



## ASSESSMENT GUIDE

English Language Arts, Mathematics,  
Science, and Social Studies

Grades 10 and 11



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**State Superintendent of Education**

**Revised September 2006**

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**This *Assessment Guide* may be distributed in its entirety to all teachers. However, schools may choose to provide the specific content chapters to teachers who are responsible for each content area.**

**Note:** All teachers should be provided with the following sections of the *Assessment Guide*:

- **Preface**
- **Appendices A, B, C, and D, which include a glossary, information about testing special populations, scoring information, and foundation skills**

## Preface

### What Are LEAP and GEE?

The Louisiana Educational Assessment Program (LEAP) and Graduation Exit Examination (GEE) assessments are criterion-referenced tests (CRTs) in English language arts, mathematics, science, and social studies. The LEAP measures the knowledge and skills contained in the state’s content standards and benchmarks that are clustered by grades K–4 and grades 5–8. The LEAP is administered at grades 4 and 8. The GEE measures the knowledge and skills contained in the state’s content standards and benchmarks that are clustered by grades 9–12. The GEE is administered at grade 10 (ELA and mathematics) and grade 11 (science and social studies). Both LEAP and GEE assess complex thinking skills as well as knowledge and application of information through multiple-choice items and constructed-response items, which require students to provide a written response to a question or series of questions. The LEAP tests are high stakes for students in grades 4 and 8 because they are tied to promotional policy. The GEE tests are high stakes because they require high school students to meet an established achievement level to be eligible to receive a high school diploma. The high-stakes testing policy can be accessed at [www.louisianaschools.net](http://www.louisianaschools.net) under Testing.

### Why Have the LEAP and GEE Assessment Guides Been Revised?

The LEAP and GEE assessment guides have been reorganized into three grade-specific versions—grade 4 (LEAP), grade 8 (LEAP), and grades 10 and 11 (GEE)—that each include four content areas. Previous editions of the *Teachers’ Guide to Statewide Assessment* were organized by content and included all grade levels. This reorganization was made in response to requests from many teachers asking that all information for each grade be combined in one guide.

**It is important to note that the LEAP and GEE tests have not changed. The content standards and benchmarks that form the basis for the LEAP tests have not changed. Rather, the format and the organization of the guides have been revised, and the text has been edited for conciseness.**

The revised LEAP and GEE guides follow the same structure as the guides for grades 3, 5, 6, 7, and 9, grades assessed through the *integrated* Louisiana Educational Assessment Program (*i*LEAP). The intent of the revised LEAP and GEE guides is to provide a user-friendly and practical document in a format consistent with that of guides developed for other Louisiana assessments. Additionally, within each guide, each content area is organized in the same general format, with only necessary content-specific changes that provide more clarity.

The sample test items in the former editions (*Teachers' Guide to Statewide Assessment*) have been replaced with items that have appeared on LEAP and GEE assessments. The replacement items have also appeared in the released items documents that the Department of Education produces each year. These items and additional released test items are available at [www.louisianaschools.net](http://www.louisianaschools.net)

### **What Is the Purpose of the *Assessment Guide*?**

Each *Assessment Guide* provides an overview of LEAP at grade 4 or grade 8 or GEE at grades 10 and 11. In addition to providing teachers with a description of the overall design of the LEAP or GEE assessments, each guide presents sample test items to aid teachers in aligning their instruction with the statewide assessments. Teachers should use this guide to

- become familiar with the LEAP and GEE test format,
- include these types of formats in their classroom instruction and assessments,
- align their instruction and assessment with the *Louisiana Content Standards, Benchmarks, Grade-Level Expectations*, and the *Comprehensive Curriculum*, and
- provide test accommodations recorded on a student's IEP or IAP.

### **What Does the *Assessment Guide* Include?**

The *Assessment Guide* includes information that all teachers can use to understand the purpose and structure of the LEAP or GEE and how the assessments affect teaching and learning in Louisiana. Each guide contains information about the four core-content areas that are assessed on LEAP or GEE. The guides include information about

- test specifications,
- test content (key concepts),
- sample test items,
- achievement level descriptors, and
- scoring.

## **Types of Items**

Each content-area assessment includes both multiple-choice and constructed-response items. **Multiple-choice (MC) items** assess knowledge, conceptual understanding, and application of skills in each of the four content areas. Multiple-choice items consist of a stem followed by four response options (A, B, C, and D) and are scored correct or incorrect. **Constructed-response (CR) items** require students to compose an answer and generally require higher-order thinking. Constructed-response items include those requiring short answers, scored 0 to 2 points, and extended constructed-response items requiring more in-depth answers, scored 0 to 4 points. The content-area sections of the guide present detailed information about the characteristics of the items.

## **General LEAP and GEE Test Design**

The table on the next page presents the overall design (test components) of the contents and grades assessed. It presents the approximate number of items for each test and the item types, multiple-choice and constructed-response.

## LEAP and GEE Test Design

| CONTENT AREA   | TEST SESSIONS  |
|--|--|
| <b>English Language Arts<br/>(Grades 4, 8, and 10)</b> | <ol style="list-style-type: none"> <li>1. Writing (in response to prompt) <ul style="list-style-type: none"> <li>• Gr. 4: descriptive or narrative</li> <li>• Gr. 8: narrative or expository</li> <li>• Gr.10: expository or persuasive</li> </ul> </li> <li>2. Reading and Responding <ul style="list-style-type: none"> <li>• 4 reading passages: 2 short/2 long</li> <li>• 4 to 6 MC items (1 point each) per passage</li> <li>• 2 CR (short-answer) items (2 points each) per passage</li> <li>• Grades 8 and 10 only: one extended CR item (4 points)</li> </ul> </li> <li>3. Using Information Resources <ul style="list-style-type: none"> <li>• One resource packet with 4 to 6 sources</li> <li>• 5 MC items and 2 CR (short-answer) items</li> </ul> </li> <li>4. Proofreading <ul style="list-style-type: none"> <li>• Editing a short passage</li> <li>• 8 MC items</li> </ul> </li> </ol> |
| <b>Mathematics<br/>(Grades 4, 8, and 10)</b>           | <ol style="list-style-type: none"> <li>1. 60 MC items (across 6 strands) <ul style="list-style-type: none"> <li>• 30 noncalculator</li> <li>• 30 calculator</li> <li>• Problem-solving context</li> </ul> </li> <li>2. Extended CR items (4 points) <ul style="list-style-type: none"> <li>• Grade 4: 3 items</li> <li>• Grades 8 and 10: 4 items</li> </ul> </li> </ol>   |
| <b>Science<br/>(Grades 4, 8, and 11)</b>               | <ol style="list-style-type: none"> <li>1. 40 MC items (across 5 strands) <ul style="list-style-type: none"> <li>• Science as Inquiry</li> <li>• Physical Science</li> <li>• Life Science</li> <li>• Earth and Space Science</li> <li>• Science and the Environment</li> </ul> </li> <li>2. 4 CR (short-answer) items (2 points) <ul style="list-style-type: none"> <li>• 1 per <i>content</i> strand</li> </ul> </li> <li>3. Comprehensive Science Task <ul style="list-style-type: none"> <li>• 3 CR (short-answer) items (inquiry strand)</li> <li>• 1 extended CR item (4 points) related to <i>content</i> strand</li> </ul> </li> </ol>   |
| <b>Social Studies<br/>(Grades 4, 8, and 11)</b>        | <ol style="list-style-type: none"> <li>1. 50 MC items (across 4 strands) Grade 4<br/>60 MC items (across 4 strands) Grades 8 and 11 <ul style="list-style-type: none"> <li>• Geography</li> <li>• Civics</li> <li>• Economics</li> <li>• History</li> </ul> </li> <li>2. Extended CR item (4 points) <ul style="list-style-type: none"> <li>• 4 items (1 per strand)</li> </ul> </li> </ol>  |



## Administration Schedule

The LEAP and GEE tests are administered in March.

The Mathematics and the English Language Arts tests are administered over a two-day period, while the Science and the Social Studies tests are administered in one day. The suggested time for each test session appears in the *Test Administration Manual*.

More detailed information regarding the number of sessions and number of questions for each test or test session is provided in the content-area sections of this guide.

## Achievement Level Descriptors

Student performance on LEAP and GEE is reported in terms of achievement level: *Advanced*, *Mastery*, *Basic*, *Approaching Basic*, or *Unsatisfactory*. Content-specific achievement level descriptors, which are based on general policy definitions, are included in the content sections of the guides. Louisiana's general policy definitions for the five achievement levels are provided below.

**Advanced:** *A student at this level has demonstrated superior performance beyond the level of mastery.*

**Mastery:** *A student at this level has demonstrated competency over challenging subject matter and is well prepared for the next level of schooling.*

**Basic:** *A student at this level has demonstrated only the fundamental knowledge and skills needed for the next level of schooling.*

**Approaching Basic:** *A student at this level has only partially demonstrated the fundamental knowledge and skills needed for the next level of schooling.*

**Unsatisfactory:** *A student at this level has not demonstrated the fundamental knowledge and skills needed for the next level of schooling.*

## Foundation Skills

Five foundation skills serve as the basis upon which the *Louisiana Content Standards* across all grades and all content areas were developed. These skills represent global outcomes for all students. The skills are

- Communication
- Problem Solving
- Resource Access and Utilization
- Linking and Generating Knowledge
- Citizenship

Refer to appendix D for descriptions of these skills.

## **A Word to the General Education Teacher about Test Accommodations**

Test accommodations are provided to minimize the effects of a disability and to ensure that a student can demonstrate the degree of achievement he or she actually possesses. An *accommodation* is a change in the setting of the test administration, the timing, scheduling, presentation format, and/or method of response to the assessment. Although some students with disabilities will not need test accommodations, many will need them to provide a valid and accurate measure of their abilities. The goal in using accommodations is to give students with disabilities an equal opportunity in assessment, not to give students with disabilities an unfair advantage over other students or to subvert or invalidate the purpose of the tests. The accommodation should allow the test score to reflect a student's proficiency in the area tested without the interference of his or her disability.

**Test accommodations should not be different from or in addition to the accommodations provided in the classroom during instruction and assessment and as indicated on the student's Individualized Education Program (IEP) or Section 504 plan (IAP).** Testing and instructional accommodations must be based on each student's needs as documented in the student's IEP or IAP. If an accommodation approved for use during a state assessment is not provided during general instruction or classroom assessment, it becomes inappropriate to provide that accommodation during a state assessment. For example, if the student does not have tests read aloud during classroom assessments, then *Tests Read Aloud* would not be an appropriate accommodation for state assessments.

Since accommodations used during state assessments must be an ongoing part of classroom instruction and assessment, it is crucial that general educators be knowledgeable about accommodations, use them routinely in the classroom, and be prepared to implement the use of approved accommodations during state assessments.

For a list of approved test accommodations that may be used for students with disabilities and suggestions for implementing accommodations during assessment, see appendix B.

### **What Additional Resources Are Available?**

The Louisiana Department of Education has developed several resources to assist educators as they prepare students for LEAP and GEE. Information about access to these resources can be found on the LDE Web site, [www.louisianaschools.net](http://www.louisianaschools.net).

- *Bulletin 118: Statewide Assessment Standards and Practices* explains the Louisiana Educational Assessment Program policies of the Board of Elementary and Secondary Education.
- Content Standards Documents explain the framework for Louisiana's Content Standards for English Language Arts, Mathematics, Science, and Social Studies.
- *Comprehensive Curriculum* is based on Louisiana's Content Standards and organizes Grade-Level Expectations into coherent, time-bound units with sample activities and classroom assessments.

- Practice Assessment/Strengthen Skills (PASS) offers an online practice assessment aligned with LEAP and GEE.
- Released Items Documents provide test items and student responses from previous LEAP and GEE tests.
- Test Administration Manuals include comprehensive information regarding the administration of the LEAP and GEE.

**Questions or requests for additional information regarding this *Assessment Guide* should be addressed to the Division of Standards, Assessments, and Accountability, Louisiana Department of Education at 225-342-3393 or toll free at 1-877-453-2721.**



## Chapter 1: GEE English Language Arts, Grade 10

This chapter provides specifications for the English language arts assessment for Grade 10 GEE. It describes the content and format of the test, provides the number and types of items, and explains how the standards and benchmarks for English language arts are assessed.

### Test Structure

The English language arts test consists of four sessions and is administered over two days. Students are allowed as much time as they need to complete each session, but suggested times are provided in the *Test Administration Manual*; it explains the procedures for allowing students additional time to complete a session of the test.

### Test Sessions

- Writing
- Reading and Responding
- Using Information Resources
- Proofreading

### Item Types

The grade 10 GEE English language arts assessment includes a written composition, short-answer questions, multiple-choice questions, and an extended-response (essay) question.

Multiple-choice items consist of a stem and four answer options (A, B, C, and D). All sessions of the English language arts test, with the exception of Writing, include multiple-choice questions.

Constructed-response items require students to express their answers in writing. In response to a writing prompt, students write compositions, which are scored using a 12-point rubric. Other constructed-response items include short-answer questions scored on a 0- to 2-point scale and one extended-response (essay) question scored on a 0- to 4-point scale.

The test sessions and number of item types are as follows:

- Writing consists of a prompt that requires students to write a composition.
- Reading and Responding consists of 20 multiple-choice questions, 10 short-answer questions, and one 4-point extended-response (essay) question based on reading passages.
- Using Information Resources consists of 5 multiple-choice questions and 2 short-answer questions.
- Proofreading consists of 8 multiple-choice questions.

## **Test Description**

### **Writing**

This session of the test is designed to measure key aspects of standards 2 and 3. In response to a writing prompt, students are required to draft and edit compositions in their test booklets and write their final drafts in their answer documents.

At grade 10, the mode of writing will alternate between expository and persuasive. Students are allowed to use dictionaries and thesauruses for the Writing session only. They are also given a Writer's Checklist. A reduced copy of the Writer's Checklist is located on page 1-77. An electronic version, suitable for printing, is located on the Department Web site.

The instructions that accompany each writing prompt direct students to focus on the:

- purpose and focus of the composition
- intended audience
- recommended length of the composition
- important elements that will be considered in evaluation of the composition (focus, or central idea, supporting details, development of ideas, organization, and sentence formation, usage, mechanics, and spelling)

Legibility is assessed through the ease of understanding what the student has written. Any legible composition is scored, but the quality of penmanship is not scored.

### **Using Information Resources**

This session assesses standard 5, except for benchmark ELA-5-H4.

Students are provided four to six reference sources to use to answer 5 multiple-choice and 2 short-answer items. These reference sources may include sources such as:

- articles (from encyclopedias, magazines, newspapers, textbooks)
- parts of books (tables of contents, indexes, appendixes, bibliographies)
- visual aids (maps, graphs, tables, charts, illustrations, schedules, diagrams)
- computer information (such as a picture of a page from an online card catalog or a Web page)

All of the information resources are realistic, grade-appropriate materials that a tenth-grade student might find in a library and use in preparing a project or report. All materials are related to a specific topic. With the reference materials, students receive a written description of a task, such as gathering information and planning to write a report. Students are directed to skim through the resources to locate and select information.

## Reading and Responding

This session consists of four reading passages (including at least one fiction, one nonfiction, and one poem). It includes multiple-choice questions, short-answer questions, and one extended-response (essay) question, which measure the content of standards 1, 6, and 7. All reading passages are complete and authentic, either previously published work, self-contained excerpts from longer published works, or well-developed text written for the test. The extended-response (essay) question asks students to compare and/or contrast elements of two of the passages.

**Fiction passages** (approximately 600–1,500 words) may include short stories, folktales, legends, myths, or dramas.

**Nonfiction passages** (approximately 600–1,500 words) may include newspaper and magazine articles, autobiographies, biographies, editorials, encyclopedia articles, letters to the editor, and speeches. If appropriate, the nonfiction passage will include a visual of some kind (for example, pictures, graphs, tables, flow charts).

The lengths of two passages (one fiction and one nonfiction) fall within the respective ranges noted above. The poem and the fourth passage may be shorter than 600 words. The reading level of each piece is grade-appropriate. Long passages are measured with 6 multiple-choice and 2 short-answer questions. Short passages are measured with 4 multiple-choice and 2 short-answer questions.

At grade 10, the Reading and Responding session consists of 20 multiple-choice questions, 8 short-answer questions, and 1 extended-response (essay) question. The distribution of items across the standards is as follows:

Standard 1: 25 percent

Standard 6: 30 percent

Standard 7: 45 percent

## Proofreading

This session assesses standard 3, benchmarks ELA-3-H2 and ELA-3-H3.

Students read a text of about 100–250 words that includes mistakes in sentence formation, grammar, usage, mechanics and spelling. The text may be a letter, a narrative, an editorial, or an expository piece. It will include eight numbered, underlined parts. Students answer multiple-choice questions that require choosing the best way to write each underlined part (either by correcting the mistake or by indicating that the underlined part is written correctly as is).

## Scoring the English Language Arts Sessions

### Multiple-choice items:

Each multiple-choice item has four response options (A, B, C, and D) and is scored right/wrong. Correct answers receive a score of 1; incorrect answers receive a score of 0.

### Written composition:

Students' compositions are scored for elements of composing (such as central idea, elaboration, and coherence) and for style and audience awareness (such as vocabulary, sentence variety, tone, and voice) under standard 2; and for sentence formation, usage, mechanics, and spelling under standard 3.

Legibility contributes to the scorers' ease of understanding what the student has written. Any legible composition will be scored, regardless of penmanship. Students may write in print or cursive.

Only the written response to the writing prompt is scored for the conventions of writing (sentence formation, usage, mechanics, and spelling). All other written responses for the English Language Arts, Mathematics, Science, and Social Studies assessments are scored for content only.

A 12-point rubric is used to score writing. The dimensions and point values of the writing rubric are:

|                          |                                    |
|--------------------------|------------------------------------|
| Composing                | 4 points (on a 1-to-4-point scale) |
| Style/Audience Awareness | 4 points (on a 1-to-4-point scale) |
| Sentence Formation       | 1 point (on a 0-to-1-point scale)  |
| Usage                    | 1 point (on a 0-to-1-point scale)  |
| Mechanics                | 1 point (on a 0-to-1-point scale)  |
| Spelling                 | 1 point (on a 0-to-1-point scale)  |

For the *Composing* dimension and for the *Style/Audience Awareness* dimension, the following descriptors apply to the score points:

| Score Level | Description of Score Level  |
|-------------|---|
| 4           | The writer demonstrates <b>consistent</b> , though not necessarily perfect, control of almost all of the dimension's features.                          |
| 3           | The writer demonstrates <b>reasonable</b> , but not consistent, control of most of the dimension's features, indicating some weakness in the dimension. |
| 2           | The writer demonstrates enough <b>inconsistent</b> control of several features to indicate significant weakness in the dimension.                       |
| 1           | The writer demonstrates <b>little or no</b> control of most of the dimension's features.  |



**Control** is defined as the writer’s ability to use a given feature of written language effectively at the appropriate grade level.

The Composing dimension includes the focusing, supporting, and structuring that a writer does to construct an effective message for a reader. The writer crafts that message by focusing on a central idea, providing elaboration of ideas to support the central idea, and delivering the central idea and its support in a unified, organized text. Specific features of Composing are as follows:

- Central idea
- Support/Elaboration
- Unity
- Organization

This chart shows the specific elements considered when scoring the Composing dimension:

| <b>Score Points</b>               | <b>Central Idea</b>   | <b>Elaboration</b>  | <b>Organization and Unity</b>  |
|-----------------------------------|---|---|--|
| <b>4<br/>Consistent Control</b>   | <ul style="list-style-type: none"> <li>• sharp focus</li> <li>• clarity of purpose</li> <li>• strategy (preplanning and foreshadowing)</li> </ul> | <ul style="list-style-type: none"> <li>• selected information</li> <li>• thorough elaboration</li> <li>• ideas are developed (examples)</li> <li>• necessary information</li> <li>• specific details</li> </ul> | <ul style="list-style-type: none"> <li>• wholeness throughout</li> <li>• ideas related to central idea</li> <li>• beginning, middle, end</li> <li>• logical order</li> <li>• transitions</li> <li>• sense of completion</li> </ul> |
| <b>3<br/>Reasonable Control</b>   | <ul style="list-style-type: none"> <li>• clear central idea</li> <li>• clear focus</li> </ul>   | <ul style="list-style-type: none"> <li>• ideas are developed</li> <li>• necessary information</li> <li>• relevant</li> <li>• may have uneven development</li> </ul>   | <ul style="list-style-type: none"> <li>• beginning, middle, end</li> <li>• logical order</li> <li>• simple transitions</li> <li>• wholeness (may have a weak ending)</li> </ul>  |
| <b>2<br/>Inconsistent Control</b> | <ul style="list-style-type: none"> <li>• vague central idea</li> <li>• shifts in focus</li> <li>• digressions</li> </ul>                          | <ul style="list-style-type: none"> <li>• listing</li> <li>• information may be superficial, incomplete, and/or irrelevant</li> <li>• idea clusters</li> <li>• little or uneven development</li> </ul>           | <ul style="list-style-type: none"> <li>• weak beginning, middle, end</li> <li>• retreats and/or repetitions</li> <li>• gaps</li> <li>• random order</li> <li>• no ending</li> </ul>  |
| <b>1<br/>Little or No Control</b> | <ul style="list-style-type: none"> <li>• unclear central idea</li> <li>• confusion</li> </ul>   | <ul style="list-style-type: none"> <li>• automatic writing without selection</li> <li>• relevant information missed</li> <li>• little or no development</li> <li>• minimal information</li> </ul>               | <ul style="list-style-type: none"> <li>• no beginning or end</li> <li>• severe gaps</li> <li>• random order</li> <li>• too little to demonstrate</li> </ul>  |

The Style/Audience Awareness dimension comprises features of linguistic expression: how a writer purposefully shapes and controls language to affect readers. This domain focuses on the expressiveness, specificity, and rhythm of the piece and on the writer’s tone and presence. Features of Style/Audience Awareness are as follows:

- Selected vocabulary (diction or word choice)
- Selected information
- Sentence variety (syntactic variety)
- Tone
- Voice

This chart shows the specific elements considered when scoring the Style/Audience Awareness dimension.

| Score Point                           | Selected Vocabulary  | Selected Information   | Sentence Diversity   | Tone and Voice   |
|---------------------------------------|--|--|--|--|
| <b>4<br/>Consistent<br/>Control</b>   | <ul style="list-style-type: none"> <li>• word choice is appropriate, relevant</li> <li>• vivid power verbs</li> <li>• stylistic techniques (imagery, similes)</li> </ul> | <ul style="list-style-type: none"> <li>• selected for relevance and/or impact</li> <li>• vivid examples or anecdotes</li> <li>• appropriate to audience</li> <li>• manipulates audience (humor)</li> </ul> | <ul style="list-style-type: none"> <li>• some variety in structure (beginnings, endings), complexity, length</li> </ul>  | <ul style="list-style-type: none"> <li>• consistent, clear, vibrant tone and voice</li> <li>• individual personality</li> <li>• engages and/or manipulates audience</li> </ul> |
| <b>3<br/>Reasonable<br/>Control</b>   | <ul style="list-style-type: none"> <li>• clear</li> <li>• appropriate</li> <li>• relevant</li> <li>• some variety</li> </ul>   | <ul style="list-style-type: none"> <li>• some selected information</li> <li>• some examples</li> <li>• appropriate to audience</li> </ul>  | <ul style="list-style-type: none"> <li>• some variety in structure and/or complexity and/or length</li> <li>• And, But beginnings</li> </ul>                       | <ul style="list-style-type: none"> <li>• consistent tone</li> <li>• aware of audience</li> <li>• clear voice</li> </ul>  |
| <b>2<br/>Inconsistent<br/>Control</b> | <ul style="list-style-type: none"> <li>• generic</li> <li>• overused</li> <li>• some may be inappropriate</li> <li>• wrong word</li> </ul>                               | <ul style="list-style-type: none"> <li>• contradictions</li> <li>• bare bones</li> <li>• lists information</li> <li>• irrelevant</li> <li>• superficial</li> </ul>   | <ul style="list-style-type: none"> <li>• sentence patterns</li> <li>• simple sentences</li> <li>• overextended sentences</li> <li>• And, But beginnings</li> </ul> | <ul style="list-style-type: none"> <li>• vague</li> <li>• weak awareness of audience</li> <li>• inappropriate</li> <li>• monotonous</li> <li>• inconsistent tone</li> </ul>    |
| <b>1<br/>Little or No<br/>Control</b> | <ul style="list-style-type: none"> <li>• functional</li> <li>• inappropriate</li> <li>• wrong word</li> <li>• omission errors</li> </ul>                                 | <ul style="list-style-type: none"> <li>• automatic writing</li> <li>• too little information</li> <li>• inappropriate abrupt change from central idea</li> </ul>   | <ul style="list-style-type: none"> <li>• simple</li> <li>• patterns</li> <li>• on and on</li> </ul>  | <ul style="list-style-type: none"> <li>• confusing</li> <li>• absent</li> <li>• no awareness of audience</li> <li>• unengaged</li> </ul>                                       |

The dimensions of Sentence Formation, Usage, Mechanics, and Spelling are scored with either a + (receiving a score point of 1) or – (receiving a score point of 0).

**Sentence Formation:** Desirable features are completeness and construction of a variety of patterns.

|   |   |
|---|---|
| + | The response exhibits <b>acceptable</b> control of sentence formation. Most sentences are correct; there are few, if any, run-on sentences or fragments. Additionally, there is a variety of sentence patterns, indicating that the writer can construct more than one type of sentence competently.                          |
| – | The response exhibits <b>unacceptable</b> control of sentence formation. There are run-on sentences, fragments, and/or poorly constructed sentences that indicate that the writer does not have adequate skill in sentence formation. There may be evidence of control of only one type of sentence pattern (usually simple). |

**Usage:** Features are agreement, standard inflections, and word meaning.

|   |   |
|---|---|
| + | The response exhibits <b>acceptable</b> control of usage. Subject-verb agreement, verb tenses, forms of adjectives and adverbs, and word meaning are generally correct. If errors are present, they do not appear to be part of a pattern of usage errors.  |
| – | The response exhibits <b>unacceptable</b> control of usage. There are errors in subject-verb agreement, verb tenses, forms of adjectives and adverbs, and/or word meaning. The pattern of errors is evidence of a lack of control of the features of usage. |

**Mechanics:** Features are punctuation and capitalization.

|   |  |
|---|--|
| + | The response exhibits <b>acceptable</b> control of mechanics. Punctuation and capitalization are generally correct. If errors are present, they do not appear to be part of a pattern of mechanics errors. |
| – | The response exhibits <b>unacceptable</b> control of mechanics. There are errors in punctuation and capitalization. The pattern of errors is evidence of a lack of control of the features of mechanics.   |

**Spelling:**

|   |   |
|---|---|
| + | The response exhibits <b>acceptable</b> control of spelling. The majority of grade-appropriate words are spelled correctly. There is no pattern of spelling errors. |
| – | The response exhibits <b>unacceptable</b> control of spelling. There is a pattern of spelling errors. There are errors in spelling grade-appropriate words.         |

In some cases, a paper may not be scorable. For example, if a paper is illegible, it will not be scored in any dimension and will receive a score of zero. A paper may be off-topic and cannot be scored for Composing or Style/Audience Awareness dimensions, but it may be scored for Sentence Formation, Usage, Mechanics, and Spelling. Such a paper could receive a maximum of 4 of 12 points.

## Additional Scoring Criteria for Writing

### No Double Jeopardy

During scoring, **one word** will constitute **only one error**. In situations in which it is difficult to determine to which dimension the error should be assigned, the scorer will take into account priority, context clues, and error patterns that are evident in the paper.

- Priority is given to the more serious grammatical errors.
- Context clues may indicate the writer’s intention.
- Error patterns already evident in the paper indicate a skill weakness in that dimension.

### Sentence Formation:

- If a sentence with omissions, extra words, or wrong words can be corrected by changing **one word**, the error should count as a **usage** error.  
*Example:* When it’s no school, I play all day.
- If a sentence requires the rearrangement, omission, or addition of **more than one word**, the error should count as a **sentence formation** error.  
*Example:* I saw those boys fighting while driving my car.
- Nonparallel structure, often in a series, is a **sentence formation** error.  
*Example:* We will live better lives, coping with our sorrows, and how to be joyful of our happiness.
- In grades that are not responsible for mastery of colons, a sentence that contains a series that should have been preceded by a colon would count as a **sentence formation** error. The alternate correct construction would be another sentence.  
*Example:* Janet is a good librarian because of all three of these reasons she is helpful, she is smart and she is courteous.
- If a sentence fragment is deliberately presented for effect, the error is **not counted** as an error.  
*Example:* What a break!
- A **pattern of awkward syntax** (word order) should be considered a **sentence formation** error.

### Quotations:

All **spelling** and **grammar** errors that appear in a direct quotation are assumed to be the errors of the speaker, not the writer. They are **not counted in any dimension**. Errors in **mechanics** that appear in a direct quotation **do count**.

*Example:* “You aint got no reason ta be here Manny!” shouted the foreman.

Direct quotations **should not** be preceded by **that**. Indirect quotations **should** be preceded by **that**. These count as errors in **mechanics**. *Example:* Then Mom said that, “We cannot go along.” After we returned, she said we are in trouble.

### **Mechanics, Usage, and Spelling:**

Usage and mechanics errors count **each time** they occur in an composition. However, spelling errors count only **once**, even if a word is misspelled in more than one way.

- If a sentence begins with a capital letter but is **not** preceded by a period, the error counts as a **mechanics** error.  
*Example:* Martha went to the well and looked inside Far below, something was sparkling in the water.
- If a sentence begins with a lowercase letter but is preceded by a period, the error counts as a **mechanics** error.  
*Example:* Teddy is the youngest in the family. he is my only nephew.
- Use of double comparatives or double negatives is a common **usage** error.  
*Example:* I'm even more better at soccer than at football. None of them are not my friend.
- Use of the wrong preposition is a common **usage** error.  
*Example:* He went for the house.
- In addition to *TV*, both *T.V.* and *tv* are **acceptable** and **not mechanics** errors. Interchanging *will* with *would* and *can* with *could* is **acceptable** and **not a usage** error. Use of *so they* instead of *so that they* is **acceptable** and **not a usage** error.
- Agreement errors of compound pronouns or collective nouns with possessives are **usage** errors.  
*Examples: Correct: people's lives, everyone's hope, everybody's house, their lives*
- Agreement errors with collectives, phrases, and conjunctions are **usage** errors.  
*Example: Incorrect: None of the teachers are good role models or a hero.*
- A word may be both a **usage** and a **spelling** error, or it may not be possible from **context clues** to determine whether the error is in spelling or in usage. In such instances, the error should be counted in **usage only**.  
*Example:* She allway comes to work on time.
- If a misused word in a sentence is a real word, it is a **usage** error. If it is not a real word, it is a **spelling** error.  
*Example:* We all went to the skating ring. (**usage**) We joined my parnets and were reddy to leave. (**spelling**)
- An error in which a **homonym** takes the place of the correct word is counted as a **spelling** error.  
*Example:* Martin gave him a peace of his chocolate bar.
- Some words, although they are not real homonyms, are so phonetically similar that they are frequently misspelled. Context clues should indicate whether the skill weakness is **spelling** or **usage** (wrong word).  
*Example:* I would rather have a vacation then a raise! (**spelling**) She was late for her piano listens. (**usage**)

- A word may be either a **spelling** or a **mechanics** error. Use either **context clues** or **error patterns** to determine which dimension would be most appropriate.  
*Example:* All the hero's aren't in the movies. (**spelling**)
- A word may be either a **usage** or a **mechanics** error. Use either **context clues** or **error patterns** to determine which dimension would be most appropriate.  
*Example:* Were going to Disneyland on our vacation. (**mechanics**)
- In a series, a comma before *and* is optional; both ways are considered **correct**.  
*Example:* The birds, cats and dogs . . . The birds, cats, and dogs . . .
- In some series, the placement of the comma **is not optional because it affects the sense** of the sentence.  
*Example:* The pet shop was filled with birds, cats and dogs (kenneled), and fish of every color, shape and size.
- A word at the end of a line that is not broken at the end of a syllable or is broken and has only one syllable is a **mechanics** error.  
*Example:* I worked at the National Foundation for the Blind.

#### Other Issues:

- **Jargon** that is in common use in contemporary speech is permitted in on-demand compositions.  
*Example:* After he cut the lights, we locked the door and left the house.
- **Dialect** is counted as a usage error unless it is in a direct quotation.  
*Example:* I'm very happy y'all are reading my test and I hope y'all pass me.

Students must produce a **composition** to participate in the test. Plays, poems, lyrics, and drawings are **not** acceptable. One or two sentences do not satisfy the requirements of a composition. Copies are not allowed.

Because the purpose of writing assessments is to determine how well students can demonstrate and maintain writing skills in an original on-demand composition, the rules of **standard written English** apply and override foreign language, regional, ethnic, and colloquial speech patterns.

Compositions will be considered **on topic** if the scorer can determine that the student attempted to respond to the prompt.

For each administration of GEE, a student’s writing response is scored by at least two readers, whose scores are averaged for each dimension.

### Example of Scores for a Writing Response

| Dimension                | Reader 1 | Reader 2 | Average            |
|--------------------------|----------|----------|--------------------|
| Composing                | 3        | 4        | 3.5                |
| Style/Audience Awareness | 2        | 2        | 2.0                |
| <i>Subtotal</i>          |          |          | 5.5                |
| Sentence Formation       | 1        | 0        | 0.5                |
| Usage                    | 1        | 1        | 1.0                |
| Mechanics                | 0        | 1        | 0.5                |
| Spelling                 | 1        | 1        | 1.0                |
| <i>Subtotal</i>          |          |          | 3.0                |
| <b>Total score</b>       |          |          | <b>8.5 (of 12)</b> |

### Constructed-response items:

All constructed responses are hand-scored with item-specific scoring rubrics, which are included with the sample items in this guide. The short-answer items in the grade 10 English Language Arts test are scored on a 0- to 2-point scale.

### General Scoring Rubric—Short-Answer Items

| Score Level | Description of Score Level  |
|-------------|---|
| <b>2</b>    | <ul style="list-style-type: none"> <li>The student’s response provides a complete and correct answer.</li> </ul>  |
| <b>1</b>    | <ul style="list-style-type: none"> <li>The student’s response is partially correct.</li> <li>The student’s response demonstrates limited awareness or contains errors.</li> </ul> |
| <b>0</b>    | <ul style="list-style-type: none"> <li>The student’s response is totally incorrect, irrelevant, too minimal to evaluate, or blank.</li> </ul>                                     |

At grade10, students write an extended response, or essay, to a question that requires them to compare and/or contrast elements of two reading passages. The general scoring rubric for this item is shown here; an item-specific rubric is provided in the sample items in this guide.

### General Scoring Rubric—Essay Items

| Score Level | Description of Score Level   |
|-------------|--|
| 4           | <ul style="list-style-type: none"> <li>• The student’s response demonstrates in-depth understanding of the relevant content and/or procedures.</li> <li>• The student completes all important components of the task accurately and communicates ideas effectively.</li> <li>• Where appropriate, the student offers insightful interpretations and/or extensions.</li> <li>• Where appropriate, the student uses more sophisticated reasoning and/or efficient procedures.</li> </ul> |
| 3           | <ul style="list-style-type: none"> <li>• The student completes most important aspects of the task accurately and communicates clearly.</li> <li>• The response demonstrates an understanding of major concepts and/or processes, although less important ideas or details may be overlooked or misunderstood.</li> <li>• The student’s logic and reasoning may contain minor flaws.</li> </ul>   |
| 2           | <ul style="list-style-type: none"> <li>• The student completes some parts of the task successfully.</li> <li>• The response demonstrates gaps in the conceptual understanding.</li> </ul>  |
| 1           | <ul style="list-style-type: none"> <li>• The student completes only a small portion of the tasks and/or shows minimal understanding of the concepts and/or processes.</li> </ul>   |
| 0           | <ul style="list-style-type: none"> <li>• The student’s response is totally incorrect, irrelevant, too minimal to evaluate, or blank.</li> </ul>  |



## English Language Arts Test Specifications, Grade 10

| Content Standard                              | Points    | Subtest   |                             |                        |              |
|---|-----------|-----------|-----------------------------|------------------------|--------------|
|   |           | Writing   | Using Information Resources | Reading and Responding | Proofreading |
| 1. Read, comprehend, and respond              | 10        | —         | —                           | 10                     | —            |
| 2. Write competently                          | 8         | 8         | —                           | —                      | —            |
| 3. Use conventions of language                | 12        | 4         | —                           | —                      | 8            |
| 4. Apply speaking/listening skills            | N/A       | —         | —                           | —                      | —            |
| 5. Locate, select, and synthesize information | 9         | —         | 9                           | —                      | —            |
| 6. Read, analyze, and respond to literature   | 12        | —         | —                           | 12                     | —            |
| 7. Apply reasoning and problem-solving skills | 18        | —         | —                           | 18                     | —            |
| <b>Total</b>                                  | <b>69</b> | <b>12</b> | <b>9</b>                    | <b>40</b>              | <b>8</b>     |
| <b>No. of items</b>                           | <b>45</b> | <b>1</b>  | <b>7</b>                    | <b>29</b>              | <b>8</b>     |

**The ELA test design remains constant from year to year.**

## STANDARDS AND BENCHMARKS ASSESSED

This section explains which benchmarks are assessed and how they will be assessed. The information is organized by test sessions.

The following information is presented for each test session:

### Standards Assessed

**Benchmarks Assessed:** the text of all benchmarks eligible for GEE

### Assessment Limits:

- any benchmarks that are excluded from GEE
- any special restrictions on test content

### Explanation of Codes

Standards 1, 6, and 7 relate to reading comprehension skills.

Standards 2 and 3 relate to writing processes and conventions of language.

Standard 4 relates to speaking and listening skills, which are **not** assessed on GEE.

Standard 5 relates to research skills.

ELA codes are arranged by content area, standard number, grade cluster (E, M, H), and benchmark number. The first part of the code is always ELA. The second part indicates the standard number. The third part indicates the grade cluster and benchmark number.

### Examples of English Language Arts Codes

| Code     | Translation   |
|----------|---|
| ELA-1-E4 | English Language Arts, standard 1, elementary, benchmark 4    |
| ELA-4-M1 | English Language Arts, standard 4, middle school, benchmark 1 |
| ELA-3-H3 | English Language Arts, standard 3, high school, benchmark 3   |

## Writing

The Writing session measures standards 2 and 3.

|  |  |
|--|--|
| Standard 2: <i>Students write competently for a variety of purposes and audiences.</i> |  |
| <b>Benchmarks Assessed</b>   |  |
| ELA-2-H1   | writing compositions (250–300 words) that employ specific organizational elements (for example, spatial order, order of importance, ascending/descending order, chronological order) and clearly imply a central idea with supporting details in a logical, sequential order |
| ELA-2-H2   | using language, concepts, and ideas that show an awareness of an intended audience and/or purpose (for example, classroom, real-life, workplace) in developing complex compositions  |
| ELA-2-H3   | applying the steps of the writing process, emphasizing revising and editing in final drafts  |
| ELA-2-H4   | using narration, description, exposition, and persuasion to develop various modes of writing (for example, editorials, critical analyses)*   |
| ELA-2-H5   | applying literary devices and various stylistic elements (for example, diction, sentence structure, voice, tone)   |
| ELA-2-H6   | writing as a response to texts and life experiences (for example, technical writing, resumes)  |

\*Inclusive of K–8 examples

For the writing session, students compose a response to a writing topic, referred to as a writing prompt. ELA-2-E1, ELA-2-E2, and ELA-2-E3 are assessed through the composition, which reflects use of a writing process that may include evidence of prewriting with notes, outlines, or webbing ideas and conscious construction to communicate ideas. The composition is scored for a focused central idea, organization, and elaboration with supporting details as well as for use of language and sentence structure appropriate to the intended audience.

### **Assessment Limits:**

The modes assessed at grade 10 are expository or persuasive.

**Standard 3:** *Students communicate using standard English grammar, usage, sentence structure, punctuation, capitalization, spelling, and handwriting.*

**Benchmarks Assessed**

|          |   |
|----------|---|
| ELA-3-H2 | using the grammatical and mechanical conventions of standard English*   |
| ELA-3-H3 | spelling accurately using strategies and resources (for example, technical glossary, specialized dictionary) when necessary |

\*Inclusive of K–8 examples

Compositions are scored for the conventions of standard English.

**Assessment Limits:**

The content parameters for conventions grade 10 students are expected to know are specified on page 1-17 of this guide. Any legible composition is scored, but quality of penmanship, ELA-3-H1, writing fluidly and legibly in cursive or printed form, is not scored.

## Content Parameters

### *Punctuation*

- use of commas to separate terms in a series, to separate independent clauses in a compound sentence, to set off direct quotations, between day and year in a date, between city and state, to set off nouns of direct address, after an introductory word or phrase, to set off an appositive or parenthetical phrase, after the salutation and after the closing in a friendly letter
- use of semicolon in a sentence to separate independent clauses
- use of quotation marks in a direct quotation and to set off the titles of short works (poems, stories, songs, etc.)
- use of end punctuation
- use of periods with abbreviations
- use of apostrophes with contractions and possessives
- use of colon preceding a list and after the salutation in a business letter

### *Capitalization*

- capitalizing names and initials of persons, names of places, days, months, and holidays, titles of respect, proper adjectives, geographical names, streets, cities, states, countries, continents, names of companies, buildings, monuments, names of political and ethnic groups, religions, titles of books, songs, poems, etc.
- capitalizing the first word of a sentence, first word of a direct quotation, the salutation and closing of a friendly or business letter

### *Structure*

- use of complete sentences (avoiding fragments and run-on sentences)

### *Usage*

- subject-verb agreement
- use of verb tenses
- pronoun-antecedent agreement and use of pronoun case
- adjectives and adverbs (for example, comparative and superlative; *real/really* or *good/well* except with the word *feel*)
- avoiding double negatives
- usage of all parts of speech

### *Correct spelling of commonly used, grade-appropriate words*

## Using Information Resources

The Using Information Resources session measures standard 5, research skills, using a set of reference sources.

**Standard 5:** *Students locate, select, and synthesize information from a variety of texts, media, references, and technological sources to acquire and communicate knowledge.*

### **Benchmarks Assessed**

|          |   |
|----------|---|
| ELA-5-H1 | evaluating and using organizational features of printed text, other media, and electronic information (for example, citations, endnotes, bibliographic references)* |
| ELA-5-H2 | synthesizing information resources  |
| ELA-5-H3 | accessing information and conducting research using a variety of primary and secondary sources to produce formal papers*  |
| ELA-5-H5 | citing references using various formats (for example, parenthetical citations)*   |
| ELA-5-H6 | analyzing and synthesizing graphic organizers (for example, organizational charts, concept maps, comparative tables)*   |

\*Inclusive of K–8 examples

Items that measure ELA-5-H1 assess the ability to use organizational features of a variety of sources to evaluate and select information for a given purpose. Items measuring ELA-5-H2 assess the ability to analyze the best source of information. Items that measure ELA-5-H3 focus on determining the usefulness of primary and secondary sources but do not require the production of a finished report. ELA-5-H5 is assessed with items that involve identifying or reproducing an accurate parenthetical citation or bibliographic entry. Items that measure ELA-5-H6 involve analyzing information in graphic organizers.

These benchmarks may be assessed with multiple-choice and short-answer items.

### **Assessment Limits:**

Benchmark ELA-5-H4, using available technology to produce, revise, and publish a variety of works, is not assessed because the process of producing a research report does not lend itself to GEE assessment.

## Reading and Responding

The Reading and Responding session assesses reading comprehension skills specified in standards 1, 6, and 7 with four reading passages.

|   |  |
|---|--|
| <b>Standard 1:</b> <i>Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.</i> |  |
| <b>Benchmarks Assessed</b>  |  |
| ELA-1-H1  | using knowledge of word meaning and extending basic and technical vocabulary, employing a variety of strategies (for example, contexts, connotations and denotations, word derivations, relationships, inferences) |
| ELA-1-H2  | analyzing and evaluating the effects of complex elements and complex literary devices (for example, irony, sarcasm, ambiguity)* on the meaning and purpose of a selection  |
| ELA-1-H3  | reading, comprehending, and responding to extended, complex written, spoken, and visual texts (for example, ranging from 600-1,500 words)  |
| ELA-1-H4  | analyzing and evaluating complex texts with supportive explanations to generate connections to real-life situations and other texts (for example, consumer materials, public documents)                            |

\*Inclusive of K–8 examples

For benchmark ELA-1-H1 items are related to the reading passages and do not test vocabulary in isolation. ELA-1-H1 is tested through multiple-choice questions involving application of grade-appropriate vocabulary (including multiple-meaning and technical words). Items assess understanding the meaning of a word from context. Clues to proper meaning are found in the sentence itself or in surrounding sentences.

Items measuring benchmarks ELA-1-H2, ELA-1-H3, and ELA-1-H4 are closely related to the reading selections and may include both multiple choice and short answer.

These four benchmarks may be assessed with multiple-choice and short-answer.

### **Assessment Limits:**

Benchmark ELA-1-H5 (adjusting reading rate according to texts and purposes for reading) is not assessed because the skill requires teacher observation.

**Standard 6:** *Students read, analyze, and respond to literature as a record of life experiences.*

**Benchmarks Assessed**

|          |  |
|----------|--|
| ELA-6-H1 | analyzing, evaluating, and responding to United States and world literature that represents the experiences and traditions of diverse ethnic groups*             |
| ELA-6-H2 | analyzing distinctive elements (for example, recurrent themes, historical significance, literary techniques) of ancient, American, British, and world literature |
| ELA-6-H3 | analyzing and synthesizing a variety of classic and contemporary fiction and nonfiction literature from many genres (for example, epic)*                         |
| ELA-6-H4 | analyzing and responding to various genres as records of life experiences  |

\*Inclusive of K–8 examples

Reading passages represent a variety of literary genres. At least one will represent American literature, reflecting the experiences and traditions of ethnic group(s) within the United States. Questions involve identifying characteristics of the passages and comparing and contrasting literary elements and devices; items do not simply require students to identify the genre of a given passage. All four benchmarks may be measured by multiple-choice and short-answer questions.



**Standard 7:** *Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.*

**Benchmarks Assessed**

|          |   |
|----------|---|
| ELA-7-H1 | using comprehension strategies (for example, synthesizing, critiquing)* to evaluate oral, written, and visual texts   |
| ELA-7-H2 | using reasoning skills (for example, analyzing, evaluating), incorporating life experiences, and using available information resources to solve problems in complex oral, written, and visual texts |
| ELA-7-H3 | analyzing and evaluating the effects of an author’s life, culture, and philosophical assumptions as reflected in the author’s viewpoint (perspective)   |
| ELA-7-H4 | using analytical reasoning skills in a variety of complex oral, written, and visual texts*  |

\*Inclusive of K–8 examples

Items for benchmark ELA-7-H3 do not require identification of author’s purpose, but instead focus on the author’s viewpoint (perspective). All four benchmarks may be measured by multiple-choice or short-answer questions, and may be reflected in the composition question.

## Proofreading

The Proofreading session measures standard 3, benchmarks ELA-3-H2 and ELA-3-H3, through the use of a rough draft of a student letter, report, or essay.

|  |
|--|
| Standard 3: <i>Students communicate using standard English grammar, usage, sentence structure, punctuation, capitalization, spelling, and handwriting.</i> |
|--|

|                            |
|----------------------------|
| <b>Benchmarks Assessed</b> |
|----------------------------|

|          |   |
|----------|---|
| ELA-3-H2 | using the grammatical and mechanical conventions of standard English*   |
| ELA-3-H3 | spelling accurately using strategies and resources (for example, technical glossary, specialized dictionary) when necessary |

\*Inclusive of K–8 examples

All questions in the Proofreading session measure the use of the conventions of standard English. ELA-3-H3 is assessed with test items that require students to recognize the correct spelling of grade-appropriate words. Students may not use dictionaries for this test session. The content parameters for grade 10 are shown on page 1-17.

These benchmarks are measured with 8 multiple-choice questions.

# Sample Test Items: Grade 10 English Language Arts

## WRITING

Below is a sample writing topic like those used in a GEE English Language Arts test. The writing assessment measures standards 2 and 3, with the exception of ELA-3-H1, writing legibly.

### Writing Topic

Read the topic in the box below and write a well-organized, multiparagraph composition of about 250 to 300 words. Be sure to follow the suggestions listed under the box.

Your English teacher has asked you to write about a career or profession you believe is important to society. This career could be one that you want to pursue or one you simply respect. Write an essay explaining what the career is like and why this career is important to society.

Before you begin to write, think about the career. What is it like? Why is it important? How does it influence society?

Now write an essay explaining to your English teacher why the career you picked is important to society. Give specific details and support those details with clear examples and evidence. **Explain** why you think this career is important.

- Remember that your audience is your English teacher. Use appropriate language and explain your ideas clearly.
- Be sure to write clearly and check your composition for correct spelling, punctuation, and grammar.

## USING INFORMATION RESOURCES

Following is a set of information resources and questions used on grade 10 GEE assessments. The grade 10 assessment focuses primarily on measuring student ability to **synthesize** information. Items in the Using Information Resources session measure standard 5, with the exception of ELA-5-H4, using available technology to produce, revise, and publish a variety of works.

## Session 2 — Using Information Resources

**Introduction:** In this session of the test, you will look at some reference materials and then use the materials to answer the questions on pages XX and XX.

**Topic:** The Great Depression and Its Impact on People in the United States

Suppose you want to write a report on the causes of the Great Depression and its impact on people in the United States during those days. Five main sources of information about this topic are contained in this session of the test. The information sources and the page numbers where they can be found are listed below.

1. Internet Web Site Information  
“Great Depression and World War II, 1929–1945” (page XX)

2. From the *Encyclopedia Britannica*  
“Great Depression” (pages XX–XX)

3. Internet Web Site Information  
“Dear Mrs. Roosevelt” (page XX)

4. Data and Statistics  
1930 Census Data (page XX)

5. From a Book on the Great Depression  
a. Table of Contents (page XX)  
b. Time Line (page XX)  
c. Works Consulted (page XX)

**Note:** Model bibliographic entries for different types of documents are on page XX. These show acceptable formats for entries.

**Directions:** Skim pages XX through XX to become familiar with the information in these sources. Remember that these are reference sources, so you should not read every word in each source. Once you have skimmed these sources, answer questions x through x on pages xx and xx. Use the information sources to help you answer the questions. As you work through the questions, go back and read the parts that will give you the information you need.

1. Internet Web Site Information  
“Great Depression and World War II, 1929–1945”  
(Date accessed: October 13, 2000)

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## Great Depression And World War II, 1929-1945

### Overview

The widespread prosperity of the 1920s ended abruptly with the stock market crash in October 1929 and the great economic depression that followed. The depression threatened people’s jobs, savings, and even their homes and farms. At the depths of the depression, over one-quarter of the American workforce was out of work. For many Americans, these were hard times. The New Deal, as the first two terms of Franklin Delano Roosevelt’s presidency were called, became a time of hope and optimism. Although the economic depression continued throughout the New Deal era, the darkest hours of despair seemed to have passed. In part, this was the result of FDR himself. In his first inaugural address, FDR asserted his “firm belief that the only thing we have to fear is fear itself—nameless, unreasoning, unjustified terror.” As FDR provided leadership, most Americans placed great confidence in him.

The economic troubles of the 1930s were worldwide in scope and effect. Economic instability led to political instability in many parts of the world. Political chaos, in turn, gave rise to dictatorial regimes such as Adolf Hitler’s in Germany and the military’s in Japan. (Totalitarian regimes in the Soviet Union and Italy predated the depression.) These regimes pushed the world ever closer to war in the 1930s. When world war finally broke out in both Europe and Asia, the United States tried to avoid being drawn into the conflict. But so powerful and influential a nation as the United States could scarcely avoid involvement for long.

When Japan attacked the U.S. Naval base at Pearl Harbor, Hawaii, on December 7, 1941, the United States found itself in the war it had sought to avoid for more than two years. Mobilizing the economy for world war finally cured the depression. Millions of men and women joined the armed forces, and even larger numbers went to work in well-paying defense jobs. World War Two affected the world and the United States profoundly; it continues to influence us even today.

### Topics

- [Americans React to the Great Depression](#)
- [Art and Entertainment in the 1930s and 1940s](#)
- [The Dust Bowl](#)
- [President Franklin Delano Roosevelt and the New Deal](#)
- [Labor Unions During the Great Depression and the New Deal](#)
- [Race Relations in the 1930s and 1940s](#)
- [World War II](#)

Progressive Era to New Era | **Great Depression and World War II** | Postwar United States

[American Memory](#) | [Learning Page](#) | [Search](#) | [Features](#) | [Learn More](#) | [New](#) | [Activities](#)  
[Programs](#) | [Lessons](#) | [Research Tools](#)

[Library of Congress](#)

Questions about American Memory?

URL: <http://www.loc.gov/>

[NDLP Reference Librarian](#)

<http://lcweb2.loc.gov/ammem/ndlpedu/timeline/depwwii/depwar.html>

2. From the *Encyclopedia Britannica*  
“Great Depression”

ENCYCLOPEDIA BRITANNICA

**Great Depression** also called DEPRESSION OF 1929, or Slump of 1929, economic slump in North America, Europe, and other industrialized areas of the world that began in 1929 and lasted until about 1939. It was the longest and most severe depression ever experienced by the industrialized Western world.

Though the U.S. economy had gone into depression six months earlier, the Great Depression may be said to have begun with a catastrophic collapse of stock-market prices on the New York Stock Exchange in October 1929. (*See* Stock Market Crash of 1929.) During the next three years stock prices in the United States continued to fall, until by late 1932 they had dropped to only about 20 percent of their value in 1929. Besides ruining many thousands of individual investors, this precipitous decline in the value of assets greatly strained banks and other financial institutions, particularly those holding stocks in their portfolios. Many banks were consequently forced into insolvency; by 1933, 11,000 of the United States' 25,000 banks had failed. The failure of so many banks, combined with a general and nationwide loss of confidence in the economy, led to much-reduced levels of spending and demand and hence of production, thus aggravating the downward spiral. The result was drastically falling output and drastically rising unemployment; by 1932, U.S. manufacturing output had fallen to 54 percent of its 1929 level, and unemployment had risen to between 12 and 15 million workers, or 25–30 percent of the work force.

The Great Depression began in the United States but quickly turned into a worldwide economic slump owing to the special and intimate relationships that had been forged between the United States and European economies after World War I. The United States had emerged from the war as the major creditor and financier of postwar Europe, whose national economies had been greatly weakened by the war itself, by war debt, and, in the case of Germany and other defeated nations, by the need to pay war reparations. So once the American economy slumped and the flow of American investment credits to Europe dried up, prosperity tended to collapse there as well. The Depression hit hardest those nations that were most deeply indebted to the United States, *i.e.*, Germany and Great Britain. In Germany, unemployment rose sharply beginning in late 1929, and by early 1932 it had reached 6 million workers, or 25 percent of the work force. Britain was less severely affected, but its industrial and export sectors remained seriously depressed until World War II. Many other countries had been affected by the slump by 1931.

Almost all nations sought to protect their domestic production by imposing tariffs, raising existing ones, and setting quotas on foreign imports. The effect of these restrictive measures was to greatly reduce the volume of international trade: by 1932 the total value of world trade had fallen by more than half as country after country took measures against the importation of foreign goods.

The Great Depression had important consequences in the political sphere. In the United States, economic distress led to the election of the Democrat Franklin D. Roosevelt to the presidency in late 1932. Roosevelt introduced a number of major changes in the structure of the American economy, using increased government regulation and massive public-works projects to promote a recovery. (*See New Deal.*) But despite this active intervention, mass unemployment and economic stagnation continued, though on a somewhat reduced scale, with about 15 percent of the work force still unemployed in 1939 at the outbreak of World War II. After that, unemployment dropped rapidly as American factories were flooded with orders from overseas for armaments and munitions. The depression ended completely soon after the United States' entry into World War II in 1941. In Europe, the Great Depression strengthened extremist forces and lowered the prestige of liberal democracy. In Germany, economic distress directly contributed to Adolf Hitler's rise to power in 1933. The Nazis' public-works projects and their rapid expansion of munitions production ended the Depression there by 1936.

At least in part, the Great Depression was caused by underlying weaknesses and imbalances within the U.S. economy that had been obscured by the boom psychology and speculative euphoria of the 1920s. The Depression exposed those weaknesses, as it did the inability of the nation's political and financial institutions to cope with the vicious downward economic cycle that had set in by 1930. Prior to the Great Depression, governments traditionally took little or no action in times of business downturn, relying instead on impersonal market forces to achieve the necessary economic correction. But market forces alone proved unable to achieve the desired recovery in the early years of the Great Depression, and this painful discovery eventually inspired some fundamental changes in the United States' economic structure. After the Great Depression, government action, whether in the form of taxation, industrial regulation, public works, social insurance, social-welfare services, or deficit spending, came to assume a principal role in ensuring economic stability in most industrial nations with market economies.



3. Internet Web Site Information  
“Dear Mrs. Roosevelt”



Home

Library

Classroom

Timeline

### How the Depression Affected Children

What was it like growing up during the Great Depression? For many people, life was a daily struggle. At the peak of the Depression, 25% of the nation’s workers—one out of four—were unemployed. No job meant no money to pay the mortgage or buy food and clothes for the family.

Times were hard whether you lived in a city or on a farm, whether you were an adult or a child.

Families unable to pay the mortgage lost their homes and farms.  
As a result, about 250,000 young people were homeless in the early years of the Depression.  
Many became nomads, traveling the highways and railways.

20% of America’s children were hungry and without proper clothing.  
In some coal mining regions, the percentage of malnourished children reached as high as 90%.

Children went without shoes and warm clothes for the winter.

Thousands of schools had to close down because they lacked the money to stay open.  
About 3 million children between 7 and 17 had to leave school.  
40% of young people from age 16 to 24 were neither in school nor working.

**4. Data and Statistics**  
**1930 Census Data**

| State          | Total number of people able to work but unemployed | Total population   |
|----------------|--|--------------------|
| ALABAMA        | 21,441   | 2,646,248          |
| ARIZONA        | 7,990  | 435,573            |
| ARKANSAS       | 12,820   | 1,854,482          |
| CALIFORNIA     | 161,687  | 5,677,251          |
| COLORADO       | 22,696   | 1,035,791          |
| CONNECTICUT    | 38,230   | 1,606,903          |
| DELAWARE       | 3,187  | 238,380            |
| FLORIDA        | 33,120   | 1,468,211          |
| GEORGIA        | 27,672   | 2,908,506          |
| IDAHO          | 6,194  | 445,032            |
| ILLINOIS       | 226,999  | 7,630,654          |
| INDIANA        | 60,714   | 3,238,503          |
| IOWA           | 22,340   | 2,470,939          |
| KANSAS         | 22,157   | 1,880,999          |
| KENTUCKY       | 29,452   | 2,614,589          |
| LOUISIANA      | 30,866   | 2,101,593          |
| MAINE          | 13,419   | 797,423            |
| MARYLAND       | 24,438   | 1,631,526          |
| MASSACHUSETTS  | 116,210  | 4,249,614          |
| MICHIGAN       | 157,812  | 4,842,325          |
| MINNESOTA      | 44,545   | 2,563,953          |
| MISSISSIPPI    | 10,798   | 2,009,821          |
| MISSOURI       | 63,413   | 3,629,367          |
| MONTANA        | 10,963   | 537,606            |
| NEBRASKA       | 14,778   | 1,377,963          |
| NEVADA         | 2,888  | 91,058             |
| NEW HAMPSHIRE  | 8,184  | 465,293            |
| NEW JERSEY     | 116,305  | 4,041,334          |
| NEW MEXICO     | 5,654  | 423,317            |
| NEW YORK       | 354,390  | 12,588,066         |
| NORTH CAROLINA | 28,621   | 3,170,276          |
| NORTH DAKOTA   | 5,982  | 680,845            |
| OHIO           | 159,936  | 6,646,697          |
| OKLAHOMA       | 37,333   | 2,396,040          |
| OREGON         | 25,482   | 953,786            |
| PENNSYLVANIA   | 207,691  | 9,631,350          |
| RHODE ISLAND   | 22,437   | 687,497            |
| SOUTH CAROLINA | 11,950   | 1,738,765          |
| SOUTH DAKOTA   | 3,516  | 692,849            |
| TENNESSEE      | 20,412   | 2,616,556          |
| TEXAS          | 75,827   | 5,824,715          |
| UTAH           | 8,712  | 507,847            |
| VERMONT        | 5,293  | 359,611            |
| VIRGINIA       | 26,461   | 2,421,851          |
| WASHINGTON     | 36,972   | 1,563,396          |
| WEST VIRGINIA  | 21,375   | 1,729,205          |
| WISCONSIN      | 46,982   | 2,939,006          |
| WYOMING        | 3,719  | 225,565            |
| <b>TOTAL</b>   | <b>2,420,063</b>                                   | <b>122,288,177</b> |

5. From a Book on the Great Depression

**a. Table of Contents**

**Contents**

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5. From a Book on the Great Depression  
b. Time Line

**Important Dates in the History of the Great Depression**

| 1919  | 1927   | 1930   | 1933  |
|---|--|--|---|
| <p><b>1919</b><br/>The treaty of Versailles ends World War I; its terms demand full reparations and payment of war debts from the defeated countries.</p>   | <p><b>1927</b><br/>Some American banks fail because of bad investments and low prices for agricultural produce.</p>  | <p><b>1928</b><br/>Herbert Hoover, an advocate of rugged individualism, is elected president of the United States.</p>   | <p><b>1929</b><br/>The American stock market fails in October, and millions of investors are plunged into bankruptcy.</p>   |
|   |  | <p><b>1930</b><br/>The Hawley-Smoot Tariff Act raises import duties on a variety of industrial products and raw materials.</p>   | <p><b>1931</b><br/>Hostilities begin between Japan and China; the resulting increase in defense spending and war preparations effectively insulates Japan from the economic depression felt in other industrial nations; Hoover creates the Reconstruction Finance Corporation to lend money to banks and businesses to prevent them from failing.</p>  |
|   |  | <p><b>1932</b><br/>Franklin Delano Roosevelt is elected president of the United States.</p>  | <p><b>1933</b><br/>Adolf Hitler becomes chancellor of Germany and puts into effect his four-year plan of economic recovery; Roosevelt declares a federal bank holiday to determine which are solvent enough to reopen; FDR broadcasts first fireside chat with America; the One Hundred Days congressional session approves fifteen major acts, thus initiating the New Deal; the World Economic Conference in London fails to agree on policies of international cooperation to combat the worldwide depression.</p> |
| 1934  | 1937   | 1939   | 1940  |
| <p><b>1934</b><br/>The Securities and Exchange Act regulates Wall Street trading; the Democratic majorities in Congress and state governments in midterm elections are seen as a mandate for extending New Deal policies.</p> | <p><b>1935</b><br/>The National Labor Relations Act gives workers the right to organize; the Social Security Act provides for old-age pensions and unemployment insurance; Italy invades Ethiopia; the continuing military buildup ends Italy's economic depression.</p> | <p><b>1936</b><br/>Germany's second four-year plan focuses on defense spending and the buildup of arms.</p>  | <p><b>1937</b><br/>Franklin Delano Roosevelt begins second term as president of the United States; the recession of 1937–1938 begins, and unemployment rises to 20 percent of American workers; Congress defeats the Supreme Court Reform Bill, emphasizing that the Constitution must remain the guiding principle of the government.</p>  |
|   |  | <p><b>1939</b><br/>Germany invades Czechoslovakia, and the resulting defense spending and arms buildup by Great Britain, France, and the United States ends the Great Depression of the 1930s.</p> |   |

5. From a Book on the Great Depression  
c. Works Consulted

## Works Consulted

- Frank Kingdon, *As FDR Said: A Treasury of His Speeches, Conversations, and Writings*. New York: Duell, Sloan, and Pearce, 1950. A collection of Franklin Roosevelt's most famous speeches and some of his correspondence to colleagues.
- John A. Lapp, *The First Chapter of the New Deal*. Chicago: John A. Prescott and Son, 1933. Includes copies of texts of New Deal legislation.
- Richard Lowitt and Maurine Beasley, eds., *One Third of a Nation: Lorena Hickok Reports on the Great Depression*. Urbana: University of Illinois, 1981. A collection of the letters of presidential adviser Lorena Hickok, who traveled throughout the United States during the depression to report on conditions and evaluate the effectiveness of New Deal programs.
- Robert S. McElvaine, *The Great Depression: America 1929–1941*. New York: New York Times Book Company, 1984. An in-depth analysis of the causes, conditions, and effects of the depression on American society.
- John Major, ed., *The New Deal*. New York: Barnes and Noble, 1967. A collection of speeches, newspaper articles, and government documents of the 1930s that tell about the depression and New Deal in the words of participants in New Deal agencies and journalists who covered it firsthand.
- Broadus Mitchell, *Depression Decade: From New Era Through New Deal 1929–1941*. New York: Rinehart, 1955. A history of the depression years.
- Ted Morgan, *FDR: A Biography*. New York: Simon and Schuster, 1985. An in-depth analysis of the life of Franklin D. Roosevelt.
- Michael E. Parrish, *Anxious Decades: America in Prosperity and Depression 1920–1941*. New York: W. W. Norton, 1992. An analysis of events in America from 1920 to 1941, which includes the cultural implications of the Great Depression as well as the history.
- James T. Patterson, *America's Struggle Against Poverty 1900–1980*. Cambridge, MA: Harvard University Press, 1981. Contains a chapter on the New Deal's efforts to combat poverty in America.
- Franklin D. Roosevelt, *My Friends: Twenty-eight History Making Speeches*. Buffalo, NY: Foster and Stewart Publishing Company, 1945. A collection of FDR's speeches.
- \_\_\_\_\_, *Nothing to Fear: The Selected Addresses of Franklin Delano Roosevelt 1932–1945*. New York: Houghton Mifflin, 1946. A collection of FDR's speeches.
- Richard Norton Smith, *An Uncommon Man: The Triumph of Herbert Hoover*. New York: Simon and Schuster, 1984. A biography of Herbert Hoover.
- Studs Terkel, *Hard Times: An Oral History of the Great Depression*. New York: Pantheon, 1970. A collection of interviews with survivors of the Great Depression about daily life in the 1930s.
- Rexford G. Tugwell, *FDR: Architect of an Era*. New York: Macmillan, 1967. Background information on the New Deal by a member of FDR's brain trust.
- Harris Gaylord Warren, *Herbert Hoover and the Great Depression*. New York: W.W. Norton, 1967. A biography of Herbert Hoover.

## Models of Bibliographic Entries

The following six sample entries are from the *Modern Language Association (MLA) Handbook for Writers of Research Papers*. They show you some acceptable formats for bibliographic entries.

### **A Book by a Single Author**

Harris, Celia. Interesting Habitats. Chicago: Grayson Publications, 1996.

### **A Book by More Than One Author**

Baraty, Joseph A., and Rosa Garcia. Marsh Birds of the Southeast. New York: Wendeny Press, 1982.

### **An Encyclopedia Entry**

"Dwarfed Trees." Encyclopedia Americana. 1958.

### **A Magazine Article**

Chen, David. "Floating Down the River." Our Wildlife 9 July 1988: 120–25.

### **Book Issued by Organization Identifying No Author**

National Wildlife Association. Swamp Life. Washington: National Wildlife Association, 1985.

### **WWW Sites (World Wide Web)**

Smith, Laura P. "A History of Wildlife." 2 Aug. 1999 <<http://www.wildlife.com/talent/lpb/muddex/essay>>.

**Note:** The date indicates when the Web site was accessed.

All items in the Using Information Resources test session measure benchmarks of **standard 5**: Students locate, select, and synthesize information from a variety of texts, media, references, and technological sources to acquire and communicate knowledge.

### Sample Multiple-Choice Items

1. Which resource in the works consulted is a **primary** source?
  - A. *Depression Decade: From New Era Through New Deal 1929–1941*
  - B. *Anxious Decades: America in Prosperity and Depression 1920–1941*
  - C. *An Uncommon Man: The Triumph of Herbert Hoover*
  - D. *The New Deal*

**Correct response: D**

**Benchmark ELA-5-H2:** synthesizing information resources

2. Which two resources focus **mainly** on the impact of the Depression in the United States?
  - A. 1930 census data and “Dear Mrs. Roosevelt”
  - B. the encyclopedia article and the timeline
  - C. “Great Depression and World War II, 1929–1945” and 1930 census data
  - D. the works consulted and “Great Depression and World War II, 1929–1945”

**Correct response: A**

**Benchmark ELA-5-H1:** evaluating and using organizational features of printed text, other media, and electronic information (for example, citations, endnotes, bibliographic references)

3. Which resource would be the **most** efficient for finding out when Congress approved the first bills that started the New Deal?
- A. the timeline
  - B. the works consulted
  - C. the 1930 census data
  - D. the table of contents

**Correct response: A**

**Benchmark ELA-5-H3:** accessing information and conducting research using a variety of primary and secondary sources to produce formal papers

4. Which state had the **greatest** number of unemployed people in 1930?
- A. Illinois
  - B. California
  - C. New York
  - D. Pennsylvania

**Correct response: C**

**Benchmark ELA-5-H6:** analyzing and synthesizing graphic organizers (for example, organizational charts, concept maps, comparative tables)



### Sample Short-Answer Items

5. Write **three** main topics that could be included in an outline for a report on the Great Depression and its impact on the people of the United States.

### Scoring Rubric:

| Score | Description  |
|-------|--|
| 2     | The student's response includes three main headings with a focus on the Great Depression and its impact.                                     |
| 1     | The student's response is partially correct. It includes fewer than three main headings with a focus on the Great Depression and its impact. |
| 0     | The student's response is incorrect, irrelevant, too minimal to evaluate, or blank.  |

### Exemplary responses:

- I. The causes of the Great Depression
- II. The results of the Great Depression
- III. Coping with the Depression and the New Deal

**Benchmark ELA-5-H3:** accessing information and conducting research using a variety of primary and secondary sources to produce formal papers

6. When you complete your report, you need to list the reference sources you used to gather information. Using the appropriate model on page X, write a bibliographic entry for the article “Great Depression and World War II, 1929–1945.”

**Scoring Rubric:**

| Score | Description   |
|-------|---|
| 2     | The student's response accurately reproduces the model that is given, including the title, date, and www address.         |
| 1     | The student's response generally reproduces the model (at least two correct parts) but may have minor punctuation errors. |
| 0     | The student's response is incorrect, irrelevant, too minimal to evaluate, or blank.                                       |

**Exemplary response:**

“Great Depression and World War II, 1929–1945.” 13 Oct. 2000  
<<http://lcweb2.loc.gov/ammem/ndlpedu/timeline/depwwii/depwar.html>>.

**Benchmark ELA-5-H5:** citing references using various formats (for example, parenthetical citations)

## READING AND RESPONDING

Below are four reading passages and sample items used in the Reading and Responding session on GEE assessments. The samples are from the four types of passages that appear on tests: long and short fiction and nonfiction passages and poetry. Items in the Reading and Responding session measure the following standards:

- **ELA Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.
- **ELA Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.
- **ELA Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

## Long Nonfiction

“A Faded Photograph” is taken from Willie Morris’s book *My Dog Skip*. Read the excerpt then answer the questions that follow.

### “A Faded Photograph”

by Willie Morris

I came across a photograph of him not long ago, his black face with the long snout sniffing at something in the air, his tail straight and pointing, his eyes flashing in some momentary excitement. Looking at a faded photograph taken more than forty years before, even as a grown man, I would admit I still missed him.

It was 1943. I was nine years old and in the third grade when I saw him for the very first time. I had known we were getting him. My father had ordered him from a dog breeder he had heard about in Springfield, Missouri. Daddy had picked him up at the Illinois Central train depot, and when I came home that day from school he had just put the wire portable kennel on our back porch. I opened the door to the box and looked inside. I saw a little puppy drinking water from a container attached to the bottom. He glanced up at me.

“Come here, boy,” I said.

He walked on unsteady legs toward me. I was sitting on the floor of the porch when he came out. He jumped into my lap and began nuzzling my hand with his nose. When I leaned toward him, he gave me a moist lick on my chin. Then he hugged me.

I led him into the house and gave him some puppy food in a dish. Then I followed him as he gingerly explored every room in the house. That night he jumped into my bed and stared at me, as if he were looking me over. then, perhaps because he missed his mother in Missouri, he went to sleep in my arms. I was an only child, and he now was an only dog.

This was the first of our many days and years together. We named him Skipper for the lively way he walked, but he was always just Skip to me.

We had had a whole string of dogs before. When I was a very little boy we had big bird dog, and then two purebred English smooth-haired fox terriers like this one, and I got to know all about doge, a most precocious expert—their funny or crazy moods, how they looked when they were hungry or sick, when they were ready to bite and when their growling meant nothing, what they might be trying to say when they moaned and made strange human noises deep in their throats.

None of those other doge ever came up to this one. You could talk to him as well as you could to many human beings, and *much* better than you could to some. He would sit down and look you straight in the eye, a long, mesmerizing gaze, and when he understood what you were saying he would turn his head sideways, back and forth, oscillating his whole body like the pendulum on a clock. Before going to sleep at night, with him sitting next to my face on the bed as he always did in such hours, I would say, “First thing tomorrow I want you to get your leash and then come get me up, because we’re gonna get in the car and go out to the woods and get some *squirrels*,” and the next morning sure enough he would get his leash, wake up both my father and me, walk nervously around the house with the leash in his mouth while we ate breakfast, and then lead us out to the car. Or I could say, “How about a little *swim*?” and his face would light up and he would push open the back door with his paws and escort me the quarter of a mile down the back alleyway to the swimming hole under the cypress near the bayou. Or, “bubba’s comin’ over here today, and we’re gonna play some *football*,” and he would listen closely to this, and go out and wait around in front of

the house and pick up Bubba’s scent a block down the street and come tell me he was on his way. Or “Skip, how about some *catch?*” and he would get up and walk into the front room, open a door in the antique cabinet with his improbable nose, and bring me his tennis ball.

I watched him grow up from the puppy who came to us from Missouri to the sleek, dexterous, affectionate creature who could do all these things, and more. He knew my father by the name of Big Boss. My mother was Bossie, and I was Little Boss or, interchangeably, Willie. (I called *him*, depending on the mood, Skip, Old Skip, and Boy. I have learned that when you love somebody, you will address him or her by different names.) Sometimes my father would hide in a closet and I would ask, “Skip, where’s Big Boss?” and he would search the whole house, looking in every bed and under every chair and table until he arrived at the right closet, and began scratching it with his paws.

The town where Old Skip and I grew up together was an unhurried and isolated place then. About ten thousand people lived there, of all races and origins, and it sat there crazily, half on steep hills and half on the flat Delta. Some of the streets were not paved, and the main street, stretching its several blocks from the Dixie Theater down to the bed in the river, was narrow and plain, but down along the quiet, shady streets, with their magnolia and pecan and elm and locust

trees, were the stately old homes that had been built long before the civil War, slightly

dark and decaying until the descendants became prosperous enough to have them “restored,” which usually meant one coat of white enamel.

All this was before the big supermarkets and shopping centers and affluent subdivisions with no sidewalks and the monster highways and the innocence lost. It was even before there was television, and people would not close their doors and shut their curtains to watch the quiz games or the comedy hours or the talk shows where everybody talks at once. We would sit out on our front porches in the hot, serene nights and say hello to everyone who walked by. If the fire truck came past, we all got in our cars to follow it, and Skip was always the first to want to go. The houses were set out in a line under the soft green trees, their leaves rustling gently with the breeze. From the river sometimes came the melancholy echo of a boat’s horn.

I knew the place then better than I did my own heart—every bend in every road, every house and every field, the exact spot where the robin went for her first crocus. It was not in my soul then, only in my pores, as familiar to me as rain or grass or sunlight. The town was poor one year and rich the next; everything in it pertained to cotton, and hence to usury and mortgage, debenture and labor. We lived and died by nature and followed the whims of the timeless clouds.

### Sample Multiple-Choice Items

1. “A Faded Photograph” is told from the point of view of
  - A. a young boy.
  - B. Skip.
  - C. a grown man.
  - D. all of the characters.

**Correct response: C**

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-H2:** analyzing and evaluating the effects of complex elements and complex literary devices (for example, irony, sarcasm, ambiguity) on the meaning and purpose of a selection

2. Which adjectives **best** describe the narrator’s memory of his boyhood with Skip?
  - A. joyful and unrealistic
  - B. sad and mournful
  - C. happy and nostalgic
  - D. distant and hazy

**Correct response: C**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H1:** using comprehension strategies (for example, synthesizing, critiquing) to evaluate oral, written, and visual texts

3. In paragraph 5 the narrator calls Skip an “only dog.” This suggests that the narrator
- A. comes from a large family as compared to Skip.
  - B. identifies with the dog and welcomes his companionship.
  - C. will never own another dog.
  - D. knows that Skip did not have brothers or sisters.

**Correct response: B**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H2:** using reasoning skills (for example, analyzing, evaluating), incorporating life experiences, and using available information resources to solve problems in complex oral, written, and visual texts

4. For which quality is Skip named?
- A. his sluggish gait
  - B. his high-pitched bark
  - C. his wagging tail
  - D. his lively walk

**Correct response: D**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H4:** using analytical reasoning skills in a variety of complex oral, written, and visual texts

## Sample Short-Answer Items

5. Describe the relationship between the narrator and his dog, Skip. Use details from the passage to support your response.

### Scoring Rubric:

| Score | Description   |
|-------|---|
| 2     | The student's response is complete. It <ul style="list-style-type: none"><li>• fully describes the relationship between the narrator and his dog Skip</li></ul> <b>AND</b> <ul style="list-style-type: none"><li>• uses specific and relevant details from the passage as support.</li></ul>  |
| 1     | The student's response is partial. It <ul style="list-style-type: none"><li>• partially describes the relationship between the narrator and his dog Skip</li></ul> <b>AND</b> <ul style="list-style-type: none"><li>• uses general (or no) information from the passage</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>• demonstrates a limited awareness and/or may contain errors.</li></ul> |
| 0     | The student's response is incorrect or irrelevant, too brief to evaluate, or blank.   |

### Exemplary response:

The narrator and his dog are the best of friends and close companions. Their relationship is affectionate, playful, and constant. The narrator talks to his dog as if he were a person and holds him in his arms.

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-H4:** analyzing and evaluating complex texts with supportive explanations to generate connections to real-life situations and other texts (for example, consumer materials, public documents)



6. What change is described in paragraph 11? In what way is this change important to the narrator?

**Scoring Rubric:**

| Score | Description  |
|-------|--|
| 2     | The student's response is complete. It <ul style="list-style-type: none"> <li>states that the town is changing from an unhurried, open, innocent society to one with closed doors and subdivisions</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>explains how this is important to the narrator.</li> </ul>                     |
| 1     | The student's response is partial. It <ul style="list-style-type: none"> <li>states a change</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>states how the change is important to the narrator</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>demonstrates a limited awareness and/or may contain errors.</li> </ul> |
| 0     | The student's response is incorrect or irrelevant, too brief to evaluate, or blank.  |

**Exemplary response:**

The narrator sees the town changing negatively. Innocence is lost and people are turning to television and going behind closed doors. People go inside rather than sit on their porches greeting each other in the evenings. This change is important to the narrator because he loves his town and likes the old open, innocent way of life.

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H4:** using analytical reasoning skills in a variety of complex oral, written, and visual texts

## Poetry

In the following poem, the poet Leonard Adame remembers his Mexican American grandmother. Read the poem, then answer the questions that follow.

### My Grandmother Would Rock Quietly and Hum by Leonard Adame

|    |  |    |   |
|----|--|----|---|
|    | in her house<br>she would rock quietly and hum<br>until her swelled hands<br>calmed                          |    | she had lost her teeth<br>and when we ate<br>she had bread<br>soaked in “cafe” <sup>3</sup>   |
| 5  | in summer<br>she wore thick stockings<br>sweaters<br>and grey braids   | 25 |   |
|    | (when “el cheque” <sup>1</sup> came<br>we went to Payless<br>and I laughed greedily<br>when given a quarter) | 30 | always her eyes<br>were clear<br>and she could see—<br>through her eyes<br>she gave me herself  |
| 10 |  | 35 | she would sit<br>and talk<br>of her girlhood—<br>of things strange to me:   |
|    | mornings,<br>sunlight barely lit<br>the kitchen<br>and where<br>there were shadows<br>it was not cold        | 40 | México<br>epidemics<br>relatives shot<br>her father’s hopes<br>of this country—   |
| 15 |  | 45 | how they sank<br>with cement dust<br>to his insides   |
|    | she quietly rolled<br>flour tortillas—<br>the “papas” <sup>2</sup><br>cracking in hot lard<br>would wake me  | 50 | now<br>when I go<br>to the old house<br>the worn spots<br>by the stove<br>echo of her shuffling<br>and<br>México<br>still hangs in her<br>fading<br>calendar pictures |
| 20 |  | 55 |   |

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<sup>1</sup> the check

<sup>2</sup> potatoes

<sup>3</sup> coffee

### Sample Multiple-Choice Items

1. The mood of the poem **most** reflects the poet's
- A. respect for his grandmother.
  - B. longing to return to Mexico.
  - C. uncertainty about this grandmother's health.
  - D. happiness about Mexican traditions and cooking.

**Correct response: A**

**Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.  
**Benchmark ELA-6-H2:** analyzing distinctive elements (for example, recurrent themes, historical significance, literary techniques) of ancient, American, British, and world literature

2. Lines 31 and 32, "through her eyes / she gave me herself," mean that the grandmother
- A. passed on her eyes to her grandson.
  - B. struggled to give her family the best things she saw.
  - C. had strong opinions about life in the United States.
  - D. passed on her memories and knowledge to her grandson.

**Correct response: D**

**Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.  
**Benchmark ELA-6-H1:** analyzing, evaluating, and responding to United States and world literature that represents the experiences and traditions of diverse ethnic groups

3. Why does the speaker most likely say “México / epidemics / relatives shot” (lines 37 through 39) are “strange”?
- A. He questions his grandmother’s memories.
  - B. He has not heard stories about his family.
  - C. He thinks the stories are made up.
  - D. He has never experienced similar events.

**Correct response: D**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H3:** analyzing and evaluating the effects of an author’s life, culture, and philosophical assumptions as reflected in the author’s viewpoint (perspective)

4. The **most likely** reason the poet uses Spanish words is to
- A. show that the grandmother said these words.
  - B. show that the narrator can speak Spanish.
  - C. teach the reader these words.
  - D. create a bilingual poem.

**Correct response: A**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H2:** using reasoning skills (for example, analyzing, evaluating), incorporating life experiences, and using available information resources to solve problems in complex oral, written, and visual texts

## Sample Short-Answer Items

5. What is the symbolic meaning of the last line “México / still hangs in her / fading / calendar pictures”?

### Scoring Rubric:

| Score | Description  |
|-------|--|
| 2     | The student’s response is complete. It states a plausible symbolic meaning of the lines.   |
| 1     | The student’s response is partial. It<br>• generally discusses the lines<br><b>OR</b><br>• demonstrates a limited awareness and/or may contain errors. |
| 0     | The student’s response is incorrect, irrelevant, too brief to evaluate, or blank.  |

### Exemplary responses:

The last lines of the poem refer to the grandmother’s past in Mexico and her Mexican cultural heritage, symbolized by the calendar pictures. Although the grandmother’s Mexican traditions are not as strong as they were (the calendar pictures are fading), the cultural and heritage “still hang,” which means that they are still part of the family.

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-H2:** analyzing and evaluating the effects of complex elements and complex literary devices (for example, irony, sarcasm, ambiguity) on the meaning and purpose of a selection

- 6.** What is the speaker of the poem trying to convey about his grandmother?  
Use specific details from the poem to support your answer.

**Scoring Rubric:**

| Score | Description  |
|-------|--|
| 2     | The student's response is complete. It <ul style="list-style-type: none"> <li>• explains what the speaker of the poem is trying to convey about his grandmother</li> <li><b>AND</b></li> <li>• uses specific and relevant details from the poem as support.</li> </ul> |
| 1     | The student's response is partial. It <ul style="list-style-type: none"> <li>• partially describes the grandmother with some information from the poem</li> <li><b>OR</b></li> <li>• demonstrates a limited awareness and/or may contain errors.</li> </ul>            |
| 0     | The student's response is incorrect or irrelevant, too brief to evaluate, or blank.  |

**Exemplary response:**

The speaker is conveying that his grandmother was a quiet woman, who wanted to pass on her Mexican heritage to her children. The poet describes her as old, with swollen hands, thick stockings, grey braids. Although she was old, her mind and eyes were clear.

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H3:** analyzing and evaluating the effects of an author's life, culture, and philosophical assumptions as reflected in the author's viewpoint (perspective)

**Sample Essay Item for “My Grandmother Would Rock Quietly and Hum” and “A Faded Photograph.”**

“A Faded Photograph” and “My Grandmother Would Rock Quietly and Hum” look back to an earlier time with nostalgia. Explain how the author and the poet develop a nostalgic mood. Cite specific words from both selections that build the mood.

**Scoring Rubric:**

| Score    | Description   |
|----------|---|
| <b>4</b> | The student’s response is complete. It <ul style="list-style-type: none"> <li>• insightfully and thoroughly explains how the mood is developed</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• cites specific words from both passages that clearly develop the mood or nostalgia.</li> </ul>  |
| <b>3</b> | The student’s response is general. It <ul style="list-style-type: none"> <li>• generally explains how the mood is developed</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• cites specific words (fewer than 4) that develop the mood.</li> </ul>  |
| <b>2</b> | The student’s response is partial. It <ul style="list-style-type: none"> <li>• explains how the mood is developed in one of the passages</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• cites some information that develops the mood</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>• partially explains how the mood is developed in both passages</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• cites information from one passage.</li> </ul> |
| <b>1</b> | The student’s response is minimal. It <ul style="list-style-type: none"> <li>• minimally discusses mood in one or both passages</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• uses general information from one passage</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>• demonstrates a limited awareness and/or may contain errors.</li> </ul>   |
| <b>0</b> | The student’s response is incorrect or irrelevant, too brief to evaluate, or blank.   |

**Exemplary response:**

Both writers develop a mood of nostalgia by using the past tense and memories from childhood. In “A Faded Photograph” the author develops the mood of nostalgia by first establishing that he is looking at a forty-year-old photograph, which made him miss the dog he had as a boy. He also describes how the town used to be when there were no big supermarkets or “affluent subdivisions with no sidewalks.” For Morris the town was an “unhurried place.” Similarly, the poet of the poem builds a mood by creating nostalgic images of a grandmother with “grey braids” rocking and humming and talking about her girlhood in Mexico. The poet recalls images of a warm kitchen with smells of his grandmother’s cooking breakfast. The nostalgic mood is further developed with the image of the fading calendar pictures.

**Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.

**Benchmark ELA-6-H2:** analyzing and evaluating distinctive elements (for example, recurrent themes, historical significance, literary techniques) of ancient, American, British, and world literature



## Long Fiction

**One of the pleasures—and one of the dangers!—of travel is the opportunity to sample different cuisines. Read this passage about a traveler in India and then answer questions that follow.**

### The Well-Seasoned Traveler

by M. Kazemzadeh

The 6:40 train from Delhi to Agra pulled out of the station exactly on time. As the train rolled south, the conductor strolled through the first class carriages announcing the dinner service. Neville Sackville-Jones, the well-known travel writer, closed the book he was reading (*A Brief History of Agra and the Taj Mahal*) and made his way to the dining car.

Sackville-Jones was feeling particularly pleased with himself. He was, after all, the author of several important travel guides. He took pride in advising the proper English gentleman (and, where appropriate, the proper English lady) on how to travel safely and enjoyably.

Now he was in India, his first visit. With a sense of purpose, Sackville-Jones entered the dining car. He made a mental note of his first impression: elegant furnishings, real silver on the tables, velvet drapes, a bevy of waiters for the few diners. "Very good," he thought.

"Good evening sir," said a waiter, bowing with customary Indian courtesy as he ushered Sackville-Jones to his seat. "Kindly do the honor of following me."

"Excellent," thought Sackville-Jones. Really the staff was outdoing itself. So far, the dining car was earning high marks.

Sackville-Jones took a seat and spread out his notebook on the snowy white tablecloth. He liked to compose while dining, finding the atmosphere of restaurants—and the promise of food—an inspiration to his artistic endeavors. He took out a starched linen handkerchief and dabbed at his brow. India was quite warm even in late winter, especially for a well-fed man.

"My esteemed readers will find that train travel in India exceeds one's expectations. The dining car is a particular delight. Lavishly furnished, correctly. . . ."

Sackville-Jones noticed the waiter hovering near his elbow. He waved him away impatiently. "Not yet, man," he said, "can't you see I'm busy?"

"Very good, sir. As you wish, sir." The waiter again bowed before retiring to another table.

". . . correctly staffed," Sackville-Jones continued, "by waiters trained in the proper ways of service and with just a touch of the exotic in their aspect." He beamed as he wrote. Delightful prose, he thought.

Now he would have to try the food. Sackville-Jones prided himself on his palate. In each country that he visited, he sampled the local cuisine to determine what was fit for English consumption. Some things were better left alone, but other exotic dishes were quite acceptable. Why, the *bratwurst* in Vienna were almost as good as English sausage; the caviar served in Moscow had been first rate; even the grilled buffalo steaks in Botswana were quite tasty, if one left aside the mashed yams.

He motioned for the waiter, who arrived with another deep bow.

"What do you recommend?" Sackville-Jones asked.

"For visitors, sir, we suggest the lamb *masala*."

"No, no, I don't want visitors' food. I want authentic cuisine. I *must* have authentic."

Sackville-Jones felt an obligation to try "real" local food on his travels, if only to warn his readers away from it.

"Of course, sir," the waiter bowed again. "Our lamb *masala* is authentic, sir, only not quite so hot and spicy as the lamb *vindaloo*. I think the gentleman would prefer it, sir."

"The gentleman would prefer to make up his own mind," growled Sackville-Jones. The dining car was losing marks, he thought. "I want you to give me the lamb *vindaloo*."

The waiter bowed again, but looked deeply concerned.

"Sir," he pleaded, "I beg you choose the lamb *masala*. I am sure it will be better."

Sackville-Jones thumped the table, rattling the silver and upsetting an empty glass.

"Enough!" he roared. "Send me the manager!"

The crestfallen waiter bowed again, murmured apologies under his breath, then scurried away.

Meanwhile, Sackville-Jones again took up his pen. "Unfortunately," he wrote, "the staff insist on making counter-recommendations to visitors on what they should eat. This serious breach of manners, if not worse, is naturally somewhat distressing."

The manager arrived quickly at Sackville-Jones's table with the waiter in tow. With a bow he asked how he could be of service.

"You can be of service by serving me what I want. Your waiter here refuses to give me what I ordered."

The manager turned to the hapless waiter and berated him. "How can you treat this distinguished gentleman badly? In India the guest is a jewel on a velvet pillow. We will talk more of this later," he cried. He then turned back to Sackville-Jones. "With apologies, sir. This man is very sorry for his error. Now, what can I get for you?"

"I want the lamb *vindaloo*. I am accustomed to Indian food. I know exactly what I want to eat."

A faint look of surprise passed over the manager's face. "You are aware of course, sir, that the *vindaloo* is quite hot and spicy?"

"Yes, yes. I know that. Don't tell me that you are going to argue with me, as well?"

Sackville-Jones mopped his brow again. Really, this was getting tiresome.

"Of course not, sir, we will bring your order right away." The manager bowed again and walked toward the kitchen car, pushing the unlucky waiter before him.

Sackville-Jones was pleased to hear the manager continue to scold the waiter, although he could not catch the exact words as the language was unfamiliar to him. He again took up his pen. "The managers, however, understand the true meaning of service. My readers can rest assured that manners are upheld by those in authority, and the traveler's every wish is respected." He put down his pen. Now it remained to see if the food proved appetizing.

Within a few minutes, the waiter reappeared, carrying a tray stacked high with dishes. He placed before Sackville-Jones a plate of rice, a bowl of curried lamb, and several dishes containing breads, condiments, and sauces. The waiter looked as if he were struggling to control his emotions. Served him right, too, Sackville-Jones thought.

"Lamb *vindaloo*, as you ordered, sir." The waiter had clearly learned a lesson.

Sackville-Jones picked up his fork. Hungry after his trying encounters, he helped himself to a large mouthful of curry. He did not even have time to chew once. Sackville-Jones felt as if he had placed a live coal in his mouth. Never in his life had he experienced such blinding pain, so quickly, from such a seemingly innocent source. His face turned bright red, sweat erupted on his brow, and tears sprang to his eyes. He gasped, covering his face with his napkin lest anyone see his reaction.

What was he to do? Sackville-Jones feverishly ran through his options. He could swallow the blasted thing, but he would surely die if it reached his stomach, not to mention how it would burn on the way down. He couldn't spit it out, at least not in front of the entire dining car. Sackville-Jones did the only thing he could do. He fled the dining car. As he ran past the kitchen, he saw through the open door the waiter and the manager, arms around each other's shoulders. Tears of laughter poured down their faces.

### Sample Multiple-Choice Items

1. Neville Sackville-Jones could **best** be described as
- A. modest and refined.
  - B. boring and uneducated.
  - C. demanding and pompous.
  - D. adventurous and generous.

**Correct response: C**

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-H2:** analyzing and evaluating the effects of complex elements and complex literary devices (for example, irony, sarcasm, ambiguity) on the meaning and purpose of a selection

2. What is the **most** likely reason that Sackville-Jones is on the train to Agra?
- A. He prefers traveling by land.
  - B. He plans to visit the Taj Mahal.
  - C. He thinks the food will be better there.
  - D. He intends to write a history of the city.

**Correct response: B**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H1:** using comprehension strategies (for example, synthesizing, critiquing) to evaluate oral, written, and visual texts

**3. Read this sentence:**

“The manager turned to the hapless waiter and berated him.”

Which word could best be substituted for the word berated?

- A. dismissed
- B. grabbed
- C. scolded
- D. struck

**Correct response: C**

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-H1:** using knowledge of word meaning and extending basic and technical vocabulary, employing a variety of strategies (for example, contexts, connotations and denotations, word derivations, relationships, inferences)

**4. The waiter is anxious for Sackville-Jones to choose the lamb *masala* because it is**

- A. less spicy.
- B. less foreign.
- C. more authentic.
- D. more expensive.

**Correct response: A**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H1:** using comprehension strategies (for example, synthesizing, critiquing) to evaluate oral, written, and visual texts

## Sample Short-Answer Items

5. What are the major differences between the behavior of Sackville-Jones and the behavior of the staff of the restaurant in the train? Use at least **two** details from the passage to support your answer.

### Scoring Rubric:

| Score | Description   |
|-------|---|
| 2     | The student's response is complete. It <ul style="list-style-type: none"><li>identifies differences between Sackville-Jones's behavior and the behavior of the waiter or manager</li></ul> <b>AND</b> <ul style="list-style-type: none"><li>uses two details from the passage as support.</li></ul>   |
| 1     | The student's response is partially correct. It <ul style="list-style-type: none"><li>identifies differences between Sackville-Jones's behavior and the behavior of the waiter or manager and uses only one detail from the passage as support</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>identifies characteristics of only one character and uses details from the passage</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>demonstrates a limited awareness and/or may contain errors.</li></ul> |
| 0     | The student's response is incorrect or irrelevant, too brief to evaluate, or blank.   |

### Exemplary responses:

#### *Differences:*

- Sackville-Jones is rude; the others are polite.
- The waiter tries to help; Sackville-Jones refuses to take advice.
- The waiter and manager are patient; Sackville-Jones is impatient.
- Other plausible text-based responses.

#### *Details:*

- Sackville-Jones gets angry at the waiter's suggestion.
- The waiter addresses Sackville-Jones as "Sir" and bows.
- The manager reprimands the waiter for not obeying the guest.
- Sackville-Jones thumps the table.
- The waiter is distressed but tries to advise Sackville-Jones.
- The manager says a guest is a jewel on a velvet pillow.
- Other plausible text-based responses.

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-H2:** analyzing and evaluating the effects of complex elements and complex literary devices (for example, contexts, connotations and denotations, word derivations, relationships, inferences) on the meaning and purpose of a selection

6. According to the restaurant manager, Indians think of every guest as “a jewel on a velvet pillow.” What does this mean? Use at least one example from the passage in your explanation.

**Scoring Rubric:**

| Score | Description   |
|-------|---|
| 2     | The student’s response is complete. It <ul style="list-style-type: none"> <li>• offers a clear explanation of the expression</li> </ul> <b>AND</b><br>cites at least one example from the text.   |
| 1     | The student’s response is partially correct. It <ul style="list-style-type: none"> <li>• offers an explanation of the phrase</li> </ul> <b>OR</b><br><ul style="list-style-type: none"> <li>• cites one example from the text.</li> </ul> |
| 0     | The student’s response is incorrect, irrelevant, too brief to evaluate, or blank.   |

**Exemplary responses:**

*This phrase means that the Indians believe that guests*

- are precious, as a gem is precious.
- must be treated well, like putting a jewel on a velvet pillow.
- must have everything soft, comfortable, and luxurious.
- deserve to be treated politely.
- deserve to have their wishes respected.
- Other plausible text-based responses.

*Examples:*

- The train has velvet drapes, real silver, elegant furnishings, and many waiters.
- The waiter bows to Sackville-Jones and calls him “Sir.”
- The waiter and manager do as Sackville-Jones requests.
- The waiter and manager are concerned for his welfare.
- Other plausible text-based responses.

**Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.

**Benchmark ELA-6-H1:** analyzing, evaluating, and responding to United States and world literature that represents the experiences and traditions of diverse ethnic groups

## Short Passage

This essay explains the steps involved in writing a dictionary. Read the essay and answer questions XX through XX.

### How Dictionaries Are Made

S.I. Hayakawa

It is widely believed that every word has a correct meaning, that we learn these meanings principally from teachers and grammarians (except that most of the time we don't bother to, so that we ordinarily speak "sloppy English"), and that dictionaries and grammars are the supreme authority in matters of meaning and usage. Few people ask by what authority the writers of dictionaries and grammars say what they say. I once got into a dispute with an Englishwoman over the pronunciation of a word and offered to look it up in the dictionary. The Englishwoman said firmly "What for? I am English. I was born and brought up in England. The way I speak *is* English." Such self-assurance about one's own language is not uncommon among the English. In the United States, however, anyone who is willing to quarrel with the dictionary is regarded as either eccentric or mad.

Let us see how dictionaries are made and how the editors arrive at definitions. What follows applies, incidentally, only to those dictionary offices where first-hand, original research goes on—not those in which editors simply copy existing dictionaries. The task of writing a dictionary begins with the reading of vast amounts of the literature of the period or subject that the dictionary is to cover. As the editors read, they copy on cards every interesting or rare word, every unusual or peculiar occurrence of a common word, a large number of common words in their ordinary uses, and also the sentences in which each of these words appears, thus:

pail

The dairy pails bring home increase  
of milk

Keats, *Endymion*

1, 44-45

That is to say, the context of each word is connected, along with the word itself. For a really big job of dictionary writing, such as the *Oxford English Dictionary* (usually bound in about

twenty-five volumes), millions of such cards are collected, and the task of editing occupies decades. As the cards are collected, they are alphabetized and sorted. When the sorting is completed, there will be for each word anywhere from two to three to several hundred illustrative quotations, each on its card.

To define a word, then, the dictionary editor places before him the stack of cards illustrating that word; each of the cards represents an actual use of the word by a writer of some literary or historical importance. He reads the cards carefully, discards some, rereads the rest, and divides up the stack according to what he thinks are the several senses of the word. Finally, he writes his definitions, following the hard-and-fast rule that each definition *must* be based on what the quotations in front of him reveal about the meaning of the word. The editor cannot be influenced by what *he* thinks a given word *ought* to mean. He must work according to the cards or not at all.

The writing of a dictionary, therefore, is not a task of setting up authoritative statements about the "true meanings" of words, but a task of *recording*, to the best of one's ability, what various words *have meant* to authors in the distant or immediate past. *The writer of a dictionary is a historian, not a lawgiver.* If, for example, we had been writing a dictionary in 1890, or even as late as 1919, we could have said that the word "broadcast" means "to scatter" (seed, for example), but we could not have decreed that from 1921 on, the most common meaning of the word should become "to disseminate audible messages, etc., by radio transmission." To regard the dictionary as an "authority," therefore, is to credit the dictionary writer with gifts of prophecy which neither he nor anyone else possesses. In choosing our words when we speak or write, we can be *guided* by the historical record afforded us by the dictionary, but we cannot be *bound* by it, because new situations, new experiences, new inventions, new feelings, are always compelling us to give new uses to old words. Looking under a "hood," we should ordinarily have found, five hundred years ago, a monk; today, we find a motorcar engine.

### Sample Multiple-Choice Items

1. In paragraph 2, the sample item card for pail is an example of
- A. an illustrative quotation.
  - B. a correct meaning.
  - C. a possible definition.
  - D. a rare word.

**Correct response: A**

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

**Benchmark ELA-1-H3:** reading, comprehending, and responding to extended, complex written, spoken, and visual texts

2. What is the **main** point of the essay?
- A. People should use dictionaries more often.
  - B. Most dictionaries are easy to use.
  - C. The procedure for making dictionaries is confusing.
  - D. The process of developing dictionaries is ongoing.

**Correct response: D**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H1:** using comprehension strategies (for example, synthesizing, critiquing) to evaluate oral, written, and visual texts



3. In the first paragraph, the author uses the example of the Englishwoman to
- A. show that English is originally from England.
  - B. show that people should know their own language.
  - C. compare reasons for using a dictionary with reasons not to use one.
  - D. contrast the English confidence in language with American acceptance of it.

**Correct response: D**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H3:** analyzing the effects of an author’s life, culture, and philosophical assumptions as reflected in the author’s viewpoint (perspective)

4. In the last sentence of the essay, the example of a “hood” is used to show that
- A. the meanings of words continue to change.
  - B. words have only one correct meaning.
  - C. the meanings and origins of words are consistent.
  - D. we can never know exactly what a word means.

**Correct response: A**

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H4:** using analytical reasoning skills in a variety of complex oral, written, and visual texts

## Sample Short-Answer Items

5. Explain the **three** commonly held views about dictionaries that this essay disputes.

### Scoring Rubric:

| Score | Description   |
|-------|---|
| 2     | The student's response is complete. It explains three commonly held views about dictionaries disputed in the essay.   |
| 1     | The student's response is partially correct. It <ul style="list-style-type: none"><li>discusses one or two commonly held views about dictionaries disputed in the essay</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>demonstrates a limited awareness and/or may contain errors.</li></ul> |
| 0     | The student's response is incorrect, irrelevant, too brief to evaluate, or blank.   |

### Exemplary responses will include any three of these:

*Views disputed in the essay:*

- Every word has a correct meaning;
- Dictionaries are the supreme authority on meanings;
- Anyone who quarrels with a dictionary meaning is eccentric or mad; and
- We learn meanings from others (teachers and grammarians).

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H1:** using comprehension strategies (for example, synthesizing, critiquing) to evaluate oral, written, and visual texts

6. The author states in the last paragraph, “We can be **guided** by the historical record afforded us by the dictionary, but we cannot be **bound** by it” (paragraph 5). Analyze the meaning of this statement.

**Scoring Rubric:**

| <b>Score</b> | <b>Description</b>   |
|--------------|--|
| <b>2</b>     | The student’s response is complete. It gives a thorough analysis of the meaning of the statement.  |
| <b>1</b>     | The student’s response is partially correct. It <ul style="list-style-type: none"><li>• gives a vague discussion of the meaning of the statement</li></ul> <b>OR</b> <ul style="list-style-type: none"><li>• demonstrates a limited awareness and/or may contain errors.</li></ul> |
| <b>0</b>     | The student’s response is incorrect, irrelevant, too brief to evaluate, or blank.  |

**Exemplary response:**

The statement means that dictionaries provide information about how words are used at a particular time. The author states, “The writer of a dictionary is a historian, not a lawgiver.” Word meanings change according to how they are used at a particular time.

**Standard 7:** Students apply reasoning and problem-solving skills to reading, writing, speaking, listening, viewing, and visually representing.

**Benchmark ELA-7-H2:** using reasoning skills (for example, analyzing, evaluating), incorporating life experiences, and using available information resources to solve problems in complex oral, written, and visual texts

## PROOFREADING

Following are a proofreading passage and four sample multiple-choice items that appeared on a GEE English Language Arts test. The Proofreading session measures standard 3, with the exception of ELA-3-H1, writing legibly. On the actual test, this session includes eight multiple-choice items.

15 Cyprus St.  
Baton Rouge, LA 70804  
May 15, 2000

Ms. Elizabeth Bradshaw  
Recreation and Parks Director  
11 Court Street  
Baton Rouge, LA 70804

Dear Ms. Bradshaw:

I am writing to apply for the position of Youth Counselor in the town's summer recreation program, specifically the basketball program. I want to have this job because I enjoy watching aspiring young basketball players realize their potential as they progress through the summer. In addition, I have wanted to be a basketball coach my entire life.

Because I have had experience working with children and playing basketball, I feel that I am well-qualified for a position on the summer recreation staff. I have played basketball since I was eight, have attended summer hoop camp for five years, and am currently on the high school varsity squad. For the past two winters, I have also coached a team of third graders in the Pee Wee basketball division.

I am in good physical condition, I exercise every day. I am friendly and deal well  
1  
with people. I love seeing childrens' eyes light up as they learn the fun that goes along  
2  
with the game of basketball. You won't hardly find anyone more interested and qualified.

3

You may contact the following people for a personal reference: Ms. Kathleen Allen, for whom I babysit, and Mr. Ron McCurry, my basketball coach at my High School.

4

Please let me know if you would like any more information about my experience or my qualifications. Thank you for your consideration.

Sincerely,

Marie Moore

All sample questions measure ELA-3-H2.

**Standard 3:** Students communicate using standard English grammar, usage, sentence structure, punctuation, capitalization, spelling, and handwriting.

**Benchmark ELA-3-H2:** using the grammatical and mechanical conventions of standard English

1.

- A. condition I
- B. condition we
- C. condition; I
- D. no error

**Correct response: C**

2.

- A. children's eyes
- B. child's eyes
- C. childrens eyes
- D. no error

**Correct response: A**

**3.**

- A. You will not
- B. You hardly won't
- C. You will not never
- D. no error

**Correct response: A**

**4.**

- A. at my high school.
- B. at his High School.
- C. in my High School.
- D. no error

**Correct response: A**

## Standards and Benchmark Statements, across Grades

**Standard 1:** Students read, comprehend, and respond to a range of materials, using a variety of strategies for different purposes.

| K–4   | 5–8  | 9–12   |
|---|--|--|
| <p><b>ELA-1-E1</b> Gaining meaning from print and building vocabulary using a full range of strategies (for example, self-monitoring and correcting, searching, cross-checking), evidenced by reading behaviors using phonemic awareness, phonics, sentence structure, and meaning</p> <p><b>ELA-1-E2</b> Using the conventions of print (for example, left-to-right directionality, top-to-bottom, one-to-one matching, sentence framing)</p> <p><b>ELA-1-E3</b> Adjusting speed of reading (e.g., appropriate pacing, intonation, expression) to suit the difficulty of materials and the purpose for reading for example, enjoying, learning, problem solving)</p> <p><b>ELA-1-E4</b> Recognizing story elements (for example, setting, plot, character, theme) and literary devices (for example, simile, dialogue, personification) within a selection</p> <p><b>ELA-1-E5</b> Reading, comprehending, and responding to written, spoken, and visual texts in extended passages (for example, range for fiction passages—450–1,000 words; range for nonfiction—450–850 words)</p> <p><b>ELA-1-E6</b> Interpreting (for example, retelling, summarizing) texts to generate connections to real-life situations</p> | <p><b>ELA-1-M1</b> Using knowledge of word meaning and developing basic and technical vocabulary using various strategies (for example, context clues, idioms, affixes, etymology, multiple-meaning words)</p> <p style="text-align: center;"><b>Conventions of print are enhanced though application across grade levels.</b></p> <p style="text-align: center;"><b>Speed of reading is enhanced through application across grade levels.</b></p> <p><b>ELA-1-M2</b> Interpreting story elements (e.g., mood, tone, style)* and literary devices (for example, flashback, metaphor, foreshadowing, symbolism)* within a selection</p> <p><b>ELA-1-M3</b> Reading, comprehending, and responding to written, spoken, and visual texts in extended passages (for example, ranging from 500–1,000 words)</p> <p><b>ELA-1-M4</b> Interpreting (for example, paraphrasing, comparing, contrasting) texts with supportive explanations to generate connections to real-life situations and other texts (for example, business, technical, scientific)</p> | <p><b>ELA-1-H1</b> Using knowledge of word meaning and extending basic and technical vocabulary, employing a variety of strategies (for example, contexts, connotations and denotations, word derivations, relationships, inferences)</p> <p style="text-align: center;"><b>Conventions of print are enhanced though application across grade levels.</b></p> <p style="text-align: center;"><b>Speed of reading is enhanced through application across grade levels.</b></p> <p><b>ELA-1-H2</b> Analyzing and evaluating the effects of complex literary devices (for example, irony, sarcasm, ambiguity)** on the meaning and purpose of a selection</p> <p><b>ELA-1-H3</b> Reading, comprehending, and responding to extended, complex written, spoken, and visual texts (for example, ranging from 600–1,500 words)</p> <p><b>ELA-1-H4</b> Analyzing and evaluating complex texts with supportive explanations to generate connections to real-life situations and other texts (for example, consumer materials, public documents)</p> |

| <b>K-4</b>   | <b>5-8</b>  | <b>9-12</b>   |
|--|---|---|
| <b>ELA-1-E7</b> Reading with fluency (natural sequencing of words) for various purposes (for example, enjoying, learning, problem solving) | <b>ELA-1-M5</b> Adjusting reading rate according to texts and purposes for reading (for example, problem solving, evaluating, researching)* | <b>ELA-1-H5</b> Adjusting reading rate according to texts and purposes for reading (for example, analyzing, synthesizing, evaluating)** |

\* Inclusive of K-4 examples

\*\* Inclusive of K-8 examples



**Standard 2:** Students write competently for a variety of purposes and audiences.

| K–4  | 5–8   | 9–12  |
|--|---|---|
| <p><b>ELA-2-E1</b> Dictating, dictating and writing compositions that clearly state or imply a central idea with supporting details in a logical, sequential order (beginning, middle, end)</p>                        | <p><b>ELA-2-M1</b> Writing multiparagraph compositions (150–200 words) that clearly imply a central idea with supporting details in a logical, sequential order</p>   | <p><b>ELA-2-H1</b> Writing compositions (250–300 words) that employ specific organizational elements (for example, spatial order, order of importance, ascending/descending order, chronological order) and clearly imply a central idea with supporting details in a logical, sequential order</p> |
| <p><b>ELA-2-E2</b> Focusing on language (vocabulary), concepts, and ideas that show an awareness of the intended audience and/or purpose (for example, classroom, real-life, workplace) in developing compositions</p> | <p><b>ELA-2-M2</b> Using language, concepts, and ideas that show an awareness of the intended audience and/or purpose (for example, classroom, real-life, workplace) in developing complex compositions</p> | <p><b>ELA-2-H2</b> Using language, concepts, and ideas that show an awareness of the intended audience and/or purpose (for example, classroom, real-life, workplace) in developing extended complex compositions</p>  |
| <p><b>ELA-2-E3</b> Creating written texts using the writing process</p>  | <p><b>ELA-2-M3</b> Identifying and applying the steps of the writing process</p>  | <p><b>ELA-2-H3</b> Applying the steps of the writing process, emphasizing revising and editing in final drafts</p>  |
| <p><b>ELA-2-E4</b> Using narration, description, exposition, and persuasion to develop compositions (for example, stories, letters, poems, logs)</p>   | <p><b>ELA-2-M4</b> Using narration, description, exposition, and persuasion to develop various modes of writing (for example, notes, essays)*</p>   | <p><b>ELA-2-H4</b> Using narration, description, exposition, and persuasion to develop various modes of writing (for example, editorials, critical analyses)**</p>  |
| <p><b>ELA-2-E5</b> Recognizing and applying literary devices (for example, figurative language)</p>  | <p><b>ELA-2-M5</b> Identifying and applying literary devices (for example, symbolism, dialogue)*</p>  | <p><b>ELA-2-H5</b> Applying literary devices and various stylistic elements (for example, diction, sentence structure, voice, tone)**</p>   |
| <p><b>ELA-2-E6</b> Writing as a response to texts and life experiences (for example, journals, letters, lists)</p>   | <p><b>ELA-2-M6</b> Writing as a response to texts and life experiences (for example, personal and business letters)*</p>  | <p><b>ELA-2-H6</b> Writing as a response to texts and life experiences (for example, technical writing, resumes)**</p>  |

\* Inclusive of K–4 examples

\*\* Inclusive of K–8 examples

**Standard 3:** Students communicate using standard English grammar, usage, sentence structure, punctuation, capitalization, spelling, and handwriting.

| K–4   | 5–8  | 9–12   |
|---|--|--|
| <p><b>ELA-3-E1</b> Writing legibly, allowing margins and correct spacing between letters in a word and words in a sentence</p>  | <p><b>ELA-3-M1</b> Writing fluidly and legibly in cursive or printed form</p>  | <p><b>ELA-3-H1</b> Writing fluidly and legibly in cursive or printed form</p>  |
| <p><b>ELA-3-E2</b> Demonstrating use of punctuation (for example, comma, apostrophe, period, question mark, exclamation mark), capitalization, and abbreviations in final drafts of writing assignments</p>   | <p><b>ELA-3-M2</b> Demonstrating use of punctuation (for example, colon, semicolon, quotation marks, dashes, parentheses), capitalization, and abbreviations</p>                         | <p><b>ELA-3-H2</b> Using the grammatical and mechanical conventions of standard English</p>  |
| <p><b>ELA-3-E3</b> Demonstrating standard English structure and usage by writing clear, coherent sentences</p>  | <p><b>ELA-3-M3</b> Demonstrating standard English structure and usage by using correct and varied sentence types (e.g., compound and compound-complex) and effective personal styles</p> | <p><b>Standard English structure and usage are demonstrated across grade levels.</b></p>   |
| <p><b>ELA-3-E4</b> Using knowledge of the parts of speech to make choices for writing</p>   | <p><b>ELA-3-M4</b> Demonstrating understanding of the parts of speech to make choices for writing</p>  | <p><b>Standard English structure and usage are demonstrated across grade levels.</b></p>   |
| <p><b>ELA-3-E5</b> Spelling accurately using strategies (for example, letter-sound correspondence, hearing and recording sounds in sequence, spelling patterns, pronunciation) and resources (for example, glossary, dictionary) when necessary</p> | <p><b>ELA-3-M5</b> Spelling accurately using strategies and resources (for example, glossary, dictionary, thesaurus, spell check) when necessary</p>                                     | <p><b>ELA-3-H3</b> Spelling accurately using strategies and resources (for example, technical glossary, specialized dictionary) when necessary</p> |

**Standard 4:** Students demonstrate competence in speaking and listening as tools for learning and communicating.

| K–4   | 5–8   | 9–12   |
|---|---|--|
| <p><b>ELA-4-E1</b> Speaking intelligibly, using standard English pronunciation</p> <p><b>ELA-4-E2</b> Giving and following directions/procedures</p> <p><b>ELA-4-E3</b> Telling or retelling stories in sequence</p> <p><b>ELA-4-E4</b> Giving rehearsed and unrehearsed presentations</p> <p><b>ELA-4-E5</b> Speaking and listening for a variety of audiences (for example, classroom, real-life, workplace) and purposes (for example, awareness, concentration, enjoyment, information, problem solving)</p> <p><b>ELA-4-E6</b> Listening and responding to a wide variety of media (for example, music, TV, film, speech)</p> <p><b>ELA-4-E7</b> Participating in a variety of roles in group discussions (for example, active listener, contributor, discussion leader)</p> | <p><b>ELA-4-M1</b> Speaking intelligibly, using standard English pronunciation and diction</p> <p><b>ELA-4-M2</b> Giving and following directions/procedures</p> <p><b>This benchmark is not emphasized at these grade levels.</b></p> <p><b>ELA-4-M3</b> Using the features of speaking (for example, audience analysis, message construction, delivery, interpretation of feedback) when giving rehearsed and unrehearsed presentations</p> <p><b>ELA-4-M4</b> Speaking and listening for a variety of audiences (for example, classroom, real-life, workplace) and purposes (for example, awareness, concentration, enjoyment, information, problem solving)</p> <p><b>ELA-4-M5</b> Listening and responding to a wide variety of media*</p> <p><b>ELA-4-M6</b> Participating in a variety of roles in group discussions (for example, facilitator, recorder)*</p> | <p><b>ELA-4-H1</b> Speaking intelligibly, using standard English pronunciation and diction</p> <p><b>ELA-4-H2</b> Giving and following directions and procedures</p> <p><b>This benchmark is not emphasized at these grade levels.</b></p> <p><b>ELA-4-H3</b> Using the features of speaking (for example, audience analysis, message construction, delivery, interpretation of feedback) when giving prepared and impromptu presentations</p> <p><b>ELA-4-H4</b> Speaking and listening for a variety of audiences (for example, classroom, real-life, workplace) and purposes (for example, awareness, concentration, enjoyment, information, problem solving)</p> <p><b>ELA-4-M5</b> Listening and responding to a wide variety of media (for example, CD-ROM)**</p> <p><b>ELA-4-H6</b> Participating in a variety of roles in group discussion (for example, mediator)**</p> |

\* Inclusive of K–4 examples

\*\* Inclusive of K–8 examples

**Standard 5:** Students locate, select, and synthesize information from a variety of texts, media, references, and technological sources to acquire and communicate knowledge.

| K–4  | 5–8   | 9–12  |
|--|---|---|
| <p><b>ELA-5-E1</b> Recognizing and using organizational features of printed text, other media, and electronic information (for example, parts of a text, alphabetizing, captions, legends, pull-down menus, keyword searches, icons, passwords, entry menu features)</p>     | <p><b>ELA-5-M1</b> Identifying and using organizational features of printed text, other media and electronic information (for example, microprint, CD-ROM, e-mail)*</p>                           | <p><b>ELA-5-H1</b> Evaluating and using organizational features of printed text, other media, and electronic information (for example, citations, endnotes, bibliographic references)**</p> |
| <p><b>ELA-5-E2</b> Locating and evaluating information sources (for example, print materials, databases, CD-ROM references, Internet information, electronic reference works, community and government data, television and radio resources, audio and visual materials)</p> | <p><b>ELA-5-M2</b> Integrating information sources*</p>   | <p><b>ELA-5-H2</b> Synthesizing information sources**</p>   |
| <p><b>ELA-5-E3</b> Locating, gathering, and selecting information using graphic organizers, simple outlining, note taking, and summarizing to produce texts and graphics</p>   | <p><b>ELA-5-M3</b> Locating, gathering, and selecting information using formal outlining, paraphrasing, interviewing, and surveying to produce documented texts and graphics*</p>                 | <p><b>ELA-5-H3</b> Accessing information and conducting research using a variety of primary and secondary sources to produce formal papers**</p>  |
| <p><b>ELA-5-E4</b> Using available technology to produce, revise, and publish a variety of works (for example, book reviews, summaries, short research reports)</p>  | <p><b>ELA-5-M4</b> Using available technology to produce, revise, and publish a variety of works (for example, documented research reports, investigative reports, annotated bibliographies)*</p> | <p><b>ELA-5-H4</b> Using available technology to produce, revise, and publish a variety of works (abstracts, analytical reports, summative research)**</p>                                  |
| <p><b>ELA-5-E5</b> Giving credit for borrowed information by telling or listing sources</p>  | <p><b>ELA-5-M5</b> Citing references using various formats (for example, endnotes, bibliography)*</p>   | <p><b>ELA-5-H5</b> Citing references using various formats (for example, parenthetical citations, annotated bibliographies)**</p>   |
| <p><b>ELA-5-E6</b> Recognizing and using graphic organizers (for example, charts/ graphs, tables/schedules, diagrams/maps)</p>   | <p><b>ELA-5-M6</b> Identifying and interpreting graphic organizers (for example, flowcharts, timelines, tree diagrams)*</p>   | <p><b>ELA-5-H6</b> Analyzing and synthesizing graphic organizers (for example, organizational charts, concept maps, comparative tables)**</p>   |

\* Inclusive of K–4 examples

\*\* Inclusive of K–8 examples

**Standard 6:** Students read, analyze, and respond to literature as a record of life experiences.

| K–4  | 5–8   | 9–12   |
|--|---|--|
| <p><b>ELA-6-E1</b> Recognizing and responding to United States and world literature that represents the experiences and traditions of diverse ethnic groups</p> <p><b>This benchmark is not emphasized at these grade levels.</b></p> <p><b>ELA-6-E2</b> Recognizing and responding to a variety of classic and contemporary literature from many genres (for example, folktales, legends, myths, biography, autobiography, poetry, short stories)</p> <p><b>ELA-6-E3</b> Identifying and distinguishing key differences of various genres</p> | <p><b>ELA-6-M1</b> Comparing/contrasting, and responding to United States and world literature that represents the experiences and traditions of diverse ethnic groups</p> <p><b>This benchmark is not emphasized at these grade levels.</b></p> <p><b>ELA-6-M2</b> Identifying, comparing, and responding to a variety of classic and contemporary fiction and nonfiction literature from many genres (for example, novels, drama)*</p> <p><b>ELA-6-M3</b> Classifying and interpreting various genres according to their unique characteristics</p> | <p><b>ELA-6-H1</b> Analyzing, evaluating, and responding to United States and world literature that represents the experiences and traditions of diverse ethnic groups</p> <p><b>ELA-6-H2</b> Analyzing distinctive elements (for example, recurrent themes, historical significance, literary techniques) of ancient, American, British, and world literature</p> <p><b>ELA-6-H3</b> Analyzing and synthesizing a variety of classic and contemporary fiction and nonfiction literature from many genres (for example, epic)**</p> <p><b>ELA-6-H4</b> Analyzing and responding to various genres as records of life experiences</p> |

\* Inclusive of K–4 examples

\*\* Inclusive of K–8 examples

**Standard 7:** Students apply reasoning and problem-solving skills to their reading, writing, speaking, listening, viewing, and visually representing.

| K–4   | 5–8  | 9–12   |
|---|--|--|
| <p><b>ELA-7-E1</b> Using comprehension strategies (for example, sequencing, predicting, drawing conclusions, comparing and contrasting, making inferences, determining main ideas) to interpret oral, written, and visual texts</p> | <p><b>ELA-7-M1</b> Using comprehension strategies (for example, summarizing, recognizing literary devices, paraphrasing) * to analyze oral, written, and visual texts</p>  | <p><b>ELA-7-H1</b> Using comprehension strategies (for example, synthesizing, critiquing)** to evaluate oral, written, and visual texts</p>  |
| <p><b>ELA-7-E2</b> Using basic reasoning skills, life experiences, and available information to solve problems in oral, written, and visual texts</p>   | <p><b>ELA-7-M2</b> Using reasoning skills (for example, categorizing, prioritizing),* life experiences, accumulated knowledge, and relevant available information resources to solve problems in oral, written, and visual texts</p> | <p><b>ELA-7-H2</b> Using reasoning skills (for example, analyzing, evaluating),** incorporating life experiences, and using available information resources to solve problems in complex oral, written, and visual texts</p> |
| <p><b>ELA-7-E3</b> Recognizing an author’s purpose (reason for writing), and viewpoint (perspective)</p>  | <p><b>ELA-7-M3</b> Interpreting the effects of an author’s purpose (reason for writing), and viewpoint (perspective)</p>   | <p><b>ELA-7-H3</b> Analyzing and evaluating the effects of an author’s life, culture, and philosophical assumptions as reflected in the author’s viewpoint (perspective)</p>   |
| <p><b>ELA-7-E4</b> Using basic reasoning skills to distinguish fact from opinion, skim and scan for facts, determine cause and effect, generate inquiry, and make connections with real-life situations</p>                         | <p><b>ELA-7-M4</b> Using inductive and deductive reasoning skills across oral, written, and visual texts*</p>  | <p><b>ELA-7-H4</b> Using analytical reasoning skills in a variety of complex oral, written, and visual texts**</p>   |

\* Inclusive of K–4 examples

\*\* Inclusive of K–8 examples

**Louisiana Educational Assessment Program  
Graduation Exit Exam  
English Language Arts Achievement Level Descriptors: Grade 10**

These descriptors have been modified slightly from the 2001 publication to match the condensed descriptors on the 2006 Student Report.

| Achievement Level | Descriptors   |
|-------------------|---|
| <b>Advanced</b>   | <p>Students scoring at this level generally exhibit the following skills:</p> <p><b>In the areas of reading and use of resources, students</b></p> <ul style="list-style-type: none"> <li>• demonstrate thorough understanding of what they read and describe abstract themes and ideas;</li> <li>• analyze texts for meaning and form and support their analyses with specific examples;</li> <li>• extend ideas in texts by relating them to their experiences and to the world; and</li> <li>• research topics by selecting and evaluating information from various sources.</li> </ul> <p><b>In the area of writing, students</b></p> <ul style="list-style-type: none"> <li>• express analytical, critical, and/or creative thinking in response to a writing task;</li> <li>• develop effective responses that demonstrate sharply focused central ideas, cohesive organization, and elaboration with illustrative, supporting details;</li> <li>• demonstrate audience awareness through the use of rich vocabulary and a clear personal style or voice; and</li> <li>• demonstrate consistent command of spelling, grammar, punctuation, and capitalization.</li> </ul> |
| <b>Mastery</b>    | <p>Students scoring at this level generally exhibit the following skills:</p> <p><b>In the areas of reading and use of resources, students</b></p> <ul style="list-style-type: none"> <li>• demonstrate overall understanding of what they read, including inferential and literal information;</li> <li>• analyze an author’s use of literary devices;</li> <li>• extend ideas in texts by making inferences, drawing conclusions, and making clear connections to personal experiences and other readings; and</li> <li>• research topics by selecting and analyzing information from various sources.</li> </ul> <p><b>In the area of writing, students</b></p> <ul style="list-style-type: none"> <li>• express critical, analytical, and/or creative thinking in response to a writing task;</li> <li>• develop effective responses with focused central ideas, logical organization, and convincing elaboration;</li> <li>• demonstrate awareness of the intended audience through use of varied word choice (vocabulary) and sentence structure; and</li> <li>• demonstrate reasonable command of spelling, grammar, punctuation, and capitalization.</li> </ul>         |

|   |  |
|---|--|
| <p style="text-align: center;"><b>Basic</b></p>             | <p>Students scoring at this level generally exhibit the following skills:</p> <p><b>In the areas of reading and use of resources, students</b></p> <ul style="list-style-type: none"> <li>• demonstrate overall understanding of what they read and make some interpretations;</li> <li>• identify elements of texts and an author’s style;</li> <li>• extend ideas in texts by making simple inferences and some connections to personal experiences; and</li> <li>• research topics by selecting and using information in various sources.</li> </ul> <p><b>In the area of writing, students</b></p> <ul style="list-style-type: none"> <li>• demonstrate some evidence of critical, analytical, and/or creative thinking in response to a writing task;</li> <li>• develop responses with central ideas, evidence of conscious organization, and some supporting details;</li> <li>• demonstrate audience awareness through a sense of personal style or voice and some variety in vocabulary and sentence structure; and</li> <li>• make some errors in spelling, grammar, punctuation, and capitalization that interfere with communication to the reader.</li> </ul> |
| <p style="text-align: center;"><b>Approaching Basic</b></p> | <p>Students scoring at this level generally exhibit the following skills:</p> <p><b>In the areas of reading and use of resources, students</b></p> <ul style="list-style-type: none"> <li>• demonstrate partial understanding of what they read;</li> <li>• identify some elements of an author’s style;</li> <li>• make simple or broad connections between texts and their personal experiences; and</li> <li>• research topics by locating information in commonly used sources.</li> </ul> <p><b>In the area of writing, students</b></p> <ul style="list-style-type: none"> <li>• demonstrate a limited response to a writing task;</li> <li>• develop responses with unfocused central ideas, some evidence of organization, and minimal elaboration or supporting details;</li> <li>• demonstrate limited audience awareness through use of weak personal style or voice, simple or inappropriate vocabulary, and simple sentences; and</li> <li>• demonstrate inconsistent or little command of spelling, grammar, capitalization, and punctuation.</li> </ul>   |
| <p style="text-align: center;"><b>Unsatisfactory</b></p>    | <p>Students scoring at this level generally have not demonstrated the fundamental knowledge and skills needed for the next level of schooling.</p> <p><b>In the areas of reading and use of resources, students at this level have <i>not</i> exhibited the ability to</b></p> <ul style="list-style-type: none"> <li>• demonstrate an understanding of what they read;</li> <li>• identify simple elements of an author’s style;</li> <li>• make connections between ideas in texts and personal experiences; or</li> <li>• research topics by locating information in commonly used sources.</li> </ul> <p><b>In the area of writing, students at this level have <i>not</i> exhibited the ability to</b></p> <ul style="list-style-type: none"> <li>• express ideas in response to a writing task;</li> <li>• develop a central idea with focus, observable organization, or sufficient elaboration;</li> <li>• show audience awareness through the use of appropriate vocabulary and varied sentence structure; or</li> <li>• demonstrate acceptable command of spelling, grammar, capitalization, and punctuation.</li> </ul>   |





## ENGLISH LANGUAGE ARTS WRITER'S CHECKLIST

As you write your composition, remember these important points.

### Composing:

- Write on the assigned topic.
- Present a clear main idea.
- Give enough details to support and elaborate your main idea.
- Present your ideas in a logical order.

### Style/Audience Awareness:

- Write with your audience (the person or group identified by the topic) in mind.
- Use vocabulary (words) that expresses your meaning well.
- Use sentences that make your main idea interesting to your audience.

### Sentence Formation:

- Write in complete sentences and use a variety of sentence patterns.

### Usage:

- Write using appropriate subject-verb agreement, verb tenses, word meaning, and word endings.

### Mechanics:

- Write using correct punctuation.
- Write using correct capitalization.
- Write using appropriate formatting (e.g., indentations, margins).

### Spelling:

- Write using correct spelling.



**Remember to print or write neatly.**

**Turn this card over for directions for writing your composition.**

## DIRECTIONS FOR WRITING

This is a test of writing ability. Therefore, you should follow the steps below to help you write a successful composition.

### Step 1: Planning and Drafting

- Read the writing topic in your test booklet carefully.
- Think about what you will write before you begin.
- Use the space provided in your test booklet for planning your composition and writing your rough draft.
- Remember that your planning notes and rough draft will not be scored.

### Step 2: Revising

- Review the Writer's Checklist to make sure you have covered all the points.
- Reread what you have written for your rough draft.
- Rearrange ideas or change words to make your meaning clear and improve your paper.
- Rewrite your composition neatly on the correct page(s) in your answer document.
- Write your final paper in either print or cursive using a No. 2 pencil.

### Step 3: Proofreading

- Review the points on the Writer's Checklist after you have finished writing your final draft.
- Make any needed corrections.
- Erase or strike through words if necessary.



### Points to Remember:

- Only the writing on the **Final Draft** pages in your answer document will be scored.
- Your paper will be scored on (1) development and support of ideas, (2) expression of ideas, (3) correct sentence formation, (4) usage, (5) mechanics, and (6) spelling.



## Chapter 2: GEE Mathematics, Grade 10

This chapter provides specifications for the Mathematics test for grade 10 GEE. It describes the content and format of the test, provides the number and types of items, and explains how the standards and benchmarks for each strand of Mathematics are assessed.

### Test Structure

The Mathematics test consists of three sessions. Students are allowed as much time as they need to complete each session, but suggested times are provided in the *Test Administration Manual*; it explains the procedures for allowing students additional time to complete a session of the test.

**Session 1:** 30 multiple-choice items without calculators

**Session 2:** 30 multiple-choice items with calculators

**Session 3:** 4 constructed-response items with calculators

### Item Types

The multiple-choice items consist of a stem and four answer options (A, B, C, and D). Response options that are numbers are shown in ascending or descending order of magnitude, unless such ordering cues the answer.

The constructed-response items require students to supply a numerical answer (a number sentence or an arithmetical solution), a short written answer, or some other type of constructed response.

### Test Description

#### Sessions 1 and 2:

These multiple-choice items assess a student's knowledge and conceptual understanding in all strands of mathematics. Whenever possible, concepts and skills are assessed in realistic contexts.

Any benchmark assessed without calculators is also eligible for assessment in the session permitting calculators, with the exception of estimation.

#### Session 3:

The four constructed-response items involve a number of separate steps and require application of multiple skills. They are designed to assess one or more of the strands and/or benchmarks, requiring students to demonstrate the connection of the strand to the other strands and to real-life situations.

The question format for this session is open-ended, including numerical answers, short written answers, and other types of constructed response (for example, draw a graph or geometrical pattern). Students may be required to explain in writing how they arrived at their answers.

Constructed-response items may have more than one possible solution or more than one path to the solution. Students' responses are scored for accuracy of the answer, proper operations used, and appropriate problem-solving approach or strategy. Partial credit is allowed, and calculators are permitted.

Whenever possible, test questions assess mathematical skills and knowledge in realistic contexts. These items are presented in terms of practical situations and problems that students are likely to encounter in their daily lives.

A test item may call upon skills related to more than one standard or benchmark. Nevertheless, for assessment purposes, a given test item is keyed to a single standard or benchmark reflecting the *primary* skill it measures.

Readability level of test questions is minimized to the extent possible (except for necessary mathematical terms), so that students' reading ability does not interfere with their ability to demonstrate their mathematical knowledge and skills.

**Mathematical formulas and equivalencies:** Students are not required to recall formulas or unit conversions from memory. A separate Mathematics Reference Sheet containing grade-appropriate formulas and equivalencies needed to solve measurement or geometry items is provided. Students are expected to select the proper formula or conversion needed to solve a given problem. The Mathematics Reference Sheet can be found at the end of the Mathematics section of the guide. It is also available on the Louisiana Department of Education Web site in a version suitable for printing.

**Mathematical tools:** A ruler and a protractor are provided during testing. School districts are responsible for making calculators available to all students for the appropriate sessions of the test.

## **Calculator Recommendations and Restrictions**

It is recommended that a calculator be made available to **each** student for instructional and assessment purposes. As with all instructional materials, each individual district and school should determine which calculator best supports its mathematics curriculum and instructional program. The calculator that the student uses as part of his/her regular mathematics instruction is the calculator that should be used on the Mathematics portion of GEE.

### **Calculators recommended for instruction and assessment:**

9–12 students: a scientific calculator with graphing capabilities

### **Calculators NOT permitted on statewide assessment:**

- handheld or laptop computers
- pocket organizers
- calculators with paper tape
- calculators that talk or make noise
- calculators with QWERTY (typewriter-style) keypads
- electronic writing pads or pen input devices

## Scoring the Mathematics Sessions

Multiple-choice items have four response options (A, B, C, and D) and are scored 1 if correct and 0 if incorrect.

Constructed-response items are scored according to an item-specific rubric, from 0 to 4 points. The specific rubric for each item is developed from the general 4-point scoring rubric for LEAP, GEE, and *i*LEAP.

### General Scoring Rubric for GEE Mathematics Constructed-Response Items

| Score Level | Description of Score Level  |
|-------------|---|
| 4           | <ul style="list-style-type: none"><li>• The response demonstrates in-depth understanding of the relevant content and/or procedures.</li><li>• The student completes all important components of the task accurately and communicates ideas effectively.</li><li>• Where appropriate, the student offers insightful interpretations and/or extensions.</li><li>• Where appropriate, the student uses more sophisticated reasoning and/or efficient procedures.</li></ul> |
| 3           | <ul style="list-style-type: none"><li>• The response demonstrates understanding of major concepts and/or processes, although less important ideas or details may be overlooked or misunderstood.</li><li>• The student completes most important aspects of the task accurately and communicates clearly.</li><li>• The student's logic and reasoning may contain minor flaws.</li></ul>   |
| 2           | <ul style="list-style-type: none"><li>• The student completes some parts of the task successfully.</li><li>• The response demonstrates gaps in conceptual understanding.</li></ul>  |
| 1           | <ul style="list-style-type: none"><li>• The student completes only a small portion of the tasks and/or shows minimal understanding of the concepts and/or processes.</li></ul>  |
| 0           | <ul style="list-style-type: none"><li>• The student's response is incorrect, irrelevant, too brief to evaluate, or blank.</li></ul>   |

## Mathematics Test Specifications

Sixty 1-point, multiple-choice items plus four 4-point items equals a 76-point test. The table below provides the test specifications for the multiple-choice sessions of the grade 10 GEE Mathematics assessment. The values in the table do not include the constructed-response items. The four constructed-response items vary across test forms from year to year.

### Grade 10 Mathematics Test Specifications

| Strand  | Distribution |
|---|--------------|
| Number and Number Relations                   | 10%          |
| Algebra                                       | 15%          |
| Measurement                                   | 15%          |
| Geometry                                      | 20%          |
| Data Analysis, Probability, and Discrete Math | 20%          |
| Patterns, Relations, and Functions            | 20%          |

## STRANDS, STANDARDS, AND BENCHMARKS ASSESSED

This section presents the strands/standards and benchmarks assessed on the grade 10 GEE Mathematics assessment. The section includes the text of each benchmark, followed by a list of abilities that students **may** be expected to demonstrate to give evidence of facility with the concepts or skills described in the benchmark statement.

Each of the six mathematics strands is associated with a single standard. The *strand* name serves as a label referring to the full text of its associated *standard*. Each strand has several benchmarks that describe what a student should know and be able to do in the context of the strand.

### **Strand N: Number and Number Relations**

**Standard:** In problem-solving investigations, students demonstrate an understanding of the real number system and communicate the relationships within that system using a variety of techniques and tools.

### **Strand A: Algebra**

**Standard:** In problem-solving investigations, students demonstrate an understanding of concepts and processes that allows them to analyze, represent, and describe relationships among variable quantities and to apply algebraic methods to real-world situations.

### **Strand M: Measurement**

**Standard:** In problem-solving investigations, students demonstrate an understanding of the concepts, processes, and real-life applications of measurement.

### **Strand G: Geometry**

**Standard:** In problem-solving investigations, students demonstrate an understanding of geometric concepts and applications involving one-, two-, and three-dimensional geometry, and justify their findings.

### **Strand D: Data Analysis, Probability, and Discrete Math**

**Standard:** In problem-solving investigations, students discover trends, formulate conjectures regarding cause-and-effect relationships, and demonstrate critical thinking skills in order to make informed decisions.

### **Strand P: Patterns, Relations, and Functions**

**Standard:** In problem-solving investigations, students demonstrate an understanding of patterns, relations, and functions that represent and explain real-world situations.



### **Explanation of Benchmark Codes**

Mathematics benchmarks are coded by strand, benchmark number, and grade cluster. The first part of the code refers to the strand (for example, Number and Number Relations). The second part is the benchmark number. The third part refers to the grade cluster (E, M, H).

### **Examples of Mathematics Codes**

| <b>Code</b> | <b>Translation</b>                                   |
|-------------|--|
| N-1-E       | Number and Number Relations, benchmark 1, elementary |
| G-5-M       | Geometry, benchmark 5, middle school                 |
| A-3-H       | Algebra, benchmark 3, high school                    |

## Strand N: Number and Number Relations

At the high school level, numerical problem-solving activities may be quite complex, involving several steps. Students should be able to solve problems that suggest algorithmic solutions as well as those in which the path to a solution is not obvious. Word problems may involve integers, fractions, and decimals, with considerable emphasis on those involving ratio and proportion. Students are expected to understand and use all real numbers (both rational and irrational).

| <b>Benchmark Assessed</b> |   |
|---------------------------|---|
| N-2-H                     | demonstrating that a number can be expressed in many forms, and selecting an appropriate form for a given situation (for example, fractions, decimals, percents, and scientific notation) |

Assessment related to this benchmark extends beyond skills tested at grade 8. Place value and factors are not directly assessed on the grade 10 test. All skills are tested in a practical context.

### **Specifically, students may be required to:**

- understand the relationship between fractions, decimals, and percents (for example,  $\frac{1}{5}$  vs. 0.20 vs. 20%)
- understand the effects of operations on quantities expressed as fractions, decimals, or integers (including negative numbers)
- use scientific notation to describe the magnitude of numbers
- explain why various forms of numbers are appropriate in a given situation

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
| N-3-H                     | using number sense to estimate and determine if solutions are reasonable |

At grade 10, items extend to include estimations and comparisons involving quantities expressed as fractions, decimals, or integers (including negative numbers), the effects of operations on these quantities, and determining reasonableness of solutions in the context of word problems.

| <b>Benchmark Assessed</b> |   |
|---------------------------|---|
| N-5-H                     | selecting and using appropriate computational methods and tools for given situations (for example, estimation, or exact computation using mental arithmetic, calculator, symbolic manipulator, or paper and pencil) |

Grade 10 items include addition, subtraction, multiplication, and division of integers, fractions, decimals, and percents in the context of multistep word problems, including those that suggest algorithmic solutions.

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
| N-6-H                     | applying ratios and proportional thinking in a variety of situations (for example, finding a missing term of a proportion) |

Students are required to solve a variety of problems with ratios and proportions.

**Specifically, students may be required to:**

- find the missing part of a given proportion
- solve problems involving elements of scale drawings

**Note:** Problems involving rate are tested under the Measurement strand.

**Benchmarks Not Directly Assessed:**

The following benchmarks are not directly assessed on the state test:

N-1-H demonstrating an understanding of the real number system

N-4-H determining whether an exact or approximate answer is necessary

N-7-H justifying reasonableness of solutions and verifying results

## Strand A: Algebra

At the high school level, students analyze patterns in data and represent them algebraically. Real-world problems that require algebraic solutions are not exclusively linear; they may involve exponents.

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
| A-1-H                     | demonstrating the ability to translate real-world situations (for example, distance-versus-time relationships, population growth, growth functions for diseases, growth of minimum wage, auto insurance tables) into algebraic expressions, equations, and inequalities and vice versa |

### **Specifically, students may be required to:**

- use letters to represent unknown or arbitrary numbers
- recognize, read, and use various symbols for multiplication and division, including whole number exponents
- recognize and use grouping symbols (parentheses, brackets, fraction bars, absolute value signs, and square root signs) and proper order of operations in expressions, equations, and inequalities

| <b>Benchmark Assessed</b> |   |
|---------------------------|---|
| A-2-H                     | recognizing the relationship between operations involving real numbers and operations involving algebraic expressions |

### **Specifically, students may be required to:**

- evaluate algebraic expressions by applying the correct order of operations
- recognize and use equivalent equations, expressions, and inequalities
- solve linear equations and inequalities involving addition, subtraction, multiplication, and division

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
| A-3-H                     | using tables and graphs as tools to interpret algebraic expressions, equations, and inequalities |

### **Specifically, students may be required to:**

- use information presented in a variety of graphs, charts, and tables

- identify graphs of algebraic equations or inequalities and vice versa
- identify a table of values for an algebraic equation

| <b>Benchmark Assessed</b> |   |
|---------------------------|---|
| A-4-H                     | solving algebraic equations and inequalities using a variety of techniques with the appropriate tools (for example, handheld manipulatives, graphing calculator, symbolic manipulator, or pencil and paper) |

**Specifically, students may be required to:**

- solve and graph real-world problems (addition, subtraction, multiplication, division) involving linear equations or inequalities and systems of linear equations or inequalities

**Note:** Exponents are not reflected in items for this benchmark.

## Strand M: Measurement

At the high school level, students should learn to measure, record, and communicate the perimeter and area of plane figures and the volume of containers. The focus is on solving real-world measurement problems with or without the use of measurement tools. Design problems involving measurement may serve as test-item content for assessment of this strand. Students are provided with a Mathematics Reference Sheet of formulas and equivalencies (unit conversions) for items assessing Measurement.

| Benchmark Assessed |   |
|--------------------|---|
| M-1-H              | selecting and using appropriate units, techniques, and tools to measure quantities in order to achieve specified degrees of precision, accuracy, and error (or tolerance) of measurements |

Test items for this benchmark focus on appropriate *units* of measure for particular cases. Selecting appropriate tools is not assessed. Students are required to identify appropriate units to measure length, area, angle measure, mass (weight), time, speed, volume, and temperature, taking into consideration the purpose of measurement and precision required.

### Specifically, students may be required to:

- measure length and read linear measurement units accurately to the nearest millimeter or sixteenth of an inch
- understand numerical relationships among units *within* each system (customary and metric)
- compare approximate relationships *between* systems in terms of intuitive reference points (for example, 10 yards is approximately 9 meters)
- demonstrate an understanding of precision, accuracy, and significant digits
- use a protractor to determine angle measure in degrees

| Benchmark Assessed |  |
|--------------------|--|
| M-2-H              | demonstrating an intuitive sense of measurement (for example, estimating and determining reasonableness of results as related to area, volume, mass, rate, and distance) |

For this benchmark, items focus on estimating reasonable measures of quantity, length, area, volume, mass, rate, and distance for illustrated objects or described situations. For example, test items may take the form: “About how long . . .”; “About how much . . .”; “About how many . . .”; “Approximately how fast . . .”

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
|---------------------------|--|

|       |  |
|-------|--|
| M-3-H | estimating, computing, and applying physical measurement using suitable units (for example, calculate perimeter and area of plane figures, surface area and volume of solids presented in real-world situations) |
|-------|--|

Items for this benchmark require students to perform calculations to solve measurement problems and to apply an understanding of the concept of rate.

**Specifically, students may be required to:**

- calculate perimeter and area of plane figures and volume of cylinders and rectangular solids shown in diagrams or described in real-world terms. *Note:* Such items draw on geometry skills, but for assessment purposes, items involving these calculations will be treated as mainly related to Measurement.
- calculate the surface area of rectangular solids and cylinders. Calculate the volume of rectangular solids, cylinders, cones, pyramids, and spheres.
- estimate and calculate area, volume, mass, and distance, given a diagram or map, illustration of an object, or a description of a situation
- understand, read, and write quantities which represent rates, using appropriate units
- perform necessary calculations to solve problems involving various kinds of rates (for example, miles per hour, words per minute)
- distinguish between instantaneous, average, and constant rates

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
|---------------------------|--|

|       |  |
|-------|--|
| M-4-H | demonstrating the concept of measurement as it applies to real-world experiences |
|-------|--|

This benchmark will not be directly assessed in the multiple-choice sessions of the test but is eligible for assessment in the constructed-response session of the test.

## Strand G: Geometry

At the high school level, competence in geometry extends to an understanding of the concept of slope and use of the coordinate plane and coordinate methods to solve real-world problems. Formulas required to solve problems are provided on the Mathematics Reference Sheet, rather than embedded in relevant questions.

| <b>Benchmark Assessed</b> |   |
|---------------------------|---|
| G-1-H                     | identifying, describing, comparing, constructing, and classifying geometric figures in two and three dimensions using technology where appropriate to explore and make conjectures about geometric concepts and figures |

Grade 10 items focus on understanding and working with properties of two- and three-dimensional figures. Properties of points, lines, and angles are not assessed at this level.

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
| G-2-H                     | representing and solving problems using geometric models and the properties of those models (for example, Pythagorean Theorem or formulas involving radius, diameter, and circumference) |

**Specifically, students may be required to:**

- solve a problem involving the Pythagorean theorem
- solve problems using formulas involving radius, diameter, circumference

Formulas for such problems are found on the Mathematics Reference Sheet. Students are required to select the proper formula to use for any given problem.

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
| G-3-H                     | solving problems using coordinate methods, as well as synthetic and transformational methods (for example, transform on a coordinate plane a design found in real-life situations) |

**Specifically, students may be required to:**

- use coordinate methods to solve real-world problems (for example, slope)
- identify slope of a given line
- match a line with graph, given point and slope or two points



- transform a design on a coordinate plane
- perform translations, reflections, or rotations on a coordinate plane
- find the distance between two points on a coordinate plane

|                           |  |
|---------------------------|--|
| <b>Benchmark Assessed</b> |  |
| G-5-H                     | classifying figures in terms of congruence and similarity and applying these relationships |

|       |  |
|-------|--|
| G-5-H | classifying figures in terms of congruence and similarity and applying these relationships |
|-------|--|

Items focus on proportional relationships, rather than proofs of similarity or congruence.

|                           |   |
|---------------------------|---|
| <b>Benchmark Assessed</b> |   |
| G-6-H                     | demonstrating deductive reasoning and mathematical justification (for example, oral explanation, informal proof, and paragraph proof) |

|       |   |
|-------|---|
| G-6-H | demonstrating deductive reasoning and mathematical justification (for example, oral explanation, informal proof, and paragraph proof) |
|-------|---|

Assessment for this benchmark *excludes* two-column proofs. Deductive reasoning may be required by multiple-choice or by constructed-response items. Any required justification or explanation would be integrated in one or more constructed-response items.

**Benchmark Not Directly Assessed:**

The following benchmark is not directly assessed on the state test:

G-4-H using inductive reasoning to predict, discover, and apply geometric properties and relationships (for example, patty paper constructions, sum of the angles in a polygon)

## Strand D: Data Analysis, Probability, and Discrete Math

At the high school level, students should be able to interpret and summarize the meaning of a set of experimental data presented in a table or a bar, line, or circle graph in the context of a given scientific experiment. They should also be able to select the most appropriate type of graph for a particular data set and construct, label, and scale bar and line graphs.

| Benchmark Assessed |   |
|--------------------|---|
| D-1-H              | designing and conducting statistical experiments that involve the collection, representation, and analysis of data in various forms |

**Note:** Analysis should reflect an understanding of factors such as: sampling, bias, accuracy, and reasonableness of data.

On the state test, items focus on representation and analysis of data, not on designing or conducting research. At the classroom level, assessment could include designing studies and collecting data through surveys, experiments, and simulations. By contrast, state assessment concentrates on the skills listed below.

### Specifically, students may be required to:

- select the most appropriate type of graph for a given situation and construct, label, and scale bar graphs, line graphs, and/or circle graphs
- organize and display data using frequency distributions, charts and tables, scatter plots, stem-and-leaf plots, box-and-whisker plots, Venn diagrams, and/or spreadsheets
- calculate/find mean, median, and mode, and recognize which measure of central tendency is most appropriate for a given set of data
- solve a variety of problems involving measures of central tendency and/or ranges

| Benchmark Assessed |   |
|--------------------|---|
| D-2-H              | recognizing data that relate two variables as linear, exponential, or otherwise in nature (for example, match a data set, linear or nonlinear, to a graph and vice versa) |

The principal type of item for this benchmark requires students to match a linear or nonlinear data set to a graph, or vice versa.

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
|---------------------------|--|

|       |  |
|-------|--|
| D-4-H | demonstrating an understanding of the calculation of finite probabilities using permutations, combinations, sample spaces, and geometric figures |
|-------|--|

**Specifically, students may be required to:**

- use lists and tree diagrams to generate combinations as part of the solution of a logic problem that involves other steps as well
- use Venn diagrams
- systematically count how many ways a particular event can happen or a particular choice can be made
- calculate the probability of occurrence of a given event
- represent probabilities as common fractions for a given situation

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
|---------------------------|--|

|       |  |
|-------|--|
| D-7-H | making inferences from data that are organized in charts, tables, and graphs (for example, pictograph; bar, line, or circle graph; stem-and-leaf plot or scatter plot) |
|-------|--|

**Specifically, students may be required to:**

- interpret and summarize a set of experimental data presented in a table, bar graph, line graph, or circle graph in context
- draw conclusions and make predictions from a variety of graphs, charts and tables (for example, pictograph; bar, line, or circle graph; stem-and-leaf plot or scatter plot)
- make predictions based on the calculation of the probability of independent events, in a described situation or using experimental data presented in tables or graphs
- explain predictions based on an understanding of the logic of probability

| <b>Benchmark Assessed</b> |  |
|---------------------------|--|
|---------------------------|--|

|       |  |
|-------|--|
| D-9-H | using discrete math to model real-life situations (for example, fair games or elections, map coloring) |
|-------|--|

Items for this benchmark require students to use given information or data to solve problems involving the concept of fairness or other rules governing countable sets. Illustrative examples include items calling for counting procedures to determine the minimum number of colors needed to represent elements on a map, to determine how to divide an estate among beneficiaries, or to determine fair games or fair elections.

**Benchmarks Not Directly Assessed:**

The following benchmarks are not directly assessed on the state test:

- D-3-H using simulations to estimate probabilities (for example, lists and tree diagrams)
- D-5-H recognizing events as dependent or independent in nature and demonstrating techniques for computing multiple-event probabilities
- D-6-H recognizing and answering questions about data that are normally or non-normally distributed
- D-8-H using logical thinking procedures, such as flow charts, Venn diagrams, and truth tables

**Note:** Logical thinking procedures (for example, flow charts and truth tables) are not directly assessed. Venn diagrams are assessed under benchmarks D-1-H and D-4-H.

## Strand P: Patterns, Relations, and Functions

At the high school level, students represent number patterns using function tables, graphs, or equations in the context of an experiment where possible.

| Benchmark Assessed |  |
|--------------------|--|
|--------------------|--|

|       |  |
|-------|--|
| P-1-H | modeling the concepts of variables, functions, and relations as they occur in the real world, and using the appropriate notation and terminology |
|-------|--|

Assessment builds on the grade 8 skill *represent number patterns using function tables, graphs, and equations in context*. Input/output tables are not assessed on the grade 10 test. Matching a graph to a described situation (or vice versa) is assessed under the Data Analysis, Probability, and Discrete Math strand.

### Specifically, students may be required to:

- use function notation to model a given real-world relationship and vice versa
- use function tables or graphs to represent functions and relations provided in a real-world context and vice versa
- discuss, summarize, or draw conclusions from a modeled relationship using appropriate terminology (for example, increasing and decreasing)

| Benchmark Assessed |  |
|--------------------|--|
|--------------------|--|

|       |  |
|-------|--|
| P-2-H | translating between tabular, symbolic, or graphic representations of functions |
|-------|--|

Items may also require students to demonstrate ability to determine the missing element in a number or shape pattern or determine the  $n$ th element in a pattern.

| Benchmark Assessed |  |
|--------------------|--|
|--------------------|--|

|       |   |
|-------|---|
| P-3-H | recognizing behavior of families of elementary functions, such as polynomial, trigonometric, and exponential functions, and, where appropriate, using graphing technologies to represent them |
|-------|---|

Test items for this benchmark are limited to linear functions only. Quadratic and exponential functions are excluded.

| <b>Benchmark Assessed</b> |   |
|---------------------------|---|
| P-4-H                     | analyzing the effects of changes in parameters (for example, coefficients and constants) on the graphs of functions, using technology whenever possible |

The primary item type for this benchmark requires students to recognize or explain what happens to a graph given a specified change.

For example:

- $f(x) = x$  versus  $f(x) = 2x$
- $f(x) = x + 5$  versus  $f(x) = x - 2$

Assessment is limited to linear functions only.

**Benchmark Not Directly Assessed:**

The following benchmark is not directly assessed on the state test:

P-5-H analyzing real-world relationships that can be modeled by elementary functions

# Sample Test Items: Grade 10 Mathematics

## Sample Multiple-Choice Items

Questions 1 through 20 are sample multiple-choice items, arranged by standard and benchmark. The items test students' ability to solve math problems. Most items are provided in context and require students to use information from stories, graphs, or tables to solve a problem.

1. There were 24 French Club members last year. If this year's membership is 150% of last year's, how many members are in the French Club this year?
- A. 16
  - B. 20
  - C. 30
  - D. 36

**Correct response: D**

*This item measures benchmark N-2-H: demonstrating that a number can be expressed in many forms, and selecting an appropriate form for a given situation (for example, fractions, decimals, percents, and scientific notation).*

2. Arlo and 23 friends went on a hike. Each hiker had 2 granola bars and a bottle of water. The granola bars cost \$0.62 each, and the bottles of water cost \$0.27 each. Estimate the total cost of the snacks for the hikers.
- A. \$16
  - B. \$23
  - C. \$36
  - D. \$48

**Correct response: C**

*This item measures benchmark N-3-H: using number sense to estimate and determine if solutions are reasonable.*

3. Cindy borrowed \$10,000 to purchase a new car. She paid back \$245 per month over a period of four years, which covered the loan amount and the interest. What is the total interest Cindy paid?
- A. \$980
  - B. \$1,760
  - C. \$2,940
  - D. \$11,760

**Correct response: B**

*This item measures benchmark N-5-H: selecting and using appropriate computational methods and tools for given situations (for example, estimation, or exact computation using mental arithmetic, calculator, symbolic manipulator, or paper and pencil).*

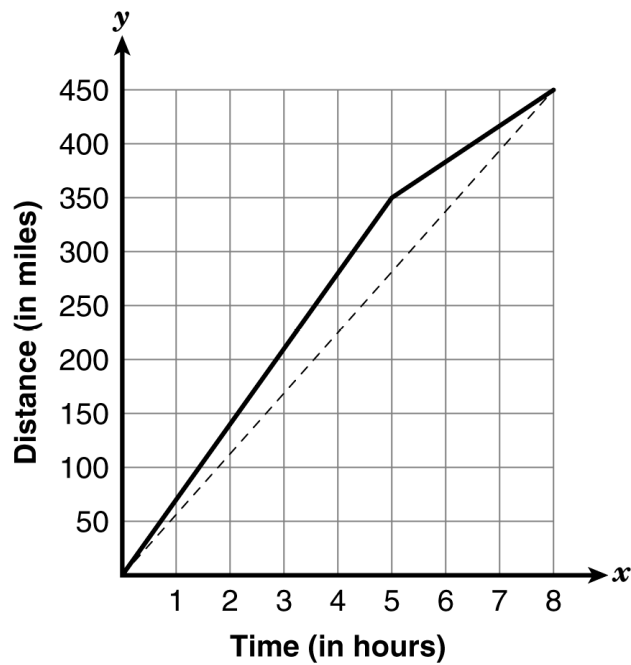
4. The length of the family room in a new home will be 16 feet. The house plan is drawn to a scale such that  $\frac{1}{2}$  inch is equivalent to 1 foot. What will be the length of the family room in the house plan?
- A. 4 inches
  - B. 8 inches
  - C. 16 inches
  - D. 32 inches

**Correct response: B**

*This item measures benchmark N-6-H: applying ratios and proportional thinking in a variety of situations (for example, finding a missing term of a proportion).*



5. The solid lines in the graph below show how much time it took Sally to drive 450 miles.



She traveled the first 5 hours at one rate of speed. She traveled at a second rate of speed for the last 3 hours. She could have traveled the same distance in 8 hours at a constant rate of speed, as indicated by the dotted line in the graph. Which of the following equations shows the correct relationship between the distance ( $D$ ) and the time ( $t$ ) for the dotted line?

- A.  $D = 50.60t$
- B.  $D = 55t$
- C.  $D = 56.25t$
- D.  $D = 58.45t$

**Correct response: C**

*This item measures benchmark **A-1-H**: demonstrating the ability to translate real-world situations (for example, distance-versus-time relationships, population growth, growth functions for diseases, growth of minimum wage, auto insurance tables) into algebraic expressions, equations, and inequalities and vice versa.*

6. Stan has 100 candy bars. If he eats 5 candy bars per day, which of the following expressions can be used find out how many candy bars Stan has left after  $d$  days?
- A.  $100 + 5 - d$
  - B.  $100d - 5$
  - C.  $100 - 5d$
  - D.  $(100 - d)5$

**Correct response: C**

*This item measures benchmark A-1-H: demonstrating the ability to translate real-world situations (for example, distance-versus-time relationships, population growth, growth functions for diseases, growth of minimum wage, auto insurance tables) into algebraic expressions, equations, and inequalities and vice versa.*

7. The following formula can be used to predict the weight of boys between the ages of 1 and 8:

$$w = 5a + 17$$

where  $w$  is the average weight in pounds, and  $a$  is the boy's age in years. According to this formula, how much weight will a boy gain each year?

- A. 5 pounds
- B. 11 pounds
- C. 17 pounds
- D. 22 pounds

**Correct response: A**

*This item measures benchmark A-2-H: recognizing the relationship between operations involving real numbers and operations involving algebraic expressions.*

8. Southland Cellular Phone Company offers two different rate plans.

- **Plan A:** \$45 per month, plus \$0.15 per minute of calling time
- **Plan B:** \$25 per month, plus \$0.25 per minute of calling time

For how many minutes of calling time do the plans cost the same amount?

- A. 50 minutes
- B. 120 minutes
- C. 175 minutes
- D. 200 minutes

**Correct response: D**

*This item measures benchmark **A-4-H**: solving algebraic equations and inequalities using a variety of techniques with the appropriate tools (for example, handheld manipulatives, graphing calculator, symbolic manipulator, or pencil and paper).*

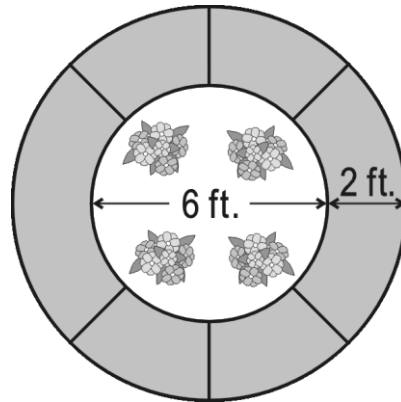
9. Which of the following distances is the **longest**?

- A. 2 kilometers
- B. 500 centimeters
- C. 2,300 meters
- D. 25,000 millimeters

**Correct response: C**

*This item measures benchmark **M-1-H**: selecting and using appropriate units, techniques, and tools to measure quantities in order to achieve specified degrees of precision, accuracy, and error (or tolerance) of measurements.*

Use the diagram below to answer question 10.



10. Which is the best estimate for the area of the walkway around this circular flower bed?
- A. 40 square feet
  - B. 50 square feet
  - C. 100 square feet
  - D. 200 square feet

**Correct response: B**

*This item measures benchmark M-3-H: estimating, computing, and applying physical measurement using suitable units (for example, calculate perimeter and area of plane figures, surface area and volume of solids presented in real-world situations).*

11. A regular-size can of Fabulous Farms peaches has a diameter of 3 inches and a height of 5 inches. A jumbo-size can of Fabulous Farms peaches has a diameter and height 2 times larger than a regular-size can. The volume of the jumbo-size can is how many times larger than the volume of the regular-size can?
- A. 2 times larger
  - B. 4 times larger
  - C. 6 times larger
  - D. 8 times larger

**Correct response: D**

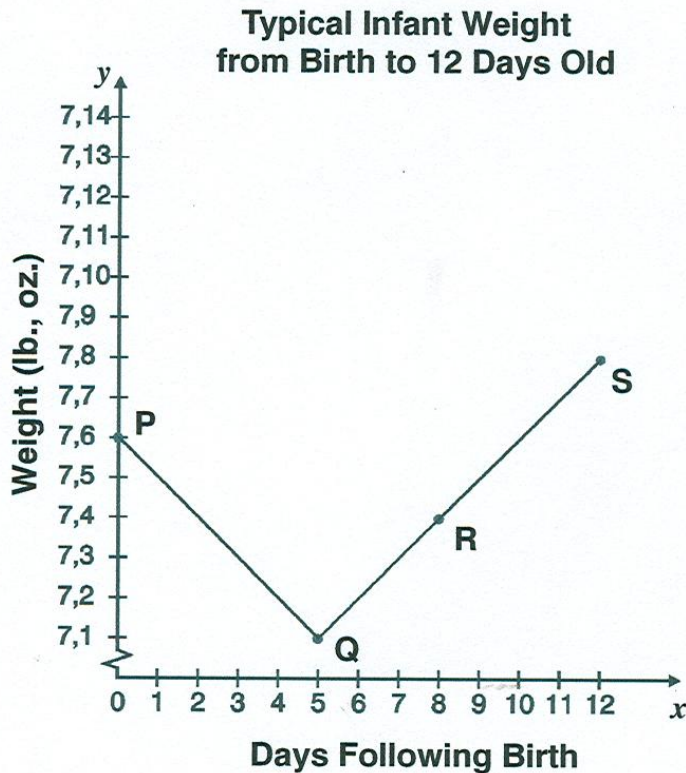
*This item measures benchmark M-3-H: estimating, computing, and applying physical measurement using suitable units (for example, calculate perimeter and area of plane figures, surface area and volume of solids presented in real-world situations).*

12. Moses and Amalia want to install a rectangular solar panel on their roof. They need to know the weight of the panel per square foot. The panel is 62.5 inches long and 31.1 inches wide, and weighs 34 pounds. About how much does the solar panel weigh per square foot?
- A. about  $\frac{1}{2}$  pound
  - B. about 1 pound
  - C. about  $2\frac{1}{2}$  pounds
  - D. about 5 pounds

**Correct response: C**

*This item measures benchmark **M-3-H**: estimating, computing, and applying physical measurement using suitable units (for example, calculate perimeter and area of plane figures, surface area and volume of solids presented in real-world situations).*

Use the graph below to answer question 13.

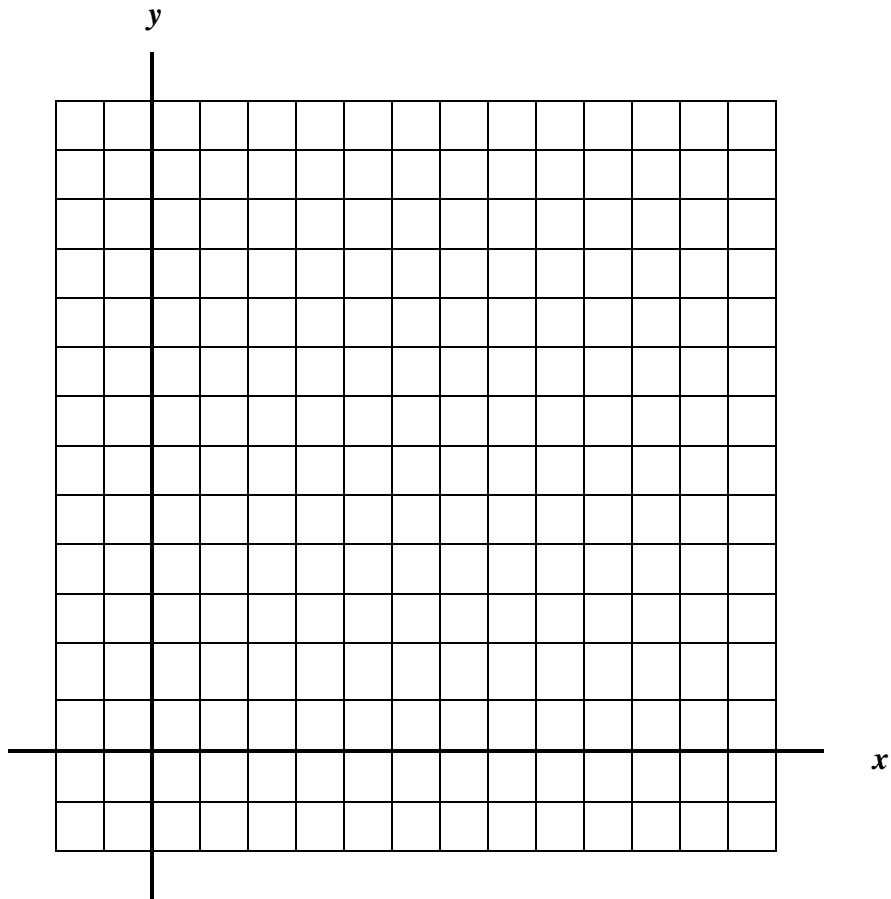


13. This graph shows a typical infant's weight for the first 12 days after birth. The **slope** of the line between points Q and R represents the
- A. average amount of weight gained per day from the fifth day to the eighth day.
  - B. total amount of weight gained from the fifth day to the eighth day.
  - C. total amount of weight gained from birth to the eighth day.
  - D. average amount of weight gained per day from birth to the eighth day.

**Correct response: A**

*This item measures benchmark G-3-H: solving problems using coordinate methods, as well as synthetic and transformational methods (for example, transform on a coordinate plane a design found in real-life situations).*

14. A rhombus is graphed on a coordinate plane. It has vertices located at  $(7, 7)$ ,  $(7, 2)$ , and  $(10, 6)$ . What are the coordinates of the fourth vertex? You may use the grid below.

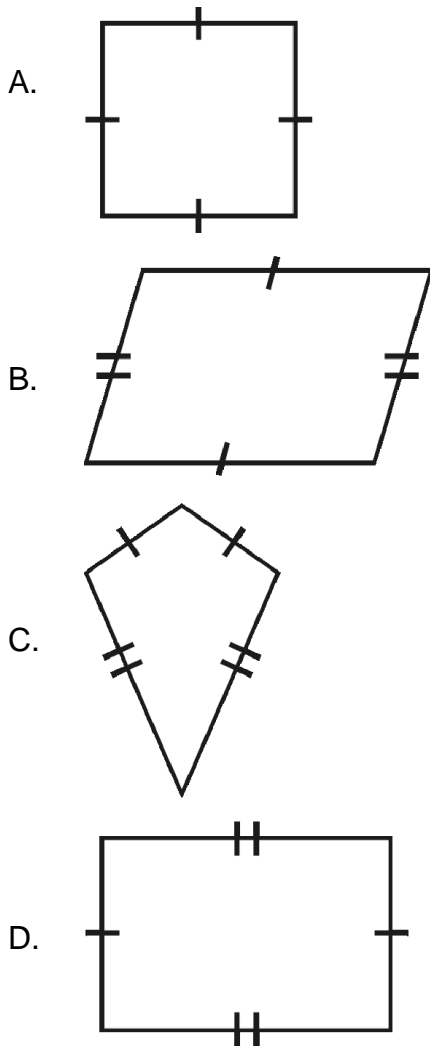


- A.  $(10, -1)$
- B.  $(10, 3)$
- C.  $(10, 7)$
- D.  $(10, 11)$

**Correct response: D**

*This item measures benchmark **G-3-H**: solving problems using coordinate methods, as well as synthetic and transformational methods (for example, transform on a coordinate plane a design found in real-life situations).*

15. Jamie said that any quadrilateral that has perpendicular diagonals must be a rhombus. Which figure could be used to prove Jamie **wrong**?



**Correct response: C**

*This item measures benchmark **G-6-H**: demonstrating deductive reasoning and mathematical justification (for example, oral explanation, informal proof, and paragraph proof).*

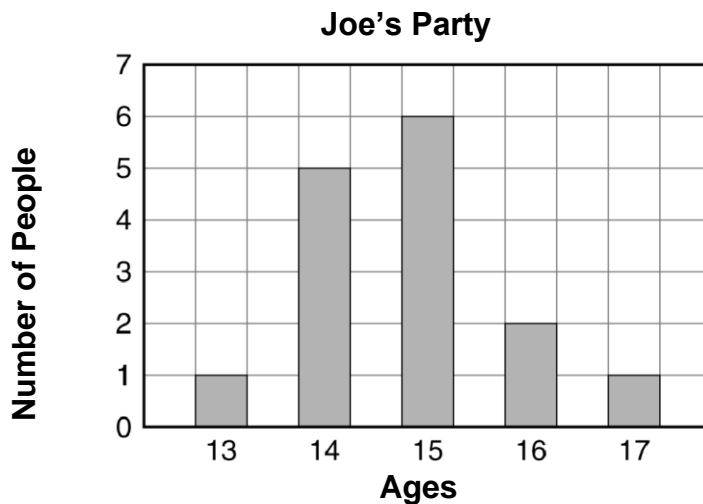


16. Roy compared the price of a tape player at 5 stores. The prices at the different stores were \$80.00, \$95.00, \$60.00, \$90.00, and \$85.00. What was the average (mean) price of the tape players?
- A. \$415.00
  - B. \$410.00
  - C. \$85.00
  - D. \$82.00

**Correct response: D**

*This item measures benchmark D-1-H: designing and conducting statistical experiments that involve the collection, representation, and analysis of data in various forms.*

17. Joe had a birthday party. The ages of the people who attended the party are shown in the bar graph below.



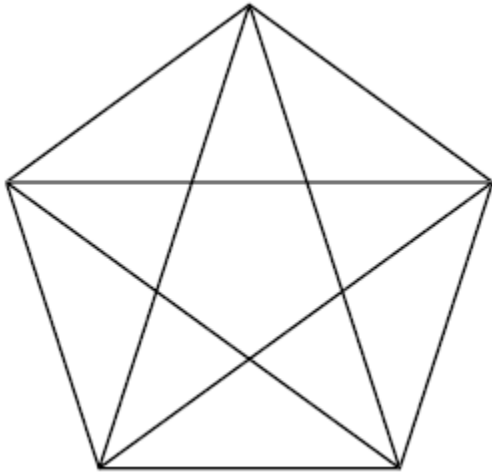
What is the **mean** age of the people at the party?

- A. 14.6 years
- B. 14.8 years
- C. 15.0 years
- D. 15.2 years

**Correct response: B**

*This item measures benchmark D-7-H: making inferences from data that are organized in charts, tables, and graphs (for example, pictograph; bar, line, or circle graph; stem-and-leaf plot or scatter plot).*

Use the map below to answer question 18.



18. What is the smallest number of colors needed to color the map so that no two regions that share more than one point as a boundary are the same color?
- A. 2 colors
  - B. 3 colors
  - C. 4 colors
  - D. 5 colors

**Correct response: A**

*This item measures benchmark **D-9-H**: using discrete math to model real-life situations (for example, fair games or elections, map coloring).*

Use the table below to answer question 19.

| Area (cm <sup>2</sup> ) | Width (cm) |
|-------------------------|------------|
| 75                      | 5          |
| 96                      | 8          |
| 100                     | 10         |
| 96                      | 12         |
| 75                      | 15         |

19. This table shows the relationship between area ( $a$ ) and width ( $w$ ) for rectangles that have perimeter of 40 centimeters. Which algebraic equation correctly describes this relationship?
- A.  $a = 15w$
  - B.  $a = 10w + 25$
  - C.  $a = 20w - w^2$
  - D.  $a = 100 - w^2$

**Correct response: C**

*This item measures benchmark P-2-H: translating between tabular, symbolic, or graphic representations of functions.*

20. Which equation has a graph that is parallel to and has a  $y$ -intercept exactly 2 units away from the  $y$ -intercept of the graph of  $y = 2x - 1$ ?
- A.  $y = 4x - 3$
  - B.  $y = -\frac{1}{2}x - 3$
  - C.  $y = 2x + 3$
  - D.  $y = 2x - 3$

**Correct response: D**

*This item measures benchmark P-3-H: recognizing behavior of families of elementary functions, such as polynomial, trigonometric, and exponential functions, and, where appropriate, using graphing technologies to represent them.*

## Sample Constructed-Response Items

Questions 21 through 24 show sample constructed-response items. Each item involves a number of separate steps and the application of multiple skills. The constructed-response items are designed to assess one or more of the benchmarks/strands. The items are scored using an item-specific rubric on a scale of 0 to 4 points.

- 21.** A school banner is 6 feet wide by 4 feet high.
- A.** If the banner were 5 feet wide, how high would it have to be in order to have the same area as the first banner?
  
  - B.** Give **three** more examples of rectangular banners that would have areas the same as the first banner but with dimensions different from both the first banner and the banner in part A. Make the width greater than the height in each example.
  
  - C.** Suppose that the length of a rectangle with an area of 24 square units is unknown. Let  $x$  represent the length. Write an expression for the width in terms of  $x$ . Use this expression to write a formula for the **perimeter**,  $p$ , in terms of the unknown value,  $x$ .

*The content standard for this item is **Measurement**. In problem-solving investigations, students demonstrate an understanding of the concepts, processes, and real-life applications of measurement.*

### Scoring Rubric:

| Score | Description  |
|-------|--|
| 4     | The student's response earns 5 points.   |
| 3     | The student's response earns 4 or $4\frac{1}{2}$ points.   |
| 2     | The student's response earns 2 to $3\frac{1}{2}$ points.   |
| 1     | The student's response earns $\frac{1}{2}$ to $1\frac{1}{2}$ points.<br><b>OR</b><br>The student's response demonstrates minimal understanding of area and/or perimeter formulas and/or writing algebraic expressions. |
| 0     | The student's response is incorrect, irrelevant to the skill or concept being measured, too brief to evaluate, or blank.   |

**Points assigned:**

*Part A (1 point):*

- 1 point for correct height (4.8', approximately 4'10")

**OR**

- ½ point for correct strategy with computation or unit conversion error

*Part B (2 points):*

- 2 points for three different sets of dimensions, all of which result in area of 24 square feet and which have width > height as specified (width and height need not be clearly labeled, as long as dimensions are in same order for each set)

**OR**

- 1 point for one or two different sets of dimensions which fulfill criteria (area = 24 sq. ft.;  $w > h$ )

**Note:** If decimal lengths are used (for example, 7 by 3.4, allow for rounding, as  $24 \div 7$  rounds to 3.4).

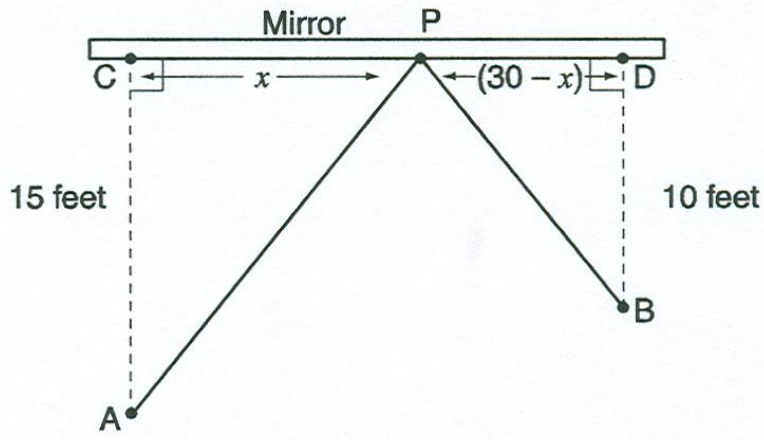
*Part C (2 points):*

- 2 points for correct algebraic expression for width and correct formula for perimeter  
(width =  $\frac{24}{x}$ ;  $p = \frac{48}{x} + 2x$ ; or algebraic equivalent)

**OR**

- 1 point for correct width but correct perimeter not given **OR** for formula showing correct perimeter relationship but using an incorrect expression for width **OR** for correct expressions based on use of perimeter formula of square (that is, assumes length and width are the same).

22. A scientist is conducting an experiment with laser beams. The laser is located at point A in the figure below. The scientist wishes to reflect the beam off a mirror so that it is directed to point B, as shown in this figure.



In this figure,  $AC = 15$  feet,  $BD = 10$  feet, and  $CD = 30$  feet. Based on the law of reflections, the scientist knows that  $\triangle ACP$  is similar to  $\triangle BDP$ .

- Use the values  $x$  and  $30 - x$  to write a proportion based on the similar triangles  $ACP$  and  $BDP$  that will help you find the length  $CP$ .
- Solve the proportion from part A and find the length  $CP$ . Show all of your work.
- In the figure,  $AC$  and  $BD$  are both perpendicular to the mirror. Find the total distance that the laser beam travels from  $A$  to  $P$  to  $B$ . Show or explain how you found your answer.

*The content standard for this item is **Geometry**. In problem-solving investigations, students demonstrate an understanding of geometric concepts and applications involving one-, two-, and three-dimensional geometry, and justify their findings.*

**Scoring Rubric:**

| Score | Description   |
|-------|---|
| 4     | The student's response earns 5 points.  |
| 3     | The student's response earns 4 points<br><b>OR</b><br>provides correct answers to all 3 parts.  |
| 2     | The student's response earns 2 or 3 points.   |
| 1     | The student's response earns 1 point.<br><b>OR</b><br>The student's response demonstrates minimal understanding of proportions, similar figures and/or the Pythagorean Theorem. |
| 0     | The student's response is incorrect, irrelevant to the skill or concept being measured, too brief to evaluate, or blank.  |

**Points assigned:**

*Part A (1 point):*

- 1 point for a correct proportion [ $\frac{15}{x} = \frac{10}{(30-x)}$ , or equivalent]

*Part B (2 points):*

- 2 points for correctly solving the proportion [ $x = CP = 18$  (ft.), or correct solution of incorrect proportion in part A] with work shown indicating correct strategy

**OR**

- 1 point for a correct strategy for solving the proportion with arithmetic or minor procedural error (for example, missing or switching a negative sign) **OR** correct answer with incomplete or no work shown

*Part C (2 points):*

- 2 points for a correct answer with work or explanation indicating a correct strategy. [ $\approx 39$  (ft.) or correct answer based on an incorrect proportion in part A and/or incorrect answer in part B; if the student is unable to find a numeric answer in part B, a complete expression involving variables and employing the Pythagorean Theorem to find the total distance would be sufficient to earn 2 points in this part]

**OR**

- 1 point for a correct answer with incomplete or no work shown **OR** correct strategy with minor computation error(s) or failure to add two segments

**Note:** Do not penalize for omitting units in either part. If incorrect units are given, do not award a score of 4. Otherwise, do not penalize.

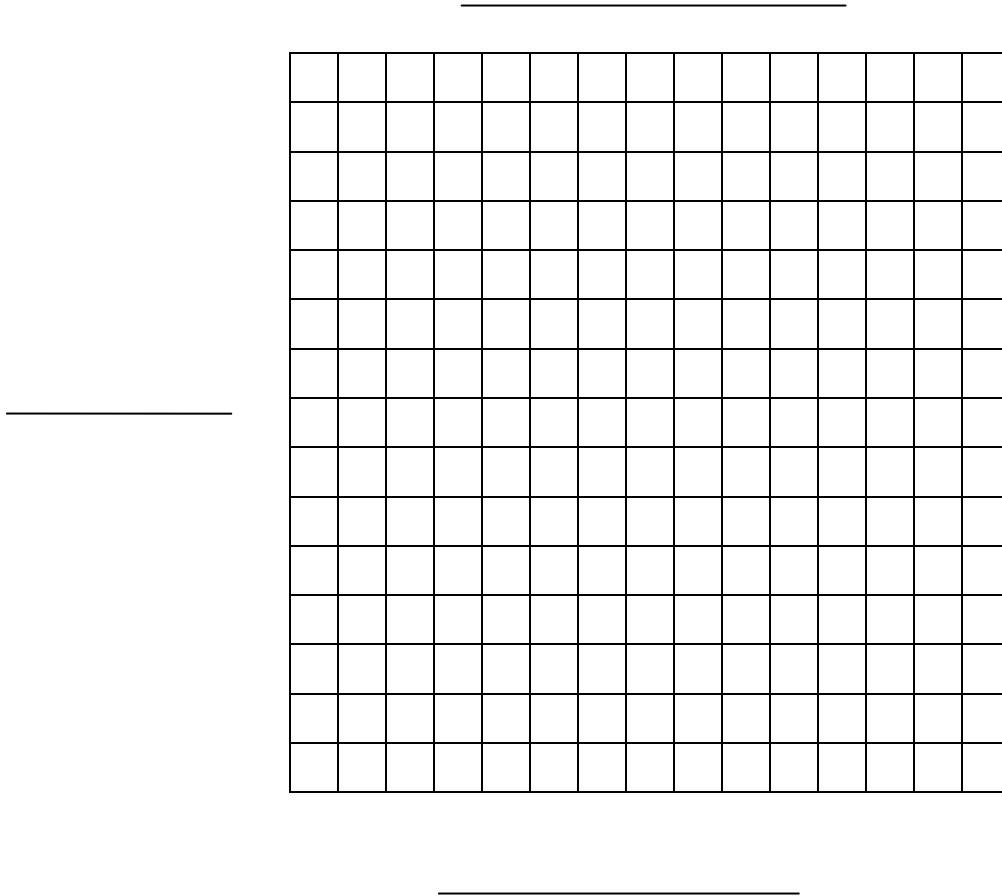
23. The following table shows the ten most profitable toys of the J. J. Toy Company.

| Toy | Cost to Produce | Profit |
|-----|-----------------|--------|
| A   | \$9.00          | \$4.00 |
| B   | \$7.00          | \$2.00 |
| C   | \$14.00         | \$5.00 |
| D   | \$8.00          | \$3.00 |
| E   | \$15.00         | \$4.00 |
| F   | \$17.00         | \$9.00 |
| G   | \$10.00         | \$2.00 |
| H   | \$22.00         | \$7.00 |
| I   | \$11.00         | \$3.00 |
| J   | \$15.00         | \$6.00 |

- A. If the company decides to produce only the six toys with the highest profit per toy, which toys should it produce?



- B. On the grid below, draw a scatter plot of the data in the table with the cost to produce each toy on the horizontal axis and the profit per toy on the vertical axis. Be sure to title the graph, label the axes, and use consistent scales.



- C. Describe the relationship between the cost and profit shown in your scatter plot.

*The content standard for this item is **Data Analysis, Probability, and Discrete Math**. In problem-solving investigations, students discover trends, formulate conjectures regarding cause-and-effect relationships, and demonstrate critical thinking skills in order to make informed decisions.*

**Scoring Rubric:**

| <b>Score</b> | <b>Description</b>   |
|--------------|--|
| <b>4</b>     | The student's response earns 4 points.   |
| <b>3</b>     | The student's response earns 3 or 3½ points.   |
| <b>2</b>     | The student's response earns 2 or 2½ points.   |
| <b>1</b>     | The student's response earns ½ to 1½ points.<br><b>OR</b><br>The student's response demonstrates minimal understanding.  |
| <b>0</b>     | The student's response is incorrect, irrelevant to the skill or concept being measured, too brief to evaluate, or blank. |

**Points assigned:***Part A (1 point):*

- 1 point for correctly identifying 6 most profitable toys (A, C, E, F, H, J)

**OR**

- ½ point for correctly identifying 4 or 5 of the 6 most profitable toys

*Part B (2 points):*

- 2 points for all points plotted correctly, with title, axes clearly labeled and appropriate scales used (shows a positive correlation between cost and profit)

**OR**

- 1½ points for plot with minor errors in one of the following areas: points plotted correctly, title, axes clearly labeled, and appropriate scales used (shows positive correlation between cost and profit), axes reversed

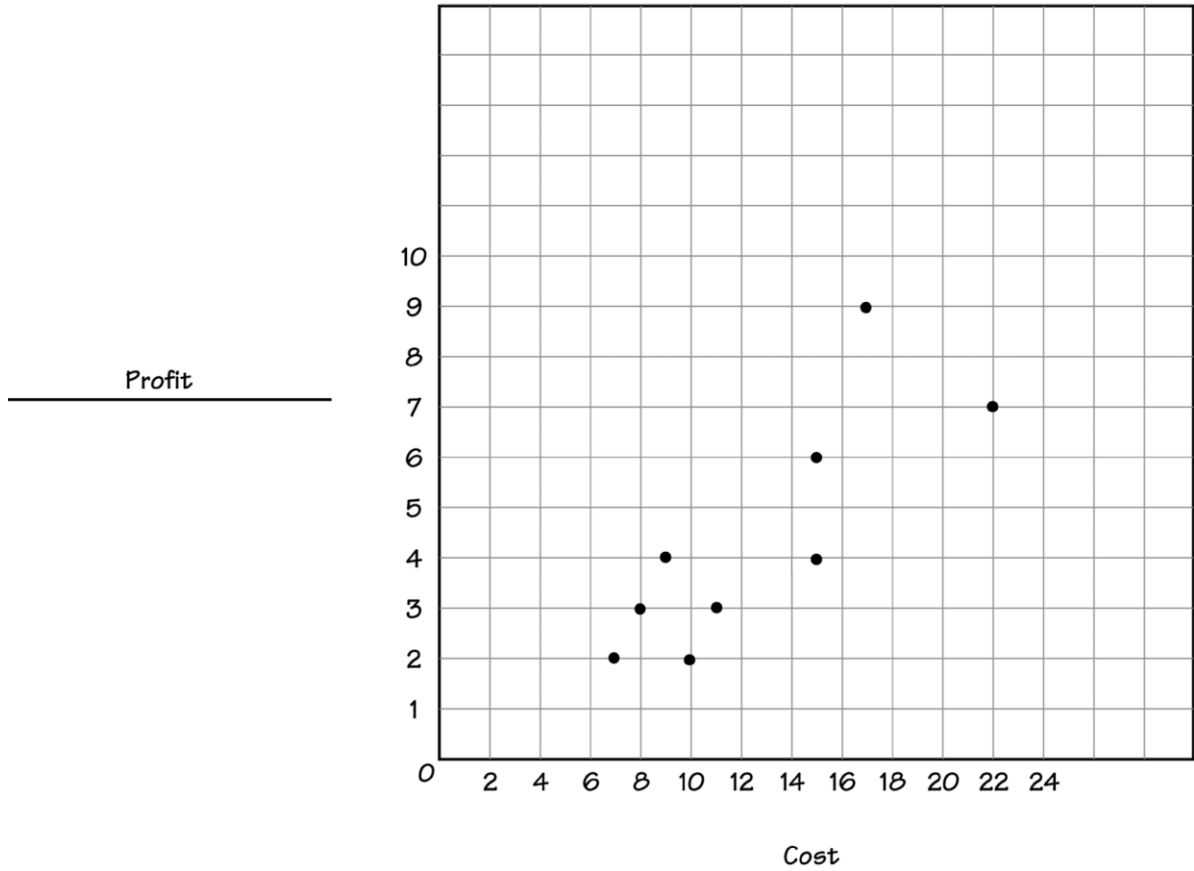
**OR**

- 1 point for plot with minor errors in two of the following areas: points plotted correctly, title, axes clearly labeled, and appropriate scales used (shows positive correlation between cost and profit), axes reversed

**OR**

- ½ point for plot with minor errors in three of the following areas: points plotted correctly, title, axes clearly labeled, and appropriate scales used (shows positive correlation between cost and profit), axes reversed

J.J. TOY COMPANY



Part C (1 point):

- 1 point for positive correlation **OR** for explanation that higher-cost toys give higher profits

24. The Playhouse Theater has two types of seating areas, the lower level and the upper level. When more than one ticket in a seating area is purchased at a time, the prices are discounted, as shown in the table below.

### Theater Tickets

| Tickets     | 1      | 2       | 3       | 4       |
|-------------|--------|---------|---------|---------|
| Lower Level | \$8.50 | \$14.50 | \$20.50 | \$26.50 |
| Upper Level | \$6.50 | \$11.50 | \$16.50 | \$21.50 |

- A. Write an equation that can be used to calculate the price ( $p$ ) of  $n$  lower-level tickets.
- B. Write an equation that can be used to calculate the price ( $p$ ) of  $n$  upper-level tickets.
- C. The theater has 125 lower-level seats and 250 upper-level seats. The theater produces 50 shows during the year. What is the greatest amount of money the theater could earn from ticket sales during the year? Justify your answer.

*The content standard for this item is **Patterns, Relations, and Functions**. In problem-solving investigations, students demonstrate an understanding of patterns, relations, and functions that represent and explain real-world situations.*

#### Scoring Rubric:

| Score | Description  |
|-------|--|
| 4     | The student's response earns 6 points.   |
| 3     | The student's response earns 4 or 5 points.  |
| 2     | The student's response earns 2 or 3 points.  |
| 1     | The student's response earns 1 point.<br><b>OR</b><br>The student's response demonstrates minimal understanding.         |
| 0     | The student's response is incorrect, irrelevant to the skill or concept being measured, too brief to evaluate, or blank. |

**Points assigned:**

*Part A (2 points):*

- 2 points for correct equation ( $p = 8.50 + 6(n - 1)$  or  $p = 6n + 2.50$ )

**OR**

- 1 point for correct procedure and switching coefficient and constant **OR** for correct procedure and equation with incorrect constant **OR** for correct procedure and equation with incorrect operation symbol **OR** for correct procedure shown, but incorrect equation due to a simplification error **OR** correct expression instead of equation

*Part B (2 points):*

- 2 points for correct equation ( $p = 6.50 + 5(n - 1)$  or  $p = 5n + 1.50$ )

**OR**

- 1 point for correct procedure and switching coefficient and constant **OR** for correct procedure and equation with incorrect constant **OR** for correct procedure and equation with incorrect operation symbol **OR** for correct procedure shown, but incorrect equation due to a simplification error **OR** correct expression instead of equation

*Part C (2 points):*

- 2 points for correct procedure and correct amount of money—**\$134,375**  
( $125 \times \$8.50$ ) + ( $250 \times \$6.50$ ) =  $\$1,062.50 + \$1,625.00 = \$2,687.50$ ,  
 $\$2,687.50 \times 50 = \$134,375$ )

**OR**

- 1 point for correct procedure for calculating amount of money with arithmetic error(s) **OR** for correct procedure and correct answer with incorrect units **OR** for correct answer and incomplete or missing procedure **OR** for calculating an amount of money correctly using equations from parts A and B **OR** omits multiplication by 50

## Standards and Benchmark Statements, across Grades

### Strand N: Number and Number Relations

**Standard:** In problem-solving investigations, students demonstrate an understanding of the real number system and communicate the relationships within that system using a variety of techniques and tools.

| K–4   | 5–8  | 9–12   |
|---|--|--|
| <p><b>N-1-E</b><br/>constructing number meaning and demonstrating that a number can be expressed in many different forms (for example, standard notation, number words, number lines, geometrical representation, fractions, and decimals)</p> <p><b>N-2-E</b><br/>demonstrating number sense and estimation skills, giving particular attention to common equivalent reference points (for example, <math>1/4 = 25\% = .25</math>; <math>1/2 = 50\% = .5</math>; <math>\\$1 = 100\%</math>, etc.)</p> <p><b>N-3-E</b><br/>reading, writing, representing, comparing, ordering, and using whole numbers in a variety of forms (for example, standard notation, number line, and geometrical representation)</p> <p><b>N-4-E</b><br/>demonstrating a conceptual understanding of the meaning of the basic arithmetic operations (add, subtract, multiply, and divide) and their relationships to each other</p> <p><b>N-5-E</b><br/>selecting appropriate operation(s) (add, subtract, multiply, and divide) for a given situation</p> | <p><b>N-1-M</b><br/>demonstrating that a rational number can be expressed in many forms, and selecting an appropriate form for a given situation (for example, fractions, decimals, and percents)</p> <p><b>N-2-M</b><br/>demonstrating number sense and estimation skills to describe, order, and compare rational numbers (for example, magnitude, integers, fractions, decimals, and percents)</p> <p><b>N-3-M</b><br/>reading, writing, representing, and using rational numbers in a variety of forms (for example, integers, mixed numbers, and improper fractions)</p> <p><b>N-4-M</b><br/>demonstrating a conceptual understanding of the meaning of the basic arithmetic operations (add, subtract, multiply, and divide) and their relationships to each other</p> <p><b>N-5-M</b><br/>applying an understanding of rational numbers and arithmetic operations to real-life situations</p> | <p><b>N-1-H</b><br/>demonstrating an understanding of the real number system</p> <p><b>N-2-H</b><br/>demonstrating that a number can be expressed in many forms, and selecting an appropriate form for a given situation (for example, fractions, decimals, percents, and scientific notation)</p> <p><b>N-3-H</b><br/>using number sense to estimate and determine if solutions are reasonable</p> <p><b>N-4-H</b><br/>determining whether an exact or approximate answer is necessary</p> <p><b>N-5-H</b><br/>selecting and using appropriate computational methods and tools for given situations (for example, estimation, or exact computation using mental arithmetic, calculator, symbolic manipulator, or paper and pencil)</p> <p><b>N-6-H</b><br/>applying ratios and proportional thinking in a variety of situations (for example, finding a missing term of a proportion)</p> |

**Strand N: Number and Number Relations (continued)**

| <b>K–4</b>   | <b>5–8</b>  | <b>9–12</b>  |
|--|---|--|
| <p><b>N-6-E</b><br/>applying a knowledge of basic math facts and arithmetic operations to real-life situations</p> <p><b>N-7-E</b><br/>constructing, using, and explaining procedures to compute and estimate with whole numbers (for example, mental math strategies)</p> <p><b>N-8-E</b><br/>selecting and using appropriate computational methods and tools for given situations involving whole numbers (for example, estimation, mental arithmetic, calculator, or paper and pencil)</p> <p><b>N-9-E</b><br/>demonstrating the connection of number and number relations to the other strands and to real-life situations</p> | <p><b>N-6-M</b><br/>constructing, using, and explaining procedures to compute and estimate with rational numbers employing mental math strategies</p> <p><b>N-7-M</b><br/>selecting and using appropriate computational methods and tools for given situations involving rational numbers (for example, estimation, or exact computation using mental arithmetic, calculator, computer, or paper and pencil)</p> <p><b>N-8-M</b><br/>demonstrating a conceptual understanding and applications of proportional reasoning (for example, determining equivalent ratios, finding a missing term of a given proportion)</p> | <p><b>N-7-H</b><br/>justifying reasonableness of solutions and verifying results</p> |

**Strand A: Algebra**

**Standard:** In problem-solving investigations, students demonstrate an understanding of concepts and processes that allows them to analyze, represent, and describe relationships among variable quantities and to apply algebraic methods to real-world situations.

| <b>K–4</b>   | <b>5–8</b>   | <b>9–12</b>   |
|--|--|---|
| <p><b>A-1-E</b><br/>demonstrating a conceptual understanding of variables, expressions, equations, and inequalities (for example, use letters or boxes to represent values; understand =, ≠, &lt;, and &gt; symbols)</p> <p><b>A-2-E</b><br/>modeling and developing strategies for solving equations and inequalities</p> <p><b>A-3-E</b><br/>recognizing the connection of algebra to the other strands and to real-life situations (for example, number sentences or formulas to represent real-world problems)</p> | <p><b>A-1-M</b><br/>demonstrating a conceptual understanding of variables, expressions, equations, and inequalities (for example, symbolically represent real-world problems as linear terms, equations, or inequalities)</p> <p><b>A-2-M</b><br/>modeling and developing methods for solving equations and inequalities (for example, using charts, graphs, manipulatives, and/or standard algebraic procedures)</p> <p><b>A-3-M</b><br/>representing situations and number patterns with tables, graphs, and verbal and written statements, while exploring the relationships among these representations (for example, multiple representations for the same situation)</p> <p><b>A-4-M</b><br/>analyzing tables and graphs to identify relationships exhibited by the data and making generalizations based upon these relationships</p> <p><b>A-5-M</b><br/>demonstrating the connection of algebra to the other strands and to real-life situations.</p> | <p><b>A-1-H</b><br/>demonstrating the ability to translate real-world situations (for example, distance-versus-time relationships, population growth, growth functions for diseases, growth of minimum wage, auto insurance tables) into algebraic expressions, equations, and inequalities and vice versa</p> <p><b>A-2-H</b><br/>recognizing the relationship between operations involving real numbers and operations involving algebraic expressions</p> <p><b>A-3-H</b><br/>using tables and graphs as tools to interpret algebraic expressions, equations, and inequalities</p> <p><b>A-4-H</b><br/>solving algebraic equations and inequalities using a variety of techniques with the appropriate tools (for example, handheld manipulatives, graphing calculator, symbolic manipulator, or pencil and paper)</p> |



**Strand M: Measurement**

**Standard:** In problem-solving investigations, students demonstrate an understanding of the concepts, processes, and real-life applications of measurement.

| K–4   | 5–8  | 9–12   |
|---|--|--|
| <p><b>M-1-E</b><br/>applying (measure or solve measurement problem) the concepts of length (inches, feet, yards, miles, millimeters, centimeters, decimeters, meters, kilometers), area, volume, capacity (cups, liquid pints and quarts, gallons, milliliters, liters), weight (ounces, pounds, tons, grams, kilograms), mass, time (seconds, minutes, hours, days, weeks, months, years), money, and temperature (Celsius and Fahrenheit) to real-world experiences</p> <p><b>M-2-E</b><br/>selecting and using appropriate standard and non-standard units of measure (for example, paper clips and Cuisenaire rods) and tools for measuring length, area, capacity, weight/mass, and time for a given situation by considering the purpose and precision required for the task</p> <p><b>M-3-E</b><br/>using estimation skills to describe, order, and compare measures of length, capacity, weight/mass, time, and temperature</p> | <p><b>M-1-M</b><br/>applying the concepts of length, area, surface area, volume, capacity, weight, mass, money, time, temperature, and rate to real-world experiences</p> <p><b>M-2-M</b><br/>demonstrating an intuitive sense of measurement (for example, estimating and determining reasonableness of measures)</p> <p><b>M-3-M</b><br/>selecting appropriate units and tools for tasks by considering the purpose for the measurement and the precision required for the task (for example, length of a room in feet rather than inches)</p> <p><b>M-4-M</b><br/>using intuition and estimation skills to describe, order, and compare formal and informal measures (for example, ordering cup, pint, quart, gallon; comparing a meter to a yard)</p> <p><b>M-5-M</b><br/>converting from one unit of measurement to another within the same system</p> <p><b>M-6-M</b><br/>demonstrating the connection of measurement to the other strands and to real-life situations</p> | <p><b>M-1-H</b><br/>selecting and using appropriate units, techniques, and tools to measure quantities in order to achieve specified degrees of precision, accuracy, and error (or tolerance) of measurements</p> <p><b>M-2-H</b><br/>demonstrating an intuitive sense of measurement (for example, estimating and determining reasonableness of results as related to area, volume, mass, rate, and distance)</p> <p><b>M-3-H</b><br/>estimating, computing, and applying physical measurement using suitable units (for example, calculate perimeter and area of plane figures, surface area and volume of solids presented in real-world situations)</p> <p><b>M-4-H</b><br/>demonstrating the concept of measurement as it applies to real-world experiences</p> |

**Strand M: Measurement (continued)**

| <b>K-4</b>  | <b>5-8</b> | <b>9-12</b> |
|---|------------|-------------|
| <p><b>M-4-E</b><br/>converting from one unit of measurement to another within the same system (customary and metric); comparisons between systems should be based on intuitive reference points, not formal computations (for example, a meter is a little longer than a yard)</p> <p><b>M-5-E</b><br/>demonstrating the connection of measurement to the other strands and to real-life situations</p> |            |             |

## Strand G: Geometry

**Standard:** In problem-solving investigations, students demonstrate an understanding of geometric concepts and applications involving one-, two-, and three-dimensional geometry, and justify their findings.

| K–4   | 5–8  | 9–12   |
|---|--|--|
| <p><b>G-1-E</b><br/>determining the relationships among shapes</p> <p><b>G-2-E</b><br/>identifying, describing, comparing, constructing, and classifying two-dimensional and three-dimensional geometric shapes using a variety of materials</p> <p><b>G-3-E</b><br/>making predictions regarding combinations, subdivisions, and transformations (slides, flips, turns) of simple plane geometric shapes</p> <p><b>G-4-E</b><br/>drawing, constructing models, and comparing geometric shapes with special attention to developing spatial sense</p> <p><b>G-5-E</b><br/>identifying and drawing lines and angles and describing their relationships to each other and to the real world</p> <p><b>G-6-E</b><br/>demonstrating the connection of geometry to the other strands and to real-life situations</p> | <p><b>G-1-M</b><br/>using estimation skills to describe, order, and compare geometric measures</p> <p><b>G-2-M</b><br/>identifying, describing, comparing, constructing, and classifying geometric figures and concepts</p> <p><b>G-3-M</b><br/>making predictions regarding transformations of geometric figures (for example, make predictions regarding translations, reflections, and rotations of common figures)</p> <p><b>G-4-M</b><br/>constructing two- and three-dimensional models</p> <p><b>G-5-M</b><br/>making and testing conjectures about geometric shapes and their properties</p> <p><b>G-6-M</b><br/>demonstrating an understanding of the coordinate system (for example, locate points, identify coordinates, and graph points in a coordinate plane to represent real-world situations)</p> | <p><b>G-1-H</b><br/>identifying, describing, comparing, constructing, and classifying geometric figures in two and three dimensions using technology where appropriate to explore and make conjectures about geometric concepts and figures</p> <p><b>G-2-H</b><br/>representing and solving problems using geometric models and the properties of those models (for example, Pythagorean Theorem or formulas involving radius, diameter, and circumference)</p> <p><b>G-3-H</b><br/>solving problems using coordinate methods, as well as synthetic and transformational methods (for example, transform on a coordinate plane a design found in real-life situations)</p> <p><b>G-4-H</b><br/>using inductive reasoning to predict, discover, and apply geometric properties and relationships (for example, patty paper constructions, sum of the angles in a polygon)</p> <p><b>G-5-H</b><br/>classifying figures in terms of congruence and similarity and applying these relationships</p> |

**Strand G: Geometry (continued)**

| <b>K-4</b> | <b>5-8</b>   | <b>9-12</b>   |
|------------|--|---|
|            | <b>G-7-M</b><br>demonstrating the connection of geometry to the other strands and to real-life situations (for example, applications of the Pythagorean Theorem) | <b>G-6-H</b><br>demonstrating deductive reasoning and mathematical justification (for example, oral explanation, informal proof, and paragraph proof) |

**Strand D: Data Analysis, Probability, and Discrete Math**

**Standard:** In problem-solving investigations, students discover trends, formulate conjectures regarding cause-and-effect relationships, and demonstrate critical thinking skills in order to make informed decisions.

| K–4   | 5–8   | 9–12   |
|---|---|--|
| <p><b>D-1-E</b><br/>collecting, organizing, and describing data based on real-life situations</p> <p><b>D-2-E</b><br/>constructing, reading, and interpreting data in charts, graphs, tables, etc.</p> <p><b>D-3-E</b><br/>formulating and solving problems that involve the use of data</p> <p><b>D-4-E</b><br/>exploring, formulating, and solving sequence-of-pattern problems involving selection and arrangement of objects/numerals</p> <p><b>D-5-E</b><br/>predicting outcomes based on probability (for example, make predictions of same chance, more likely, or less likely; determine fair and unfair games)</p> <p><b>D-6-E</b><br/>demonstrating the connection of data analysis, probability, and discrete math to other strands and real-life situations</p> | <p><b>D-1-M</b><br/>systematically collecting, organizing, describing, and displaying data in charts, tables, plots, graphs, and/or spreadsheets</p> <p><b>D-2-M</b><br/>analyzing, interpreting, evaluating, drawing inferences, and making estimations, predictions, decisions, and convincing arguments based on organized data (for example, analyze data using concepts of mean, median, mode, range, random samples, sample size, bias, and data extremes)</p> <p><b>D-3-M</b><br/>describing informal thinking procedures (for example, solving elementary logic problems using Venn diagrams, tables, charts, and/or elementary logic operatives to solve logic problems in real-life situations; reach valid conclusions in elementary logic problems involving “and, or, not, if/then”)</p> <p><b>D-4-M</b><br/>analyzing various counting and enumeration procedures with and without replacement (for example, find the total number of possible outcomes or possible choices in a given situation)</p> | <p><b>D-1-H</b><br/>designing and conducting statistical experiments that involve the collection, representation, and analysis of data in various forms</p> <p><b>D-2-H</b><br/>recognizing data that relate two variables as linear, exponential, or otherwise in nature (for example, match a data set, linear or non-linear, to a graph and vice versa)</p> <p><b>D-3-H</b><br/>using simulations to estimate probabilities (for example, lists and tree diagrams)</p> <p><b>D-4-H</b><br/>demonstrating an understanding of the calculation of finite probabilities using permutations, combinations, sample spaces, and geometric figures</p> <p><b>D-5-H</b><br/>recognizing events as dependent or independent in nature and demonstrating techniques for computing multiple-event probabilities</p> <p><b>D-6-H</b><br/>recognizing and answering questions about data that are normally or non-normally distributed</p> |

**Strand D: Data Analysis, Probability, and Discrete Math (continued)**

| K–4 | 5–8   | 9–12  |
|-----|---|---|
|     | <p><b>D-5-M</b><br/>comparing experimental probability results with theoretical probability (for example, representing probabilities of concrete situations as common fractions, investigating single-event and multiple-event probability, using sample spaces, geometric figures, tables, and/or graphs)</p> <p><b>D-6-M</b><br/>demonstrating the connection of data analysis, probability, and discrete math to other strands and to real-life situations</p> | <p><b>D-7-H</b><br/>making inferences from data that are organized in charts, tables, and graphs (for example, pictograph; bar, line, or circle graph; stem-and-leaf plot or scatter plot)</p> <p><b>D-8-H</b><br/>using logical thinking procedures, such as flow charts, Venn diagrams, and truth tables</p> <p><b>D-9-H</b><br/>using discrete math to model real-life situations (for example, fair games or elections, map coloring)</p> |

**Strand P: Patterns, Relations, and Functions**

**Standard:** In problem-solving investigations, students demonstrate an understanding of patterns, relations, and functions that represent and explain real-world situations.

| K–4   | 5–8  | 9–12   |
|---|--|--|
| <p><b>P-1-E</b><br/>recognizing, describing, extending, and creating a wide variety of numerical (for example, skip counting of whole numbers), geometrical, and statistical patterns</p> <p><b>P-2-E</b><br/>representing and describing mathematical relationships using tables, variables, open sentences, and graphs</p> <p><b>P-3-E</b><br/>recognizing the use of patterns, relations, and functions in other strands and in real-life situations</p> | <p><b>P-1-M</b><br/>describing, extending, analyzing, and creating a wide variety of numerical, geometrical, and statistical patterns (for example, skip counting of rational numbers, and simple exponential number patterns)</p> <p><b>P-2-M</b><br/>describing and representing relationships using tables, rules, simple equations, and graphs</p> <p><b>P-3-M</b><br/>analyzing relationships to explain how a change in one quantity results in a change in another (for example, change in the dimensions of a rectangular solid affects the volume)</p> <p><b>P-4-M</b><br/>demonstrating the pervasive use of patterns, relations, and functions in other strands and in real-life situations</p> | <p><b>P-1-H</b><br/>modeling the concepts of variables, functions, and relations as they occur in the real world, and using the appropriate notation and terminology</p> <p><b>P-2-H</b><br/>translating between tabular, symbolic, or graphic representations of functions</p> <p><b>P-3-H</b><br/>recognizing behavior of families of elementary functions, such as polynomial, trigonometric, and exponential functions, and, where appropriate, using graphing technologies to represent them</p> <p><b>P-4-H</b><br/>analyzing the effects of changes in parameters (for example, coefficients and constants) on the graphs of functions, using technology whenever possible</p> <p><b>P-5-H</b><br/>analyzing real-world relationships that can be modeled by elementary functions</p> |

**Louisiana Educational Assessment Program  
Graduation Exit Exam  
Mathematics Achievement Level Descriptors: Grade 10**

**Note:** These descriptors have been modified slightly from the 2001 publication to match the condensed descriptors on the updated 2006 Individual Student Reports.

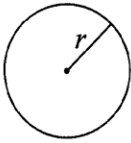
| Achievement Level | Descriptors   |
|-------------------|---|
| <b>Advanced</b>   | <p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• understand the function concept and are able to communicate and apply the numeric, algebraic, and graphical properties of functions;</li> <li>• apply their knowledge of algebra, geometry, and statistics to solve problems in more advanced areas of continuous and discrete mathematics;</li> <li>• formulate generalizations and create models through probing examples and counter examples; and</li> <li>• communicate their mathematical reasoning through the clear, concise, and correct use of mathematical symbolism and logical thinking.</li> </ul>  |
| <b>Mastery</b>    | <p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• demonstrate an understanding of algebraic, statistical, geometric, and spatial reasoning;</li> <li>• simplify algebraic expressions; justify geometric relationships; and judge and defend the reasonableness of answers as applied to real-world situations;</li> <li>• analyze and interpret data in various forms;</li> <li>• understand and use elements of the linear function concept in symbolic, graphical, and tabular form; and</li> <li>• make conjectures, defend ideas, and give supporting examples.</li> </ul>   |
| <b>Basic</b>      | <p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• use estimation to verify solutions and determine the reasonableness of results as applied to routine real-world problems;</li> <li>• use algebraic and geometric reasoning strategies to solve problems;</li> <li>• recognize relationships presented in verbal, algebraic, tabular, and graphical forms;</li> <li>• demonstrate knowledge of geometric relationships and corresponding measurement skills;</li> <li>• apply statistical reasoning in the organization and display of data and in reading tables and graphs;</li> <li>• generalize from patterns and examples in the areas of algebra, geometry, and statistics;</li> <li>• use correct mathematical language and symbols to communicate mathematical relationships and reasoning processes; and</li> <li>• use calculators appropriately to solve problems.</li> </ul> |



## Mathematics Achievement Level Descriptors: Grade 10 (continued)

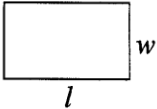
|                          |  |
|--------------------------|--|
| <b>Approaching Basic</b> | Students scoring at this level generally exhibit the ability to <ul style="list-style-type: none"><li>• use estimation and measurement to verify solutions and determine the reasonableness of results as applied to routine real-world problems;</li><li>• show limited use of fundamental algebraic, geometric, and statistical reasoning in problem solving;</li><li>• interpret data presented in various forms;</li><li>• show limited skills in communicating mathematically; and</li><li>• demonstrate limited application of conceptual knowledge.</li></ul>   |
| <b>Unsatisfactory</b>    | Students scoring at this level have not demonstrated the fundamental knowledge and skills needed for the next level of schooling. Students at this level generally have not exhibited the ability to <ul style="list-style-type: none"><li>• use estimation and measurement to verify solutions and determine the reasonableness of results as applied to routine real-world problems;</li><li>• use fundamental algebraic, geometric, and statistical reasoning in problem solving;</li><li>• interpret data presented in various forms;</li><li>• communicate mathematically; or</li><li>• apply conceptual knowledge.</li></ul> |

### Circle



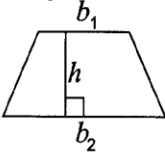
$\pi \approx 3.14$   
 Area =  $\pi r^2$   
 Circumference =  $2\pi r$

### Rectangle



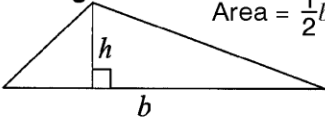
Area =  $lw$   
 Perimeter =  $2l + 2w$

### Trapezoid



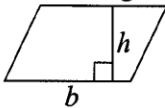
Area =  $\frac{1}{2}h(b_1 + b_2)$

### Triangle



Area =  $\frac{1}{2}bh$

### Parallelogram



Area =  $bh$

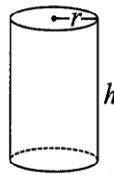
### Metric Units of Length

- 1 kilometer = 1000 meters
- 1 centimeter = 0.01 meter
- 1 millimeter = 0.001 meter
- 1 micrometer = 0.000001 meter

### U.S. Unit Conversions

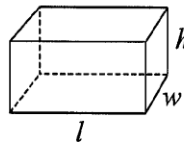
- 8 fluid ounces = 1 cup
- 2 cups = 1 pint
- 2 pints = 1 quart
- 4 quarts = 1 gallon
- 16 ounces = 1 pound
- 5,280 feet = 1 mile

### Cylinder



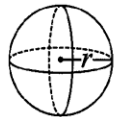
Volume =  $\pi r^2 h$   
 Surface Area =  $2\pi r^2 + 2\pi r h$

### Rectangular Solid



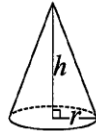
Volume =  $lwh$   
 Surface Area =  $2wl + 2lh + 2wh$

### Sphere



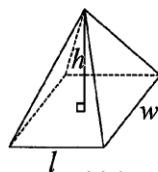
Volume =  $\frac{4}{3}\pi r^3$

### Cone



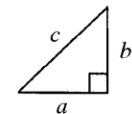
Volume =  $\frac{1}{3}\pi r^2 h$

### Rectangular Pyramid



Volume =  $\frac{1}{3}lwh$

### Pythagorean Theorem



$a^2 + b^2 = c^2$

### Cartesian Distance Formula

$$AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

(see note below)

### Slope Formula

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

(see note below)

**NOTE:** Point A:  $(x_1, y_1)$

Point B:  $(x_2, y_2)$

**Note:** The Mathematics Reference Sheet has been reduced in size for this document. A version suitable for printing can be found on the Louisiana Department of Education Web site.

## Chapter 3: GEE Science, Grade 11

This chapter provides specifications for the Science test for grade 11 GEE. It describes the contents and format of the test, provides the number and types of items, and explains how the strands, standards, benchmarks, and dimensions for Science are assessed.

### Test Structure

The Science test consists of three sessions and is administered in one day. Students are allowed as much time as they need to complete each session, but suggested times are provided in the *Test Administration Manual*; it explains the procedures for allowing students additional time to complete a session of the test.

**Session 1:** 40 multiple-choice items

**Session 2:** 4 short-answer items

**Session 3:** 1 comprehensive science task with 3 short-answer items and 1 extended constructed-response item

### Item Types

The Science test includes multiple-choice items, short-answer items scored with an item-specific 2-point rubric, and one extended constructed-response item scored with an item-specific 4-point rubric.

In Session 1, the multiple-choice items assess all five science strands. Each multiple-choice item consists of a stem and four answer options (A, B, C, and D).

In Session 2, independent short-answer items assess the four content strands.

In Session 3, the 3 short-answer items are inquiry-based and the extended constructed-response item relates to the science content of the task.

**Note:** Science is composed of five strands—Science as Inquiry, Physical Science, Life Science, Earth and Space Science, and Science and the Environment. Of these, Science as Inquiry describes the inquiry processes, which are applied to each of the four strands that explore the content of science.

Any of the Science test items may include stimulus material, for example:

- data tables or graphs presenting data to be read or interpreted;
- charts, illustrations, or graphic organizers;
- descriptions and details of science investigations; and/or
- maps showing geographical features.

## Test Description

The grade 11 GEE Science test assesses all five science strands:

- Science as Inquiry
- Physical Science
- Life Science
- Earth and Space Science
- Science and the Environment

The test items reflect the benchmarks and focus on both the *why* and the implications of phenomena in science, rather than focus on the *what* and the specific facts or details.

The **multiple-choice items** focus on important science concepts and allow students to show their breadth of understanding.

The **2-point short-answer items** address the unifying concepts and processes of science. These items allow students to reflect on a science concept, demonstrate their understanding, and make meaning from a given set of data. The wording of the items is direct and specific. Items that require multiple examples or reasons clearly state the exact number rather than a minimum (for example, “Give at least *two* reasons . . .”).

The **comprehensive science task** integrates the Science as Inquiry strand with at least one content strand (such as Life Science). Students are provided with a written scenario that describes a scientific investigation. Students are required to read, use, and react to the scenario, which usually includes diagrams, data tables, and graphs. Students are also expected to make scientific conclusions based on this scenario. The types of test items that accompany the science task may include data tables for students to complete or interpret. Students may also be required to record data and observations about the scenario.

The reading level is minimized to the extent possible (except for necessary terms) so that students’ reading ability does not interfere with their ability to demonstrate their science knowledge and skills.

## Scoring the Science Sessions

Each multiple-choice item has four response options (A, B, C, and D) and is scored right/wrong. Correct answers receive a score of 1; incorrect answers receive a score of 0.

Science has seven 2-point short-answer items and one 4-point extended constructed-response item. The specific rubric for each of these items is developed from the general scoring rubrics for LEAP, GEE, and *i*LEAP.

### General Scoring Rubric—Short-Answer Items

| Score Level | Description of Score Level  |
|-------------|---|
| <b>2</b>    | <ul style="list-style-type: none"> <li>• The student’s response provides a complete and correct answer.</li> </ul>  |
| <b>1</b>    | <ul style="list-style-type: none"> <li>• The student’s response is partially correct.</li> <li>• The student’s response demonstrates limited awareness or contains errors.</li> </ul> |
| <b>0</b>    | <ul style="list-style-type: none"> <li>• The student’s response is totally incorrect, irrelevant, too minimal to evaluate, or blank.</li> </ul>                                       |

### General Scoring Rubric—Extended Constructed-Response Items

| Score Level | Description of Score Level  |
|-------------|---|
| <b>4</b>    | <ul style="list-style-type: none"> <li>• The response demonstrates in-depth understanding of the relevant content and/or procedures.</li> <li>• The student completes all important components of the task accurately and communicates ideas effectively.</li> <li>• Where appropriate, the student offers insightful interpretations and/or extensions.</li> <li>• Where appropriate, the student chooses more sophisticated reasoning and/or efficient procedures.</li> </ul> |
| <b>3</b>    | <ul style="list-style-type: none"> <li>• The response demonstrates understanding of major concepts and/or processes, although less important ideas or details may be overlooked or misunderstood.</li> <li>• The student completes the most important aspects of the task accurately and communicates clearly.</li> <li>• The student’s logic and reasoning may contain minor flaws.</li> </ul>   |
| <b>2</b>    | <ul style="list-style-type: none"> <li>• The student completes some parts of the task successfully.</li> <li>• The response demonstrates gaps in conceptual understanding.</li> </ul>   |
| <b>1</b>    | <ul style="list-style-type: none"> <li>• The student completes only a small portion of the task and/or shows minimal understanding of the concepts or processes.</li> </ul>   |
| <b>0</b>    | <ul style="list-style-type: none"> <li>• The student’s response is totally incorrect, irrelevant, too brief to evaluate, or blank.</li> </ul>   |

## Science Test Specifications, Grade 11

### Number of Multiple-Choice, Short-Answer, and Extended Constructed-Response Items in Strands

| Strand  | Multiple-Choice<br>(1 point) | Short-Answer<br>(2 points) | ECR<br>Items<br>(4 points)              | Score<br>Points |
|---|------------------------------|----------------------------|---|-----------------|
| 1. Science as Inquiry   | 8                            | 0                          |   | 8               |
| 2. Physical Science   | 10                           | 1                          |   | 12              |
| 3. Life Science   | 10                           | 1                          |   | 12              |
| 4. Earth and Space Science  | 6                            | 1                          |   | 8               |
| 5. Science and the Environment  | 6                            | 1                          |   | 8               |
| <b>Comprehensive Science Task</b>   |                              |                            |   |                 |
| 1. Science as Inquiry<br><u>Dimension 1</u> (Questioning,<br>Planning, Doing, and<br>Recording) |                              | 1                          |   | 2               |
| 1. Science as Inquiry<br><u>Dimension 2</u> (Interpreting and<br>Communicating)                 |                              | 2                          |   | 4               |
| 2. Physical Science   |                              |                            | 1<br>(in two of<br>the four<br>strands) | 4               |
| 3. Life Science   |                              |                            |   |                 |
| 4. Earth and Space Science  |                              |                            | not<br>applicable                       |                 |
| 5. Science and the Environment  |                              |                            |   |                 |
| <b>Total Score Points</b>   | <b>40</b>                    | <b>14</b>                  | <b>4</b>                                | <b>58</b>       |

## STRANDS, STANDARDS, BENCHMARKS, AND DIMENSIONS ASSESSED

Each of the five science strands is associated with a single standard. The *strand* name serves as a label referring to the full text of its associated *standard*. Each strand has several benchmarks that describe what students should know and be able to do in the context of the strands of science. This section lists the benchmarks that are assessed and explains how they are assessed.

**Strand SI: Science as Inquiry**

**Standard:** The students will *do* science by engaging in partial and full inquiries that are within their developmental capabilities.

**Strand PS: Physical Science**

**Standard:** Students will develop an understanding of the characteristics and interrelationships of matter and energy in the physical world.

**Strand LS: Life Science**

**Standard:** The students will become aware of the characteristics and life cycles of organisms and understand their relationships to each other and to their environment.

**Strand ESS: Earth and Space Science**

**Standard:** The students will develop an understanding of the properties of Earth materials, the structure of Earth's system, Earth's history, and Earth's place in the universe.

**Strand SE: Science and the Environment**

**Standard:** In learning environmental science, students will develop an appreciation of the natural environment, learn the importance of environmental quality, and acquire a sense of stewardship. As consumers and citizens, they will be able to recognize how our personal, professional, and political actions affect the natural world.

These strands, standards, and benchmarks are further explained by indicating levels of thinking called *dimensions*.

The dimensions of science were developed to explain the level of thinking expected in the assessment of each science benchmark. Some benchmarks are assessed at a level that requires the students to demonstrate scientific knowledge and understanding, which is dimension 1. The next level requires an explanation of scientific knowledge and understanding, which is dimension 2. The most complex level requires the application of scientific knowledge and understanding, which is dimension 3.

The dimensions of science indicate levels of complexity of thought, not necessarily levels of difficulty. A benchmark assessed at the level of dimension 1 may be more difficult than a benchmark assessed at the level of dimension 3 because of the difficulty of the content itself.

The dimensions indicate what students are expected to be able to do with the concepts, processes, and ideas for each strand. The two dimensions for the Science as Inquiry strand are different from the dimensions for the content strands. These two unique dimensions help define the skills and habits of the mind students exhibit when they actively engage with materials and consider new ideas or evidence.

| Strand  | Strand Dimensions  |
|---|--|
| <b>Science as Inquiry (SI)</b>  | 1. Questioning, Planning, Doing, and Recording<br>2. Interpreting and Communicating  |
| <b>Physical Science (PS)</b><br><b>Life Science (LS)</b><br><b>Earth and Space Science (ESS)</b><br><b>Science and the Environment (SE)</b> | 1. Understanding Essential Content and Concepts<br>2. Explaining, Reflecting, and Connecting<br>3. Applying and Using Knowledge and Technology |

This section provides the following information:

**Strand:** This information is organized according to the five strands of science:

- Science as Inquiry
- Physical Science
- Life Science
- Earth and Space Science
- Science and the Environment

**Benchmarks Assessed:** the text of all benchmarks eligible for GEE

**Dimensions:** The dimensions indicate what students are expected to be able to do with the concepts and processes for each strand and benchmark.

**Key Concepts:** important concepts that may be assessed

**Benchmarks Not Assessed:** a list of all benchmarks not eligible for GEE



## Explanation of Benchmark Codes

Benchmarks are grouped by strand and thematic category. For example:

*Strand:* Physical Science

*Categories:* A. Measurement and Symbolic Representation

B. Atomic Structure

C. The Structure and Properties of Matter

D. Chemical Reactions

E. Forces and Motion

F. Energy

G. Interactions of Energy and Matter

Benchmarks are coded by strand, grade cluster (E, M, H), and benchmark number. The first term in the code refers to the strand. The second term refers to the grade cluster, and the third term refers to the category and benchmark number. Categories are indicated by letters.

### Examples of Science Codes

| Code    | Translation   |
|---------|---|
| SI-E-A5 | SI strand, elementary level, category A, benchmark 5    |
| PS-M-B4 | PS strand, middle school level, category B, benchmark 4 |
| SE-H-A6 | SE strand, high school level, category A, benchmark 6   |

For most grade clusters, strands are divided into categories, or major topical areas. However, the SE strand has no categories for prekindergarten through 4 and 5 through 8.

## Science as Inquiry

Inquiry is an integral component of scientific literacy because it actively involves students in the process of science. Students become better problem-solvers and decision-makers while using the tools, techniques, and habits of mind characteristic of scientific inquiry. Decision-making includes recognition of the impact of actions and accountability for one's choices.

| Dimension 1: Questioning, Planning, Doing, and Recording |   |
|--|---|
| Benchmarks Assessed                                      |   |
| SI-H-A1  | identifying questions and concepts that guide scientific investigations   |
| SI-H-A2  | designing and conducting scientific investigations  |
| SI-H-A3  | using technology and mathematics to improve investigations and communications   |
| S1-H-A7  | utilizing science safety procedures during scientific investigations.   |
| SI-H-B1  | communicating that scientists usually base their investigations on existing models, explanations, and theories  |
| SI-H-B2  | communicating that scientists conduct investigations for a variety of reasons, such as exploration of new areas, discovery of new aspects of the natural world, confirmation of prior investigations, evaluation of current theories, and comparison of models and theories |
| SI-H-B3  | communicating that scientists rely on technology to enhance the gathering and manipulation of data  |

### Specifically, students may be required to:

- construct knowledge and explanations
- formulate testable questions
- design plausible means of gathering data or evidence related to their questions
- design and carry out scientific investigations
- use appropriate tools, technology, and techniques
- gather data to address the questions they formulated
- recognize the variety of types of information that constitute evidence
- recognize the inherent bias and limitations of each source of information
- keep clear, concise records of appropriate data and observations

## Dimension 2: Interpreting and Communicating

### Benchmarks Assessed

|         |   |
|---------|---|
| SI-H-A4 | formulating and revising scientific explanations and models using logic and evidence  |
| SI-H-A5 | recognizing and analyzing alternative explanations and models   |
| SI-H-A6 | communicating and defending a scientific argument   |
| SI-H-B4 | analyzing a proposed explanation of scientific evidence according to the following criteria: follow a logical structure, follow rules of evidence, allow for questions and modifications, and is based on historical and current scientific knowledge |
| SI-H-B5 | communicating that the results of scientific inquiry, new knowledge, and methods emerge from different types of investigations and public communication among scientists  |

### Specifically, students may be required to:

- think critically and logically about relationships between different pieces of evidence
- develop and modify predictions, models, and explanations
- make meaning of observations, natural phenomena, and everyday occurrences
- share the results of scientific investigation in oral and written formats

### Key Concepts:

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Science as Inquiry, students must do the following:

- Identify appropriate safety procedures and safety equipment for scientific investigations.
- Determine sound reasons for conducting scientific investigations.
- Design investigations, critique investigations, collect data, recognize next steps, and communicate results.
- Read, create, interpret, and make predictions using tables, charts, and graphs of data.
- Identify how scientists develop and accept scientific theories and how scientists fit new discoveries into existing theories.
- Identify given observations and explanations that are consistent with current scientific knowledge.

- Use data to support given conclusions or form a conclusion based on an analysis of data (evidence).
- Identify or write testable questions that guide investigations and develop hypotheses when given a problem or questions.
- Determine changes in procedures to ensure accuracy of results and determine how to reduce measurement error.
- Compare results of investigations and explain why it is necessary to conduct multiple trials.
- Identify or demonstrate how scientists communicate results of investigations.
- Identify appropriate models for described scientific observations or phenomena.
- Explain or provide examples to illustrate how new technologies have improved scientific investigations and impacted society.
- Identify independent variables, dependent variables, factors to be controlled, and the control group in scientific investigations

## Physical Science

Physical Science focuses on the study of materials and their interactions with other forms of matter and energy. Because students are constantly exposed to different forms of matter and energy in the world, there are rich opportunities to draw on concrete experiences and observations to provide the foundation for more abstract concepts and ideas.

| Dimension 1: Understanding Essential Content and Concepts |  |
|---|--|
| Benchmarks Assessed                                       |  |
| PS-H-A1   | manipulating and analyzing quantitative data using the SI system   |
| PS-H-A2   | understanding the language of chemistry (formulas, equations, symbols) and its relationship to molecules, atoms, ions, and subatomic particles             |
| PS-H-B1   | describing the structure of the atom and identifying and characterizing the particles that compose it (including the structure and properties of isotopes) |
| PS-H-B3   | understanding that an atom's electron configuration, particularly that of the outermost electrons, determines the chemical properties of that atom         |
| PS-H-C1   | distinguishing among elements, compounds, and/or mixtures  |
| PS-H-C5   | understanding that chemical bonds are formed between atoms when the outermost electrons are transferred or shared to produce ionic and covalent compounds  |
| PS-H-C6   | recognizing that carbon atoms can bond to one another in chains, rings, and branching networks to form a variety of structures                             |
| PS-H-D5   | applying the law of conservation of matter to chemical reactions   |
| PS-H-E1   | recognizing the characteristics and relative strengths of the forces of nature (gravitational, electrical, magnetic, nuclear)                              |
| PS-H-G1   | giving examples of the transport of energy through wave action   |

### Specifically, students may be required to:

- demonstrate knowledge and understanding of
  - properties of matter*
  - physical interactions of matter*
  - chemical interactions of matter*
  - the transfer of energy*
- recognize and discuss patterns of behavior among materials

## Dimension 2: Explaining, Reflecting, and Connecting

### Benchmarks Assessed

|         |  |
|---------|--|
| PS-H-C2 | discovering the patterns of physical and chemical properties found on the periodic table of the elements   |
| PS-H-C3 | understanding that physical properties of substances reflect the nature of interactions among its particles  |
| PS-H-C7 | using the kinetic theory to describe the behavior of atoms and molecules during phase changes and to describe the behavior of matter in its different phases |
| PS-H-D1 | observing and describing changes in matter and citing evidence of chemical change  |
| PS-H-D4 | analyzing the factors that affect the rate and equilibrium of a chemical reaction  |
| PS-H-D6 | comparing and contrasting the energy changes that accompany changes in matter  |
| PS-H-E3 | understanding effects of forces on changes in motion as explained by Newtonian mechanics   |
| PS-H-E4 | illustrating how frame of reference affects our ability to judge motion  |
| PS-H-F1 | describing and representing relationships among energy, work, power, and efficiency  |
| PS-H-F2 | applying the universal law of conservation of matter, energy, and momentum and recognizing their implications  |
| PS-H-G2 | analyzing the relationship and interaction of magnetic and electrical fields and the forces they produce   |
| PS-H-G3 | characterizing and differentiating electromagnetic and mechanical waves and their effects on objects as well as humans                                       |

### Specifically, students may be required to:

- think critically and logically about the relationships between evidence and Physical Science concepts
- recognize the importance of and relationships among separate ideas, facts, observations, and phenomena
- recognize similarities or differences, patterns of change or constancy, and relations within systems or between form and function
- unify concepts and processes to explain natural phenomena, observations, and ideas

## Dimension 3: Applying and Using Knowledge and Technology

### Benchmarks Assessed

|         |  |
|---------|--|
| PS-H-B2 | describing the nature and importance of radioactive isotopes and nuclear reactions (fission, fusion, radioactive decay)  |
| PS-H-C4 | separating mixtures based upon the physical properties of their components   |
| PS-H-D2 | comparing, contrasting, and measuring the pH of acids and bases using a variety of indicators  |
| PS-H-D3 | writing balanced equations to represent a variety of chemical reactions (acid/base, oxidation/reduction, etc.)   |
| PS-H-D7 | identifying important chemical reactions that occur in living systems, the home, industry, and the environment   |
| PS-H-E2 | understanding the relationship of displacement, time, rate of motion, and rate of change of motion; representing rate and changes of motion mathematically and graphically |
| PS-H-G4 | explaining the possible hazards of exposure to various forms and amounts of energy   |

### Specifically, students may be required to:

- use scientific knowledge to generalize findings and Physical Science concepts
- solve contextualized problems
- apply data to new situations and critically evaluate new ideas
- propose, analyze, and critique explanations for observed phenomena
- use technology and scientific information to investigate and solve problems
- communicate their findings and ideas

### Key Concepts:

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Physical Science, students must do the following:

- Use the metric system to measure physical properties of matter.
- Identify effective procedures and physical properties of substances to be used in separating common mixtures.
- Differentiate between mass and weight.

- Describe physical properties and calculate the density of given substances.
- Describe how temperature affects particles of matter and model how those particles are spaced and move in solid, liquid, and gaseous states.
- Recognize types of mixtures and identify common chemical compounds.
- Identify the components of an atom (electrons, protons, neutrons, empty space) and how those components relate within an atom.
- Utilize Bohr diagrams to accurately illustrate the composition of selected atoms and bonds between atoms.
- Differentiate among atoms, ions, molecules, formulas, and equations.
- Use a periodic table to answer questions about atomic mass; the number of protons, electrons, valence electrons, and neutrons in elemental atoms; bonding tendencies and to compare chemical properties of groups and families of elements.
- Explain or model how a single carbon atom can form four bonds and differentiate among single, double, and triple bonds formed by carbon.
- Recognize formulas and characteristics of acids and bases and use indicators to determine pH and classify substances as acids or bases.
- Describe evidence that a chemical reaction has occurred and identify ways to alter the rate of a chemical reaction.
- Write accurate chemical formulas for common compounds and chemical ions.
- Balance chemical equations and relate this process to the conservation of matter.
- Differentiate between nuclear fission and fusion and relate these processes to the conservation of matter and energy.
- Classify chemical reactions when provided with equations or descriptions.
- Describe or identify energy transformations among states and forms of energy: states—potential and kinetic; forms—mechanical, thermal (heat), chemical, electromagnetic (electrical and magnetic), and nuclear.
- Describe how energy is transmitted through waves (sound, light, etc.), distinguish between transverse and compression waves, and identify the relationship between wavelength and frequency.
- Differentiate among components of the electromagnetic spectrum and evaluate the use of ultraviolet light, infrared light, gamma rays, X-rays, visible light, and radio waves in medial technology.
- Compare electrical, magnetic, nuclear, and gravitational forces.
- Illustrate or evaluate diagrams of the laws of refraction and reflection, magnetic fields, static electricity production, series circuits, and parallel circuits.
- Utilize Newton's laws of motion to make predictions, solve problems, answer questions, and calculate net force.



- Relate frame of reference to descriptions of the motion of objects.
- Investigate, calculate, and graph rate of motion, velocity, and acceleration of objects when provided with scenarios and data.
- Predict the effects of unbalanced forces, friction, and air resistance on the motion of objects.
- When provided with a scenario and formulas, differentiate between and calculate work and power.
- Distinguish among six types of simple machines and determine the efficiency or mechanical advantage of simple machines utilizing a given formula and data.

## Life Science

Life Science focuses on the study of living organisms—structure and function, characteristics, behavior, and interaction. The concept of species survival, through natural selection and adaptation, drives the study of organisms, including their form and function, roles in an ecosystem, and evolutionary relationships to other organisms.

|   |   |
|---|---|
| Dimension 1: Understanding Essential Content and Concepts |   |
| <b>Benchmarks Assessed</b>                                |   |
| LS-H-A2   | demonstrating a knowledge of cellular transport |
| LS-H-C5   | distinguishing among the kingdoms               |

**Specifically, students may be required to:**

- develop an understanding of the characteristics and relationships of organisms and their environments
- understand the principles and concepts that explain characteristics of plants and animals (for example, systems interactions, form and function, evolutionary development)

| Dimension 2: Explaining, Reflecting, and Connecting |  |
|---|--|
| Benchmarks Assessed                                 |  |
| LS-H-A1   | observing cells, identifying organelles, relating structure to function, and differentiating among cell types                |
| LS-H-B1   | explaining the relationship among chromosomes, DNA, genes, RNA, and proteins   |
| LS-H-B2   | comparing and contrasting mitosis and meiosis  |
| LS-H-B3   | describing the transmission of traits from parent to offspring and the influence of environmental factors on gene expression |
| LS-H-C1   | exploring experimental evidence that supports the theory of the origin of life   |
| LS-H-C2   | recognizing the evidence for evolution   |
| LS-H-C3   | discussing the patterns, mechanisms, and rate of evolution   |
| LS-H-C6   | comparing and contrasting life cycles of organisms   |
| LS-H-C7   | comparing viruses to cells   |
| LS-H-D2   | describing trophic levels and energy flows   |
| LS-H-E1   | comparing and contrasting photosynthesis and cellular respiration; emphasizing their relationships                           |
| LS-H-E2   | recognizing the importance of the ATP cycle in energy usage within the cell  |
| LS-H-E3   | differentiating among levels of biological organization  |
| LS-H-F1   | identifying the structure and functions of organ systems   |
| LS-H-F2   | identifying mechanisms involved in homeostasis   |
| LS-H-F3   | recognizing that behavior is the response of an organism to internal changes and/or external stimuli                         |
| LS-H-F4   | recognizing that behavior patterns have adaptive value   |
| LS-H-G2   | contrasting how organisms cause disease  |
| LS-H-G3   | explaining the role of the immune system in fighting disease   |

**Specifically, students may be required to:**

- think critically and logically about the relationships between evidence and Life Science concepts
- recognize the importance of and relationships among separate ideas, facts, and phenomena
- recognize similarities or differences, patterns of change or constancy, and relations within systems or between form and function
- unify concepts and processes to explain natural phenomena, observations, and ideas

| Dimension 3: Applying and Using Knowledge and Technology |   |
|--|---|
| Benchmarks Assessed                                      |   |
| LS-H-A3  | investigating cell differentiation and describing stages of embryological development in representative organisms |
| LS-H-B4  | exploring advances in biotechnology and identifying possible positive and negative effects                        |
| LS-H-C4  | classifying organisms   |
| LS-H-D1  | illustrating the biogeochemical cycles and explaining their importance  |
| LS-H-D3  | investigating population dynamics   |
| LS-H-D4  | exploring how humans have impacted ecosystems and the need for societies to plan for the future                   |
| LS-H-G1  | relating fitness and health to longevity  |
| LS-H-G4  | exploring current research on the major diseases with regard to cause, symptoms, treatment, prevention, and cure  |
| LS-H-G5  | researching technology used in prevention, diagnosis, and treatment of diseases/disorders                         |

**Specifically, students may be required to:**

- use scientific knowledge to generalize findings and Life Science concepts
- solve contextualized problems
- apply data to new situations
- critically evaluate new ideas
- propose, recognize, analyze, and critique explanations for observed phenomena
- use technology and scientific information to investigate and solve problems
- communicate findings and ideas

**Key Concepts:**

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Life Science, students must do the following:

- Determine the sequential order of biological organization within the biosphere (cell, tissue, organ, population, community, ecosystem, biome, etc.).

- Analyze the conditions required for life to develop on Earth and describe the traits of life.
- Differentiate between viruses and cells by examining components, structures, and reproductive cycles.
- Identify and describe the functions of the components (organelles) in an eukaryotic cell.
- Differentiate between animal and plant cells and prokaryotic and eukaryotic cells utilizing components, form, and energy processes found in cells.
- Describe the structure and roles of ATP, DNA, mRNA, proteins, and enzymes in cells.
- Compare types of cellular transport (osmosis, diffusion, and active) and analyze the movement of water into and out of cells in various solution concentrations.
- Identify the function of specific differentiated animal cells (for example, muscle, neuron, white blood, red blood, skin, etc.).
- Compare and contrast the processes of photosynthesis and aerobic respiration and describe how these processes are related.
- Illustrate and compare life cycles (complete and incomplete metamorphosis) of a variety of organisms including prokaryotes, bacteria, protozoans, animals, and plants.
- Identify when cell differentiation occurs in a developing zygote and compare the development of a variety of chordate embryos to identify similarities and evidence of evolutionary relationships.
- Compare the structures and functions of major organ systems in a variety of organisms, simple and complex, relating the variation in systems to the evolutionary process.
- Differentiate between the functions of and processes in mitosis and meiosis.
- Utilize form, structures, functions, energy processes, and development to describe the major kingdoms of life and to classify organisms employing dichotomous keys.
- Analyze data or scenarios, such as adaptations, fossil records, homologous body structures, embryological similarities, and DNA comparison, to identify evidence of biological evolution.
- Determine factors (for example, loss of habitat, illness, climate change) that affect animal life, and identify or relate behavioral and biological adaptations to survival of species.
- Describe, illustrate, or analyze diagrams of DNA, RNA, proteins, dominant/recessive genes, Punnett squares, genotypes, phenotypes, and human pedigrees.
- Differentiate among structure and functions of DNA, RNA, genes, and chromosomes.
- Use a Punnett square to determine genotypic and phenotypic probabilities for offspring.
- Determine the primary components, functions, and interrelationships of the major human organ systems (nervous, circulatory, immune, respiratory, digestive, urinary, integumentary, muscular, skeletal, endocrine, and reproductive).

- Identify common communicable and noncommunicable diseases (malaria, diabetes, AIDS, tuberculosis, arteriosclerosis, sickle-cell anemia, etc.), their symptoms, their causative agents (viral, bacterial, fungal, lifestyle, inherited tendencies, mutations, etc.), and treatments.
- Describe or identify what humans can do to prevent disease, maintain health, and survive (diet, fitness, hygiene, immunizations, etc.).
- Examine case studies, diagrams, or scenarios about genetic engineering/bioengineering techniques to evaluate benefits, risks, and long-term impacts on society.
- Identify or describe technological advances that have extended the life span of humans and are currently improving the practice of medicine.
- Differentiate among trophic levels, trace the flow of energy through food webs, and predict the impact on organisms and energy flow of the loss or gain of an organism in that ecosystem.
- Analyze population dynamics to make predictions considering carrying capacity, limiting factors, resources, and the impact of humans on ecosystems.
- Analyze and illustrate natural cycles (carbon, nitrogen, and oxygen) and relate them to life processes.

## Earth and Space Science

Earth and Space Science focuses on the properties, structure, and interactions of the subsystems of Earth, the solar system, and the universe. The study of Earth and Space Science provides a rich opportunity for students to demonstrate their understanding of how concrete and observable phenomena are influenced by more abstract conditions or changes.

| Dimension 1: Understanding Essential Content and Concepts |  |
|---|--|
| Benchmarks Assessed                                       |  |
| ESS-H-A1  | investigating the methods of energy transfer and identifying the Sun as the major source of energy for most of Earth's systems                   |
| ESS-H-A7  | modeling the transfer of Earth's internal heat by way of convection currents in the mantle, which powers the movement of the lithospheric plates |
| ESS-H-B1  | illustrating how stable chemical atoms or elements are recycled through the solid earth, oceans, atmosphere, and organisms                       |
| ESS-H-B2  | demonstrating Earth's internal and external energy sources as forces in moving chemical atoms or elements  |
| ESS-H-C5  | explaining that natural processes and changes in Earth's system may take place in a matter of seconds or develop over billions of years          |
| ESS-H-D1  | identifying scientific evidence that supports the latest theory of the age and origin of the universe  |
| ESS-H-D5  | describing the role of hydrogen in the formation of all the natural elements   |

### Specifically, students may be required to:

- develop an understanding of the properties of Earth materials
- develop an understanding of the structure of Earth's systems, Earth's history, and Earth's place in the universe
- develop knowledge about the structure, order, and origin of the universe

| Dimension 2: Explaining, Reflecting, and Connecting |   |
|---|---|
| Benchmarks Assessed                                 |   |
| ESS-H-A2  | modeling the seasonal changes in the relative position and appearance of the Sun and inferring the consequences with respect to Earth's temperature |
| ESS-H-A3  | explaining fission and fusion in relation to Earth's internal and external heat sources   |
| ESS-H-A4  | explaining how decay of radioactive isotopes and the gravitational energy from Earth's original formation generates Earth's internal heat           |
| ESS-H-C1  | explaining the formation of the solar system from a nebular cloud of dust and gas   |
| ESS-H-C4  | examining fossil evidence as it relates to the evolution of life and the resulting changes in the amount of oxygen in the atmosphere                |
| ESS-H-D6  | demonstrating the laws of motion for orbiting bodies  |

**Specifically, students may be required to:**

- think critically and logically about the relationships between evidence and Earth and Space Science concepts
- recognize the importance of and relationships among separate ideas, facts, and phenomena.
- recognize similarities or differences, patterns of change or constancy, and relations within systems or between form and function
- unify concepts and processes to explain natural phenomena, observations, and ideas

| Dimension 3: Applying and Using Knowledge and Technology |  |
|--|--|
| Benchmarks Assessed                                      |  |
| ESS-H-A5   | demonstrating how the Sun's radiant energy causes convection currents within the atmosphere and the oceans |
| ESS-H-C2   | estimating the age of Earth by using dating techniques   |
| ESS-H-C3   | communicating the geologic development of Louisiana  |
| ESS-H-D4   | identifying the elements found in the Sun and other stars by investigating the spectra                     |
| ESS-H-D7   | describing the impact of technology on the study of Earth, the solar system, and the universe              |



**Specifically, students may be required to:**

- use scientific knowledge to generalize findings and Earth and Space Science concepts
- solve contextualized problems
- apply data to new situations
- critically evaluate new ideas
- propose, recognize, analyze, and critique explanations for observed phenomena
- use technology and scientific information to investigate and solve problems
- communicate findings and ideas

**Key Concepts:**

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Earth and Space Science, students must do the following:

- Identify the Sun as the primary source of energy that powers food webs, the water cycle, and convection currents and describe the processes within the Sun that generate heat and light energy.
- Identify the processes within the Earth that generate Earth's internal heat and drive lithospheric plate movement.
- Explain the differences between conduction, convection, and radiation.
- Relate temperature changes and seasons to Earth's tilt, rotation, and revolution around the Sun and the resulting angle of incoming solar radiation.
- Predict the effects of convection currents on Earth's landforms, bodies of water, and the atmosphere (plate tectonics, weather, currents, etc.).
- Explain the prevailing theory concerning the production of oxygen in the Earth's atmosphere.
- Identify types of erosion and conditions causing erosion and describe how erosion affects Earth's surface.
- Identify the elements found in stars and the technology used to determine the elements present; compare the spectral lines of other elements to hydrogen.
- Compare the movement of planets and natural and man-made satellites, rotation and revolution, and the movement of other objects in the night sky.
- Recognize ways that technology improves space exploration and discovery.
- Identify constructive and destructive forces and their effects upon Earth's surface.
- Describe the types of evidence used by scientists to estimate the age of fossils, the Earth, and the universe.
- Describe the prevailing theory of how Earth and our solar system were formed.

- Differentiate between events that take a short amount of time (for example, avalanches, earthquakes, volcanoes, floods) and those that take a longer amount of time (for example, weathering and erosion, creation of sedimentary rock, fossil formation and fossil fuel deposits, plate tectonics)
- Illustrate or analyze the flow of energy in the water cycle and relate this cycle to weather and changes in landforms.

**Benchmarks Not Assessed:**

- ESS-H-A6 describing the energy transfer from the Sun to Earth and its atmosphere as it relates to the development of weather and climate patterns
- ESS-E-D2 describing the organization of the known universe
- ESS-H-D3 comparing and contrasting the Sun with other stars

## Science and the Environment

Science and the Environment focuses on the interactions among the living and nonliving components of the natural world, as well as the consequences of change. The study of Science and the Environment provides an opportunity for direct investigation of cause-and-effect relationships among organisms and resources, as well as an understanding and appreciation of the unique capability of humans to have a dramatic impact on their environment.

### Dimension 1: Understanding Essential Content and Concepts

#### Benchmarks Assessed

|          |  |
|----------|--|
| SE-H-A1  | demonstrating an understanding of the functions of Earth's major ecological systems  |
| SE-H-A4  | understanding that change is a fundamental characteristic of every ecosystem and that ecosystems have varying capacities for change and recovery |
| SE-H-A11 | understanding how pollutants can affect living systems   |

#### Specifically, students may be required to:

- develop knowledge about the interrelationships among the biological, chemical, and physical aspects of the environment

### Dimension 2: Explaining, Reflecting and Connecting

#### Benchmarks Assessed

|         |  |
|---------|--|
| SE-H-A2 | investigating the flow of energy in ecological systems   |
| SE-H-A6 | describing and explaining Earth's biochemical and geochemical cycles and their relationship to ecosystem stability               |
| SE-H-A7 | comparing and contrasting the dynamic interaction within the biosphere   |
| SE-H-A9 | demonstrating an understanding of influencing factors of biodiversity  |
| SE-H-B3 | recognizing that population size and geographic and economic factors result in the inequitable distribution of Earth's resources |

#### Specifically, students may be required to:

- think critically and logically about the relationship between evidence and concepts
- recognize the importance of and relationships among separate ideas, facts, and phenomena

- recognize similarities or differences, patterns of change or constancy, and relations within systems or between form and function
- unify concepts and processes to explain natural phenomena, observations, and ideas

| Dimension 3: Applying and Using Knowledge and Technology |   |
|--|---|
| Benchmarks Assessed                                      |   |
| SE-H-A8  | analyzing evidence that plant and animal species have evolved physical, biochemical, and/or behavioral adaptations to their environments  |
| SE-H-B6  | recognizing that sustainable development is a process of change in which resource use, investment direction, technological development, and institutional change meet society's present as well as future needs |
| SE-H-C1  | evaluating the dynamic interaction of land, water, and air and its relationship to living things in maintaining a healthy environment   |
| SE-H-C4  | demonstrating that environmental decisions include analyses that incorporate ecological, health, social, and economic factors   |

**Specifically, students may be required to:**

- use scientific knowledge and understanding to generalize findings and Science and the Environment concepts
- solve contextualized problems
- apply data to new situations
- critically evaluate new ideas
- propose, recognize, analyze, and critique explanations for observed phenomena
- use technology and scientific information to investigate and solve problems
- communicate findings and ideas

**Key Concepts:**

These concepts describe important content emphasis regarding the knowledge and skills eligible for assessment of each strand.

To experience the key concepts of Science and the Environment, students must do the following:

- Define *biome*, identify the factors that differentiate various biomes, recognize biomes with the greatest biodiversity, and explain the importance of biodiversity in a biome.

- Identify pollutants (acid rain, point source, runoff, etc.) and how they affect Earth's ecosystems.
- Identify positive and negative human impacts on environments.
- Determine how the introduction of nonnative species or the removal of a native species affects ecosystems.
- Determine factors (for example, loss of habitat, illness) that affect animal life.
- Describe the order of succession in an ecosystem following a forest fire.
- Explain sustainability and succession.
- Evaluate the advantages and disadvantages of various forms of energy production (coal mining, nuclear power plants, dams, etc.).
- Identify alternative energy technologies and describe how they affect the use of fossil fuels, the environment, etc.
- Identify symbiotic relationships in organisms and evaluate the roles of involved organisms.
- Describe trophic levels and provide examples of each: producers, consumers, decomposers, scavengers.
- Evaluate the effectiveness of using renewable resources (biodegradable, solar energy, etc.), nonrenewable resources (fossil fuels), recycling, preservation practices, and conservation practices in sustaining quality of life in managing natural resources.
- Analyze interactions among organisms and the flow of energy in the complex web of an ecosystem.
- Identify the biogeochemical cycles for common elements and describe how they cycle through the environment.
- Analyze the causes and effects of potential global environmental threats such as greenhouse gases, global warming, ozone depletion, depletion (cutting) of major forests, and pollution of potable water.
- Identify the social, economic, technological, and political considerations for environmental policies such as levees for flood control, canals for economic access, land use, and emissions.
- Recognize the differences between developed and developing nations.
- Identify adaptations of organisms that ensure survival in natural habitats.

**Benchmarks Not Assessed:**

- SE-H-A3      describing how habitat, carrying capacity, and limiting factors influence plant and animal populations (including humans)
- SE-H-A5      describing the dynamic interactions between divisions of the biosphere

- SE-H-A10 explaining that all species represent a vital link in a complex web of interaction
- SE-H-B1 explaining the relationships between renewable and nonrenewable resources
- SE-H-B2 comparing and contrasting conserving and preserving resources
- SE-H-B4 comparing and contrasting long- and short-term consequences of resource management
- SE-H-B5 analyzing resource management
- SE-H-C2 evaluating the relationships between quality of life and environmental quality
- SE-H-C3 investigating and communicating how environmental policy is formed by the interaction of social, economic, technological, and political considerations
- SE-H-C5 analyzing how public support affects the creation and enforcement of environmental laws and regulations
- SE-H-D1 demonstrating the effects of personal choices and actions on the natural environment
- SE-H-D2 analyzing how individuals are capable of reducing and reversing their impact on the environment through thinking, planning, education, collaboration, and action
- SE-H-D3 demonstrating that the most important factor in prevention and control of pollution is education
- SE-H-D4 demonstrating a knowledge that environmental issues should be a local and global concern
- SE-H-D5 recognizing that the development of accountability toward the environment is essential for sustainability
- SE-H-D6 developing an awareness of personal responsibility as stewards of the local and global environment

# Sample Test Items: Grade 11 Science

## Sample Science Multiple-Choice Items

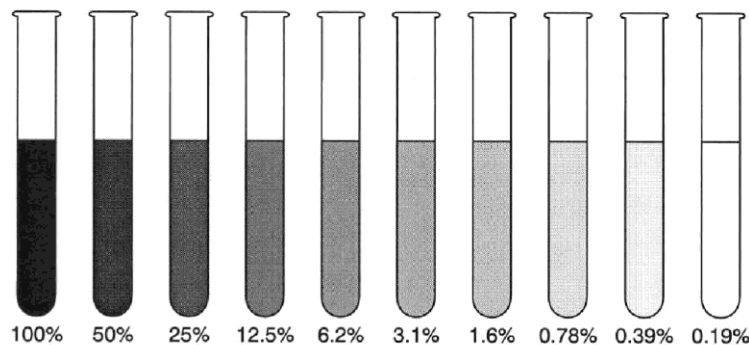
Items 1 through 16 are sample multiple-choice items, arranged by strand and benchmark. Items may assess some of the skills of a benchmark while other items may measure all of the skills of the benchmark.

### Science as Inquiry

**Benchmark SI-H-A1:** identifying questions and concepts that guide scientific investigations

Use the diagram and information below to answer question 1.

When yeast is put into a solution containing sugar, the yeast cells carry out respiration. Molasses contains various sugars. As part of a scientific investigation, a student sets up ten test tubes containing solutions of molasses. Each test tube contained 25mL of the solution, but the concentration of molasses was different in each test tube, as shown in the diagram below. The student added 5 mL of a yeast suspension to each test tube and then left them for one day in an oven set at 36°C.



1. Which question about respiration was the student **most likely** investigating?
- A. How does temperature affect respiration?
  - B. How does the volume of the solution affect respiration?
  - C. How does the amount of sugar affect respiration?
  - D. How does the number of yeast cells affect respiration?

**Correct response: C**

## Science as Inquiry

**Benchmark SI-H-A2:** designing and conducting scientific investigations

**Use the information below to answer question 2.**

Four groups of students were each given a piece of aluminum foil (20 cm × 20 cm), a container holding 1 liter of water, and some pennies. Each group was instructed to use the aluminum foil to make a boat that would hold the greatest number of pennies while floating on the water.

2. The dependent variable in this investigation is the
- A. amount of water.
  - B. number of pennies.
  - C. size of the aluminum foil.
  - D. length of the boat.

**Correct response: B**



## Science as Inquiry

**Benchmark SI-H-A4:** formulating and revising scientific explanations and models using logic and evidence

### Use the information below to answer question 3.

White light consists of wavelengths of all colors. The shorter wavelengths appear blue, and the longer wavelengths appear red. Wavelengths of blue light are scattered more easily by Earth's atmosphere than wavelengths of red light. That is why the sky appears blue during most of the day. However, at sunset the sky appears red.

3. Which is a logical explanation consistent with current scientific knowledge for why the sky appears red at sunset?
- A. Due to the angle of the Sun when it is setting, sunlight travels a greater distance through the atmosphere. Thus, blue light gets scattered before reaching an observer on Earth.
  - B. As the day draws to a close, the Sun produces less blue light. Thus, an observer on Earth sees red light even though this light does not get scattered very much.
  - C. Earth's surface is warmer at sunset and so absorbs more blue wavelengths of light than during the day. Thus, an observer on Earth only sees the red light.
  - D. As Earth's atmosphere cools, wavelengths of blue light passing through it become longer. Thus, an observer on Earth sees these longer wavelengths as red light.

**Correct response: A**

**Science as Inquiry**

**Benchmark SI-H-A5:** recognizing and analyzing alternative explanations and models

**Use the information below to answer question 4.**

Planarian worms swim away from sources of light. One explanation for this behavior is that in the dark their planarian bodies are hidden from predators.

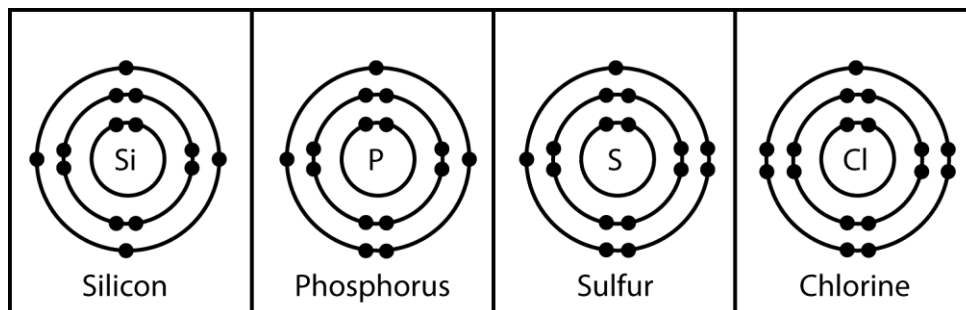
4. Which statement is another scientifically reasonable explanation for the evolution of this behavior?
- A. Light causes planarians' body temperature to decrease.
  - B. More carbon dioxide for the planarians is found in dark water.
  - C. The planarians' food generally is found in dark regions.
  - D. Light pushes on the planarians and turns them around.

**Correct response: C**

## Physical Science

**Benchmark PS-H-B3:** understanding that an atom's electron configuration, particularly that of the outermost electrons, determines the chemical properties of that atom

Use the diagram below to answer question 5.



5. Which element will gain only one electron during a chemical reaction?
- A. silicon
  - B. phosphorus
  - C. sulfur
  - D. chlorine

**Correct response: D**

## Physical Science

**Benchmark PS-H-C3:** understanding that physical properties of substances reflect the nature of interactions among its particles


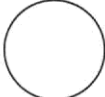




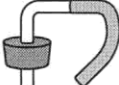


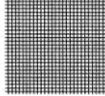






6. When water falls onto a smooth, nonabsorbent surface, the water forms half-spheres rather than spreading evenly over the surface. This occurs because of strong forces of
- A. electrical attraction between the water molecules.
  - B. gravitational attraction between the water molecules.
  - C. nuclear repulsion between the water molecules and the surface molecules.
  - D. magnetic repulsion between the water molecules and the surface molecules.

**Correct response: A**

## Physical Science

**Benchmark PS-H-C4:** separating mixtures based upon the physical properties of their components

7. Which set of equipment would be **most** useful for turning salt water into drinking water?

- A.      
Beaker      Filter Paper      Funnel      Flask
- B.      
Burner      Flask      Connector (stopper, glass tubing, hose)      Beaker
- C.      
Mortar and Pestle      Wire Screen (very fine mesh)      Medicine Dropper      Forceps
- D.      
Burner      Graduated Cylinder      Evaporating Dish      Stirring Rod

**Correct response: B**

## Physical Science

**Benchmark PS-H-C7:** using the kinetic theory to describe the behavior of atoms and molecules during phase changes and to describe the behavior of matter in its different phases

8. A closed container of gas may explode when heated mainly because heating the gas causes the pressure to increase. Which statement best explains why the pressure increases when the gas is heated?
- A. The gas molecules expand.
  - B. The gas molecules chemically react.
  - C. The gas molecules become electrically charged.
  - D. The gas molecules collide more often with the container.

**Correct response: D**

## Life Science

**Benchmark LS-H-A2:** demonstrating a knowledge of cellular transport

9. Oxygen and carbon dioxide molecules pass freely through cell membranes. Which factor determines the direction most molecules will pass through the cell membrane?
- A. the ionic charge on the outer shell of the gas molecules
  - B. the concentration of the gas molecules on each side of the membrane
  - C. the strength of the covalent bonds holding the gas atoms in the molecules
  - D. the size of the gas molecules

**Correct response: B**

## Life Science

**Benchmark LS-H-B1:** explaining the relationship among chromosomes, DNA, genes, RNA, and proteins

10. DNA contains the code for constructing which molecules?
- A. proteins
  - B. fats
  - C. starches
  - D. sugars

**Correct response: A**

## Life Science

**Benchmark LS-H-D2:** describing trophic levels and energy flows

11. Which food chain correctly summarizes the flow of energy through an ecosystem?
- A. sun → rabbit → grass → fox
  - B. rabbit → fox → sun → grass
  - C. fox → sun → rabbit → grass
  - D. sun → grass → rabbit → fox

Correct response: D

### Life Science

**Benchmark LS-H-F3:** recognizing that behavior is the response of an organism to internal changes and/or external stimuli

12. A scuba diver sees a squid releasing a cloud of black ink while the squid quickly moves away. Which stimulus **most likely** caused this behavior?
- A. a storm overhead
  - B. a nearby predator
  - C. a large tidal wave
  - D. a sudden increase in sunlight

**Correct response: B**

### Earth and Space Science

**Benchmark ESS-H-A2:** modeling the seasonal changes in the relative position and appearance of the Sun and inferring the consequences with respect to Earth's temperature

13. Summer is warmer than other seasons in the Northern Hemisphere because
- A. Earth is closer to the Sun.
  - B. rays of sunlight are more direct.
  - C. the Moon blocks fewer of the Sun's warming rays.
  - D. more wind tends to come from warm areas near the equator.

**Correct response: B**

### Earth and Space Science

**Benchmark ESS-H-B1:** illustrating how stable chemical atoms are recycled through the solid earth, oceans, atmosphere, and organisms

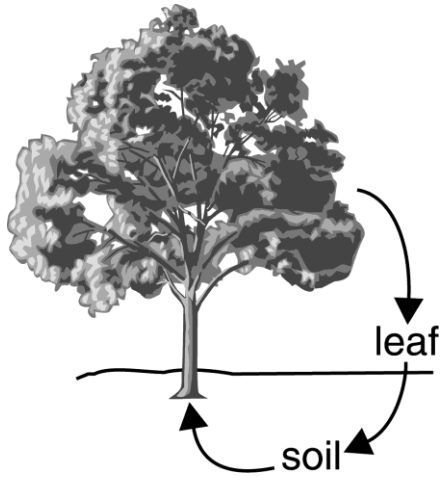
14. Which process is **not** essential for the water cycle to occur?
- A. water vapor condensing
  - B. energy being transferred from the Sun
  - C. liquid water evaporating
  - D. oxygen being dissolved in water

**Correct response: D**

**Science and the Environment**

**Benchmark SE-H-A6:** describing and explaining Earth's biochemical and geochemical cycles and their relationship to ecosystem stability

**Use the picture below to answer question 15.**



15. The picture represents the flow of a nutrient such as phosphorus in a forest. Which organism would make that nutrient available in the soil?
- A. cricket
  - B. woodpecker
  - C. squirrel
  - D. mushroom

**Correct response: D**

**Science and the Environment**

**Benchmark SE-H-A8:** analyzing evidence that plant and animal species have evolved physical, biochemical, and/or behavioral adaptations to their environments

16. Which adaptation prevents armadillos from being eaten by predators?
- A. large wings
  - B. sharp curved claws
  - C. hard outer covering
  - D. long legs

**Correct response: C**



## Sample Science Short-Answer Items

Questions 17 through 22 show sample short-answer items. Each item involves several steps and the application of multiple skills. The short-answer items are designed to assess one of the benchmarks. The items are scored using an item-specific rubric on a scale of 0 to 2 points.

### Life Science

**Benchmark LS-H-B1:** explaining the relationship among chromosomes, DNA, genes, RNA, and proteins

17. Suppose a change occurs in one of the molecules making up the DNA in the nucleus of a cell.
- A. Explain why this change could affect a protein that is made in the cytoplasm.
  - B. Explain **one** role RNA plays in making the protein.

### Scoring Rubric:

| Score | Description  |
|-------|--|
| 2     | The student's response completely answers part A and B. Response contains no errors.           |
| 1     | The student's response answers part A <b>OR</b> part B. Response contains errors or omissions. |
| 0     | The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.      |

### Scoring notes:

Assign one point for each part.

*Part A:* DNA contains the code for making the protein (or for sequencing the amino acids). If the DNA changes, the new coding could be for a different protein (or sequence of amino acids).

*Part B:* Possible answers for part B include:

- Thorough, RNA, the DNA code leaves the nucleus and guides the construction of the protein in the ribosomes in cytoplasm.

**OR**

- RNA is used to pick up amino acids and bring them to where the protein is being made (that is, the ribosome).

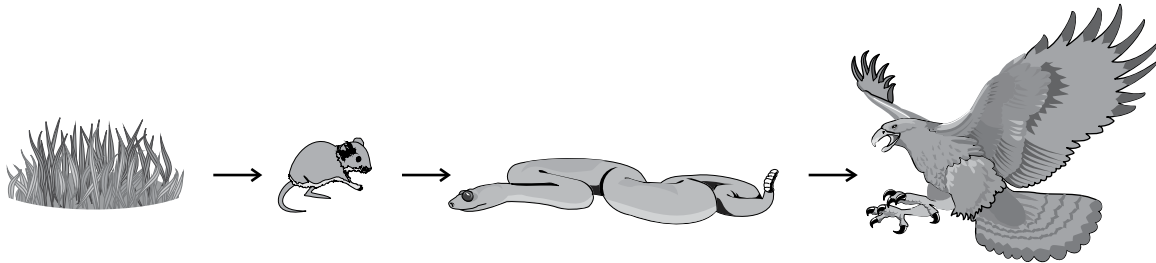
**OR**

- RNA makes sure the building blocks of proteins (that is, amino acids) are put in the correct order in the protein.

**Life Science**

**Benchmark LS-H-D2:** describing trophic levels and energy flows

**Use the food chain below to answer question 18.**



**18.** This food chain shows the direction energy flows from a producer to a third-level consumer. In terms of **energy**, explain why there would be many more mice than hawks in an environment involving this food chain.

**Scoring Rubric:**

| Score | Description  |
|-------|--|
| 2     | The student's response completely describes in terms of energy the difference in the number of mice and hawks. Response contains no errors |
| 1     | The student's response partially describes the difference in the number of mice and hawks. Response contains errors or omissions.          |
| 0     | The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.  |

**Scoring notes:**

*2 points:*

Because of energy loss in transfer, it takes a lot of energy (food, individual prey) to go from one level in the food chain to the next. Higher trophic levels have less energy available than lower levels do. About 90 percent of the energy is lost during the transfer from one level to the next. Only about 10 percent of the energy available is transferred from one level to the next.

*1 point:*

Response simply states that it takes many mice to feed a snake through its lifetime and many snakes to feed a single hawk at the top of the chain.

**Note:** The 1-point response will most likely fail to provide an explanation in terms of energy.

## Earth and Space Science

**Benchmark ESS-H-B1:** illustrating how stable chemical atoms or elements are recycled through the solid earth, oceans, atmosphere, and organisms

19. Identify **two** objects or substances within the biosphere where carbon is found during the carbon cycle.

### Scoring Rubric:

| Score | Description  |
|-------|--|
| 2     | The student's response identifies two locations where carbon is found during the carbon cycle. Response contains no errors.          |
| 1     | The student's response identifies one location where carbon is found during the carbon cycle. Response contains errors or omissions. |
| 0     | The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.  |

### Scoring notes:

*Possible locations include:*

- carbon in living organisms
- carbon dioxide in air
- carbon compounds in remains of living organisms
- coal
- diamond
- fossil fuels
- graphite
- limestone or carbonates (*Note: Do not accept just rock.*)

**Note:** Listing any two organisms (for example, fish, bird) should be given 2 points.

## Earth and Space Science

**Benchmark ESS-H-C5:** explaining that natural processes and changes in Earth’s system may take place in a matter of seconds or develop over billions of years

- 20.** Natural processes and changes on Earth can take place in a short period of time or can take millions of years.
- A.** Describe an example of a process or change that takes place in a short period of time.
- B.** Describe an example of a process or change that takes millions of years.

### Scoring Rubric:

| Score | Description  |
|-------|--|
| 2     | The student’s response describes a process or change that takes place in a very short period of time and a process or change that takes millions of years. Response contains no errors.  |
| 1     | The student’s response describes a process or change that takes place in a very short period of time,<br><b>OR</b><br>The student’s response describes a process or change that takes millions of years,<br><b>OR</b><br>The student’s response simply lists two processes or changes. |
| 0     | The student’s response is totally incorrect, irrelevant, too brief to evaluate, or blank.  |

### Scoring notes:

*Short-period processes or changes:*

- earthquakes
- volcanic eruptions
- flash floods
- tornadoes
- hurricanes
- landslides
- avalanches

*Long-period processes or changes:*

- changes in the oxygen content of the atmosphere
- plate tectonics (uplifting and weathering of mountains)
- formation of coal deposits
- formation of sedimentary rock

*Either short- or long-period processes or changes (depends on description)*

- delta formation
- coastal erosion
- river changes course (meandering rivers)

**Note:** A response must include a minimal description for each part to receive full credit.

## Science and the Environment

**Benchmark SE-H-A6:** describing and explaining Earth’s biochemical and geochemical cycles and their relationship to ecosystem stability

**21.** Describe the role **two** organisms play in the nitrogen cycle.

### Scoring Rubric:

| Score | Description  |
|-------|--|
| 2     | The student’s response describes the role two organisms play in the nitrogen cycle. Response contains no errors.           |
| 1     | The student’s response describes the role one organism plays in the nitrogen cycle. Response contains errors or omissions. |
| 0     | The student’s response is totally incorrect, irrelevant, too brief to evaluate, or blank.                                  |

### Scoring notes:

*Possible answers:*

- [nitrogen-fixing] bacteria—convert atmospheric nitrogen to a form used by other organisms (ammonium)
- [root-nodule] bacteria—convert atmospheric nitrogen to usable products for plants
- consumers (animals)—eat plant or animal material and produce nitrogenous wastes
- bacteria or fungi—decompose plant and animal nitrogen compounds
- [nitrifying soil] bacteria—convert ammonium to nitrites and nitrates
- plants—assimilate nitrates into plant material
- [denitrifying] bacteria—convert nitrates to nitrogen

**Note:** A response using bacteria twice should receive full credit if two different roles are described.

## Science and the Environment

**Benchmark SE-H-A11:** understanding how pollutants can affect living systems

- 22.** Suppose an oil tanker ran aground and broke apart near the mouth of the Mississippi River and millions of gallons of crude oil spilled out of the ship. Describe **two** effects this would **likely** have on the ecosystems in the surrounding environment.

### Scoring Rubric:

| Score | Description   |
|-------|---|
| 2     | The student's response describes two effects the oil spill could have on the surrounding ecosystems. Response contains no errors.                     |
| 1     | The student's response describes an effect the oil spill could have on the surrounding ecosystems.<br><b>OR</b><br>Response simply lists two effects. |
| 0     | The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.   |

### Scoring notes:

- wildlife is affected—oil coats plants and animals and can kill them.
- upsets ecological balance, killing wildlife and plant life
- years for areas to be restored
- fishing and estuaries affected—fish kills, pollution
- negative aesthetic effect on recreational areas

**Note:** A response that lists only one effect should be given a zero.



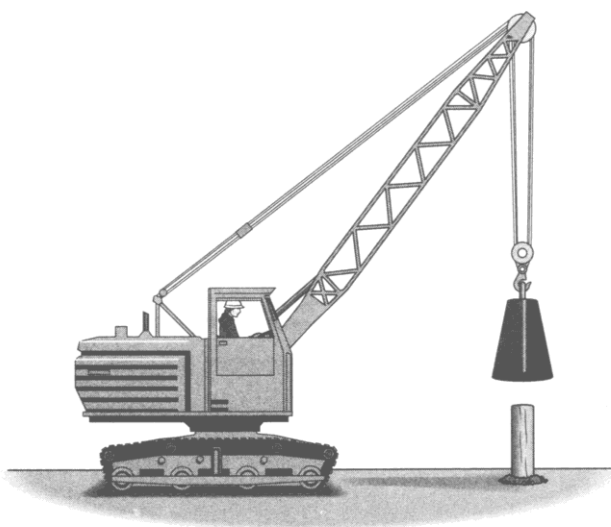
## Sample Science Task

Questions 23 through 26 show a sample science task, which includes 3 inquiry-based short-answer items and 1 extended constructed-response item. Each item involves separate steps and the application of multiple skills. Each constructed-response item is designed to assess one benchmark. The short-answer items are scored using an item-specific rubric on a scale of 0 to 2 points. The extended constructed-response item is scored using an item-specific rubric on a scale of 0 to 4 points.

### Task Description: Pile Driver

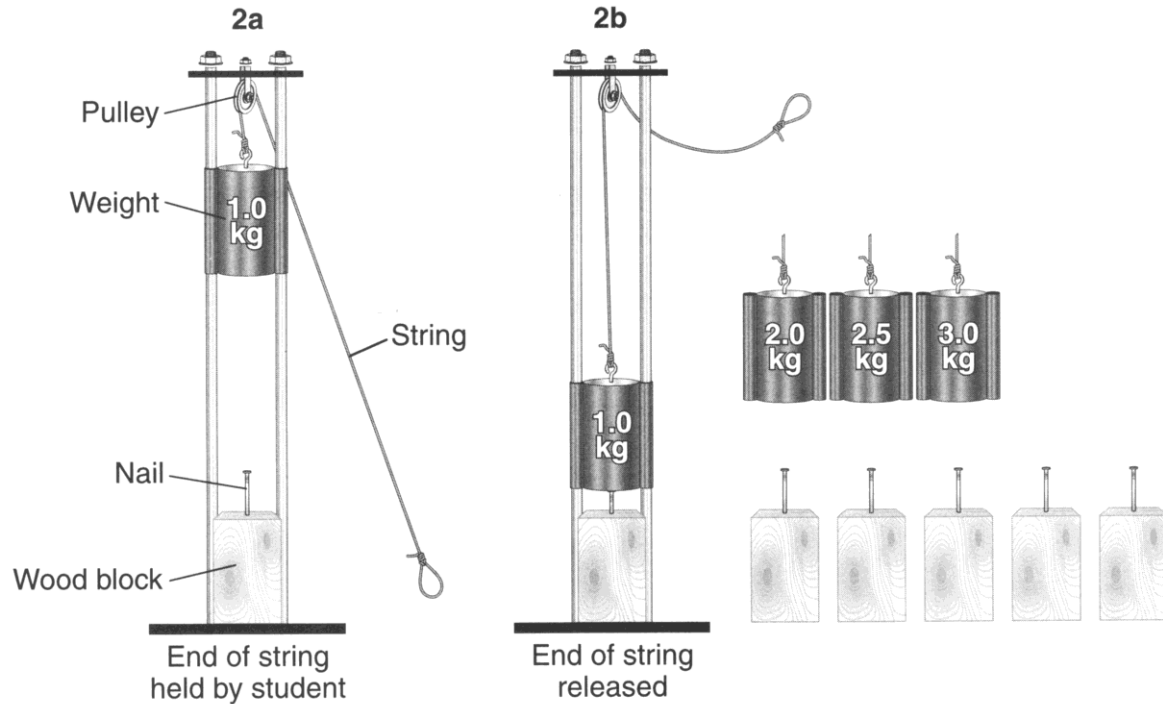
At a construction site near their school, some students observe a crane lifting a weight. The weight drops and hits a long post, pushing the post into the ground. The students watch as the machine lifts and drops the weight several more times. Each time the post moves farther into the ground. This kind of machine is called a pile driver because it pushes the post (a pile) into the ground.

### Diagram 1: Pile Driver



The students want to investigate how a pile driver works. They decide to simulate a pile driver's action in their science classroom by making a model. They build a structure to suspend a metallic weight above the floor. The weight is lifted toward the top of the structure by a pulley and string system (see diagram 2a). When the string is released, the weight moves downward (see diagram 2b).

## Diagram 2: Pile Driver Model



The students have 6 rectangular blocks of wood. They drill a small hole into each block. They put a nail in each hole so that the nail is straight up and down. Then they place one block at the bottom of the pile driver model. When the weight drops, it hits the nail and pushes the nail farther into the wood.

They repeat this procedure 5 more times. For trials 1 through 4, they change the mass of the weight. For trials 4 through 6, they change the distance the weight falls. They measure and record how deeply the nail is driven into the wood for each trial. Their results are given in the table on the next page.

| Results from Pile Driver Model |                         |                                |  |
|--------------------------------|-------------------------|--------------------------------|--|
| Trial                          | Mass of the Weight (kg) | Distance the Weight Falls (cm) | Distance Nail is Pushed into the Wood (cm) |
| 1                              | 1.0                     | 20                             | 1.2  |
| 2                              | 2.0                     | 20                             | 2.4  |
| 3                              | 2.5                     | 20                             | 3.0  |
| 4                              | 3.0                     | 20                             | 3.6  |
| 5                              | 3.0                     | 30                             | 5.4  |
| 6                              | 3.0                     | 40                             | 7.1  |

### Science as Inquiry

**Benchmark SI-H-A2:** designing and conducting scientific investigations

**23.** In trials 4 through 6, the students study how the distance the weight falls affects the distance that the nail is pushed into the wood. Identify **two** variables that need to remain constant in these trials.

1.

2.

### Scoring Rubric:

| Score | Description  |
|-------|--|
| 2     | The student's response identifies two variables that need to be constant in trials 4 through 6. Response contains no errors.           |
| 1     | The student's response identifies one variable that needs to be constant in trials 4 through 6. Response contains errors or omissions. |
| 0     | The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.  |

### Scoring notes:

*Possible variables to hold constant:*

- the mass of the weight (or the weight)
- the starter holes drilled in the wood blocks (same depth or size)
- the kind of nail (size, composition, mass, etc.)
- the kind of wood block (size, composition, etc.)

## Science as Inquiry

### Benchmark SI-H-A6: communicating and defending a scientific argument

24. Suppose the students do a seventh trial using a 2.0-kilogram weight that falls 40 centimeters.
- A. Give a reasonable prediction for the distance the nail will be driven into the wood.
  - B. Explain why your prediction is reasonable based on the results of this investigation.

### Scoring Rubric:

| Score | Description   |
|-------|---|
| 2     | The student makes a reasonable prediction and supports why the prediction is reasonable based on the results of the investigation. Response contains no errors. |
| 1     | The student either gives a reasonable prediction<br><b>OR</b><br>explains how a prediction could be made based on the results of this investigation.            |
| 0     | The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.   |

### Scoring notes:

*Part A:* Accept from 4.5 cm to 5.0 cm as reasonable.

**OR**

The nail will be driven into the wood a distance that is about double that when it was dropped from 20 cm.

*Part B:* Data for trials 4 and 6 show that when the distance the weight falls doubles, the distance the nail is pushed into the wood also doubles. Trial 2 shows that when a 2-kg mass falls 20 cm, the nail is pushed into the wood 2.4 cm. Therefore, when the same 2-kg mass falls 40 cm, the nail should be pushed into the wood 4.8 cm ( $=2.4 \text{ cm} \times 2$ ).

**Note:** Advanced students may recognize that trials 4 through 6 indicate the variables are directly proportional and explain their prediction based on a direct proportion.

## Science as Inquiry

**Benchmark SI-H-A4:** formulating and revising scientific explanations and models using logic and evidence

**25.** Like all models, the students' model has limitations. Describe **two** ways the students' model is not like a pile driver.

1.

2.

### Scoring Rubric:

| Score | Description   |
|-------|---|
| 2     | Student describes two ways the model is not like a pile driver. Response contains no errors.          |
| 1     | Student describes one way the model is not like a pile driver. Response contains errors or omissions. |
| 0     | The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.             |

### Scoring notes:

*Sample answers:*

- Pile drivers are much larger than the model.
- Pile drivers use much heavier weights than the model.
- Pile drivers get their energy from burning gasoline in a motor, not from humans lifting the weights.
- Piles are driven into soil, not wood.
- Piles are not made of the same material as nails.
- Piles don't always have points on the ends as the nails did.

## Physical Science

**Benchmark PS-H-F1:** describing and representing relationships among energy, work, power, and efficiency

**26.** This investigation involves various kinds of energy. Identify **four** kinds of energy involved in the investigation and describe specifically at which point each kind of energy was involved in the investigation.

1.

2.

3.

4.

### Scoring Rubric:

| Score | Description  |
|-------|--|
| 4     | The student identifies four kinds of energy and describes specifically where each was involved in the investigation. Response contains no errors.  |
| 3     | The student identifies three kinds of energy and describes where each was involved in the investigation. Response contains minor errors omissions.   |
| 2     | The student identifies two kinds of energy and describes where each was involved in the investigation.<br><b>OR</b><br>The student simply lists four kinds of energy involved in the investigation.      |
| 1     | The student identifies one kind of energy and describes where it was involved in the investigation.<br><b>OR</b><br>The student simply lists two or three kinds of energy involved in the investigation. |
| 0     | The student's response is totally incorrect, irrelevant, too brief to evaluate, or blank.  |

**Scoring notes:**

*Sample answers:*

- gravitational potential energy (or “energy of position”) when the weight is raised above tabletop
- kinetic energy (or “energy of motion”) when the weight is in the process of falling
- kinetic energy when the weight is in the process of being lifted
- kinetic energy of nail as it moves farther into the wood after being struck
- sound energy generated by the collision between the weight and the nail
- heat energy as a result of friction between nail and wood or string and pulley
- chemical energy in the food the students ate that gave them energy to do the investigation
- mechanical energy as a result of the moving parts of the pile driver

## Benchmark Statements, across Grades

| K–4  | 5–8   | 9–12  |
|--|---|---|
| <p style="text-align: center;"><b>SCIENCE AS INQUIRY</b></p> <p>In grades K–4, what students know and are able to do includes:</p> <p><b>A. THE ABILITIES NECESSARY TO DO SCIENTIFIC INQUIRY</b></p> <p>SI-E-A1 asking appropriate questions about organisms and events in the environment</p> <p>SI-E-A2 planning and/or designing and conducting a scientific investigation</p> <p>SI-E-A3 communicating that observations are made with one's senses</p> <p>SI-E-A4 employing equipment and tools to gather data and extend the sensory observations</p> <p>SI-E-A5 using data, including numbers and graphs, to explain observations and experiments</p> <p>SI-E-A6 communicating observations and experiments in oral and written formats</p> <p>SI-E-A7 utilizing safety procedures during experiments</p> | <p style="text-align: center;"><b>SCIENCE AS INQUIRY</b></p> <p>As students in grades 5–8 extend their knowledge, what they know and are able to do includes:</p> <p><b>A. THE ABILITIES NECESSARY TO DO SCIENTIFIC INQUIRY</b></p> <p>SI-M-A1 identifying questions that can be used to design a scientific investigation</p> <p>SI-M-A2 designing and conducting a scientific investigation</p> <p>SI-M-A3 using mathematics and appropriate tools and techniques to gather, analyze, and interpret data</p> <p>SI-M-A4 developing descriptions, explanations, and graphs using data</p> <p>SI-M-A5 developing models and predictions using the relationships between data and explanations</p> <p>SI-M-A6 comparing alternative explanations and predictions</p> <p>SI-M-A7 communicating scientific procedures, information, and explanations</p> <p>SI-M-A8 utilizing safety procedures during scientific investigations</p> | <p style="text-align: center;"><b>SCIENCE AS INQUIRY</b></p> <p>As students in grades 9–12 extend and refine their knowledge, what they know and are able to do includes:</p> <p><b>A. THE ABILITIES NECESSARY TO DO SCIENTIFIC INQUIRY</b></p> <p>SI-H-A1 identifying questions and concepts that guide scientific investigations</p> <p>SI-H-A2 designing and conducting scientific investigations</p> <p>SI-H-A3 using technology and mathematics to improve investigations and communications</p> <p>SI-H-A4 formulating and revising scientific explanations and models using logic and evidence</p> <p>SI-H-A5 recognizing and analyzing alternative explanations and models</p> <p>SI-H-A6 communicating and defending a scientific argument</p> <p>SI-H-A7 utilizing science safety procedures during scientific investigations</p> |



| K–4  | 5–8   | 9–12  |
|--|---|---|
| <p><b>B. UNDERSTANDING SCIENTIFIC INQUIRY</b></p> <p>SI-E-B1 categorizing questions into what is known, what is not known, and what questions need to be explained</p> <p>SI-E-B2 using appropriate experiments depending on the questions to be explored</p> <p>SI-E-B3 choosing appropriate equipment and tools to conduct an experiment</p> <p>SI-E-B4 developing explanations by using observations and experiments</p> <p>SI-E-B5 presenting the results of experiments</p> <p>SI-E-B6 reviewing and asking questions about the results of investigations</p> | <p><b>B. UNDERSTANDING SCIENTIFIC INQUIRY</b></p> <p>SI-M-B1 recognizing that different kinds of questions guide different kinds of scientific investigations</p> <p>SI-M-B2 communicating that current scientific knowledge guides scientific investigations</p> <p>SI-M-B3 understanding that mathematics, technology, and scientific techniques used in an experiment can limit or enhance the accuracy of scientific knowledge</p> <p>SI-M-B4 using data and logical arguments to propose, modify, or elaborate on principles and models</p> <p>SI-M-B5 understanding that scientific knowledge is enhanced through peer review, alternative explanations, and constructive criticism</p> <p>SI-M-B6 communicating that scientific investigations can result in new ideas, new methods or procedures, and new technologies</p> <p>SI-M-B7 understanding that scientific development/ technology is driven by societal needs and funding</p> | <p><b>B. UNDERSTANDING SCIENTIFIC INQUIRY</b></p> <p>SI-H-B1 communicating that scientists usually base their investigations on existing models, explanations, and theories</p> <p>SI-H-B2 communicating that scientists conduct investigations for a variety of reasons, such as exploration of new areas, discovery of new aspects of the natural world, confirmation of prior investigations, evaluation of current theories, and comparison of models and theories</p> <p>SI-H-B3 communicating that scientists rely on technology to enhance the gathering and manipulation of data</p> <p>SI-H-B4 analyzing a proposed explanation of scientific evidence according to the following criteria: follow a logical structure, follow rules of evidence, allow for questions and modifications, and is based on historical and current scientific knowledge</p> <p>SI-H-B5 communicating that the results of scientific inquiry, new knowledge, and methods emerge from different types of investigations and public communication among scientists</p> |

| K–4  | 5–8  | 9–12  |
|--|--|---|
| <p style="text-align: center;"><b>PHYSICAL SCIENCE</b></p> <p><b>A. PROPERTIES OF OBJECTS AND MATERIALS</b></p> <p>PS-E-A1 observing, describing, and classifying objects by properties (size, weight, shape, color, texture, and temperature)</p> <p>PS-E-A2 measuring properties of objects using appropriate materials, tools, and technology</p> <p>PS-E-A3 observing and describing the objects by the properties of the materials from which they are made (paper, wood, metal)</p> <p>PS-E-A4 describing the properties of the different states of matter and identifying the conditions that cause matter to change states</p> <p>PS-E-A5 creating mixtures and separating them based on differences in properties (salt, sand)</p> <p><b>B. POSITION AND MOTION OF OBJECTS</b></p> <p>PS-E-B1 observing and describing the position of an object relative to another object or the background</p> <p>PS-E-B2 exploring and recognizing that the position and motion of objects can be changed by pushing or pulling (force) over time</p> | <p style="text-align: center;"><b>PHYSICAL SCIENCE</b></p> <p><b>A. PROPERTIES AND CHANGES OF PROPERTIES IN MATTER</b></p> <p>PS-M-A1 investigating, measuring, and communicating the properties of different substances which are independent of the amount of the substance</p> <p>PS-M-A2 understanding that all matter is made up of particles called atoms and that atoms of different elements are different</p> <p>PS-M-A3 grouping substances according to similar properties and/or behaviors</p> <p>PS-M-A4 understanding that atoms and molecules are perpetually in motion</p> <p>PS-M-A5 investigating the relationships among temperature, molecular motion, phase changes, and physical properties of matter</p> <p>PS-M-A6 investigating chemical reactions between different substances to discover that new substances formed may have new physical properties and do have new chemical properties</p> <p>PS-M-A7 understanding that during a chemical reaction in a closed system, the mass of the products is equal to that of the reactants</p> | <p style="text-align: center;"><b>PHYSICAL SCIENCE</b></p> <p><b>A. MEASUREMENT AND SYMBOLIC REPRESENTATION</b></p> <p>PS-H-A1 manipulating and analyzing quantitative data using the SI system</p> <p>PS-H-A2 understanding the language of chemistry (formulas, equations, symbols) and its relationship to molecules, atoms, ions, and subatomic particles</p> <p><b>B. ATOMIC STRUCTURE</b></p> <p>PS-H-B1 describing the structure of the atom and identifying and characterizing the particles that compose it (including the structure and properties of isotopes)</p> <p>PS-H-B2 describing the nature and importance of radioactive isotopes and nuclear reactions (fission, fusion, radioactive decay)</p> <p>PS-H-B3 understanding that an atom's electron configuration, particularly that of the outermost electrons, determines the chemical properties of that atom</p> <p><b>C. THE STRUCTURE AND PROPERTIES OF MATTER</b></p> <p>PS-H-C1 distinguishing among elements, compounds, and/or mixtures</p> |

| K–4  | 5–8   | 9–12   |
|--|---|--|
| <p>PS-E-B3 describing an object’s motion by tracing and measuring its position over time</p> <p>PS-E-B4 investigating and describing how the motion of an object is related to the strength of the force (pushing or pulling) and the mass of the object</p> <p><b>C. FORMS OF ENERGY</b></p> <p>PS-E-C1 experimenting and communicating how vibrations of objects produce sound and how changing the rate of vibration varies the pitch</p> <p>PS-E-C2 investigating and describing how light travels and what happens when light strikes an object (reflection, refraction, and absorption)</p> <p>PS-E-C3 investigating and describing different ways heat can be produced and moved from one object to another by conduction</p> <p>PS-E-C4 investigating and describing how electricity travels in a circuit</p> <p>PS-E-C5 investigating and communicating that magnetism and gravity can exert forces on objects without touching the objects</p> | <p>PS-M-A8 discovering and recording how factors such as temperature influence chemical reactions</p> <p>PS-M-A9 identifying elements and compounds found in common foods, clothing, household materials, and automobiles</p> <p><b>B. MOTIONS AND FORCES</b></p> <p>PS-M-B1 describing and graphing the motions of objects</p> <p>PS-M-B2 recognizing different forces and describing their effects (gravity, electrical, magnetic)</p> <p>PS-M-B3 understanding that, when an object is not being subjected to a force, it will continue to move at a constant speed and in a straight line</p> <p>PS-M-B4 describing how forces acting on an object will reinforce or cancel one another, depending upon their direction and magnitude</p> <p>PS-M-B5 understanding that unbalanced forces will cause changes in the speed or direction of an object’s motion</p> <p><b>C. TRANSFORMATIONS OF ENERGY</b></p> <p>PS-M-C1 identifying and comparing the characteristics of different types of energy</p> | <p>PS-H-C2 discovering the patterns of physical and chemical properties found on the periodic table of the elements</p> <p>PS-H-C3 understanding that physical properties of substances reflect the nature of interactions among its particles</p> <p>PS-H-C4 separating mixtures based upon the physical properties of their components</p> <p>PS-H-C5 understanding that chemical bonds are formed between atoms when the outermost electrons are transferred or shared to produce ionic and covalent compounds</p> <p>PS-H-C6 recognizing that carbon atoms can bond to one another in chains, rings, and branching networks to form a variety of structures</p> <p>PS-H-C7 using the kinetic theory to describe the behavior of atoms and molecules during phase changes and to describe the behavior of matter in its different phases</p> <p><b>D. CHEMICAL REACTIONS</b></p> <p>PS-H-D1 observing and describing changes in matter and citing evidence of chemical change</p> |

| K–4  | 5–8  | 9–12   |
|--|--|--|
| <p>PS-E-C6 exploring and describing simple energy transformations</p> <p>PS-E-C7 exploring and describing the uses of energy at school, home, and play</p> | <p>PS-M-C2 understanding the different kinds of energy transformations and the fact that energy can be neither destroyed nor created</p> <p>PS-M-C3 understanding that the Sun is a major source of energy and that energy arrives at Earth’s surface as light with a range of wavelengths</p> <p>PS-M-C4 observing and describing the interactions of light and matter (reflection, refraction, absorption, transmission, scattering)</p> <p>PS-M-C5 investigating and describing the movement of heat and the effects of heat in objects and systems</p> <p>PS-M-C6 describing the types of energy that can be involved, converted, or released in electrical circuits</p> <p>PS-M-C7 understanding that energy is involved in chemical reactions</p> <p>PS-M-C8 comparing the uses of different energy resources and their effects upon the environment</p> | <p>PS-H-D2 comparing, contrasting, and measuring the pH of acids and bases using a variety of indicators</p> <p>PS-H-D3 writing balanced equations to represent a variety of chemical reactions (acid/base, oxidation/reduction, etc.)</p> <p>PS-H-D4 analyzing the factors that affect the rate and equilibrium of a chemical reaction</p> <p>PS-H-D5 applying the law of conservation of matter to chemical reactions</p> <p>PS-H-D6 comparing and contrasting the energy changes that accompany changes in matter</p> <p>PS-H-D7 identifying important chemical reactions that occur in living systems, the home, industry, and the environment</p> <p><b>E. FORCES AND MOTION</b></p> <p>PS-H-E1 recognizing the characteristics and relative strengths of the forces of nature (gravitational, electrical, magnetic, nuclear)</p> <p>PS-H-E2 understanding the relationship of displacement, time, rate of motion, and rate of change of motion; representing rate and changes of motion mathematically and graphically</p> |

| K–4 | 5–8 | 9–12   |
|-----|-----|--|
|     |     | <p>PS-H-E3 understanding effects of forces on changes in motion as explained by Newtonian mechanics</p> <p>PS-H-E4 illustrating how frame of reference affects our ability to judge motion</p> <p><b>F. ENERGY</b></p> <p>PS-H-F1 describing and representing relationships among energy, work, power, and efficiency</p> <p>PS-H-F2 applying the universal law of conservation of matter, energy, and momentum, and recognizing their implications</p> <p><b>G. INTERACTIONS OF ENERGY AND MATTER</b></p> <p>PS-H-G1 giving examples of the transport of energy through wave action</p> <p>PS-H-G2 analyzing the relationship and interaction of magnetic and electrical fields and the forces they produce</p> <p>PS-H-G3 characterizing and differentiating electromagnetic and mechanical waves and their effects on objects as well as humans</p> <p>PS-H-G4 explaining the possible hazards of exposure to various forms and amounts of energy</p> |

| K–4  | 5–8  | 9–12  |
|--|--|---|
| <p style="text-align: center;"><b>LIFE SCIENCE</b></p> <p><b>A. CHARACTERISTICS OF ORGANISMS</b></p> <p>LS-E-A1 identifying the needs of plants and animals, based on age-appropriate recorded observations</p> <p>LS-E-A2 distinguishing between living and nonliving things</p> <p>LS-E-A3 locating and comparing major plant and animal structures and their functions</p> <p>LS-E-A4 recognizing that there is great diversity among organisms</p> <p>LS-E-A5 locating major human body organs and describing their functions</p> <p>LS-E-A6 recognizing the food groups necessary to maintain a healthy body</p> <p><b>B. LIFE CYCLES OF ORGANISMS</b></p> <p>LS-E-B1 observing and describing the life cycles of some plants and animals</p> <p>LS-E-B2 observing, comparing, and grouping plants and animals according to likenesses and/or differences</p> <p>LS-E-B3 observing and recording how the offspring of plants and animals are similar to their parents</p> | <p style="text-align: center;"><b>LIFE SCIENCE</b></p> <p><b>A. STRUCTURE AND FUNCTION IN LIVING SYSTEMS</b></p> <p>LS-M-A1 describing the observable components and functions of a cell, such as the cell membrane, nucleus, and movement of molecules into and out of cells</p> <p>LS-M-A2 comparing and contrasting the basic structures and functions of different plant and animal cells</p> <p>LS-M-A3 observing and analyzing the growth and development of selected organisms, including a seed plant, an insect with complete metamorphosis, and an amphibian</p> <p>LS-M-A4 describing the basic processes of photosynthesis and respiration and their importance to life</p> <p>LS-M-A5 investigating human body systems and their functions (including circulatory, digestive, skeletal, respiratory)</p> <p>LS-M-A6 describing how the human body changes with age and listing factors that affect the length and quality of life</p> <p>LS-M-A7 describing communicable and noncommunicable diseases</p> | <p style="text-align: center;"><b>LIFE SCIENCE</b></p> <p><b>A. THE CELL</b></p> <p>LS-H-A1 observing cells, identifying organelles, relating structure to function, and differentiating among cell types</p> <p>LS-H-A2 demonstrating a knowledge of cellular transport</p> <p>LS-H-A3 investigating cell differentiation and describing stages of embryological development in representative organisms</p> <p><b>B. THE MOLECULAR BASIS OF HEREDITY</b></p> <p>LS-H-B1 explaining the relationship among chromosomes, DNA, genes, RNA, and proteins</p> <p>LS-H-B2 comparing and contrasting mitosis and meiosis</p> <p>LS-H-B3 describing the transmission of traits from parent to offspring and the influence of environmental factors on gene expression</p> <p>LS-H-B4 exploring advances in biotechnology and identifying possible positive and negative effects</p> |

| <b>K–4</b>  | <b>5–8</b>   | <b>9–12</b>   |
|---|--|---|
| <p>LS-E-B4 observing, recording, and graphing student growth over time using a variety of quantitative measures (height, weight, linear measure of feet and hands, etc.)</p> <p><b>C. ORGANISMS AND THEIR ENVIRONMENTS</b></p> <p>LS-E-C1 examining the habitats of plants and animals and determining how basic needs are met within each habitat</p> <p>LS-E-C2 describing how the features of some plants and animals enable them to live in specific habitats</p> <p>LS-E-C3 observing animals and plants and describing interaction or interdependence</p> | <p><b>B. REPRODUCTION AND HEREDITY</b></p> <p>LS-M-B1 describing the importance of body cell division (mitosis) and sex cell production (meiosis)</p> <p>LS-M-B2 describing the role of chromosomes and genes in heredity</p> <p>LS-M-B3 describing how heredity allows parents to pass certain traits to offspring</p> <p><b>C. POPULATIONS AND ECOSYSTEMS</b></p> <p>LS-M-C1 constructing and using classification systems based on the structure of organisms</p> <p>LS-M-C2 modeling and interpreting food chains and food webs</p> <p>LS-M-C3 investigating major ecosystems and recognizing physical properties and organisms within each</p> <p>LS-M-C4 explaining the interaction and interdependence of nonliving and living components within ecosystems</p> <p><b>D. ADAPTATIONS OF ORGANISMS</b></p> <p>LS-M-D1 describing the importance of plant and animal adaptation, including local examples</p> | <p><b>C. BIOLOGICAL EVOLUTION</b></p> <p>LS-H-C1 exploring experimental evidence that supports the theory of the origin of life</p> <p>LS-H-C2 recognizing the evidence for evolution</p> <p>LS-H-C3 discussing the patterns, mechanisms, and rate of evolution</p> <p>LS-H-C4 classifying organisms</p> <p>LS-H-C5 distinguishing among the kingdoms</p> <p>LS-H-C6 comparing and contrasting life cycles of organisms</p> <p>LS-H-C7 comparing viruses to cells</p> <p><b>D. INTERDEPENDENCE OF ORGANISMS</b></p> <p>LS-H-D1 illustrating the biogeochemical cycles and explaining their importance</p> <p>LS-H-D2 describing trophic levels and energy flows</p> <p>LS-H-D3 investigating population dynamics</p> <p>LS-H-D4 exploring how humans have impacted ecosystems and the need for societies to plan for the future</p> |

| K–4 | 5–8  | 9–12  |
|-----|--|---|
|     | <p>LS-M-D2 explaining how some members of a species survive under changed environmental conditions</p> | <p><b>E. MATTER, ENERGY, AND ORGANIZATION OF LIVING SYSTEMS</b></p> <p>LS-H-E1 comparing and contrasting photosynthesis and cellular respiration emphasizing their relationships</p> <p>LS-H-E2 recognizing the importance of the ATP cycle in energy usage within the cell</p> <p>LS-H-E3 differentiating among levels of biological organization</p> <p><b>F. SYSTEMS AND THE BEHAVIOR OF ORGANISMS</b></p> <p>LS-H-F1 identifying the structure and functions of organ systems</p> <p>LS-H-F2 identifying mechanisms involved in homeostasis</p> <p>LS-H-F3 recognizing that behavior is the response of an organism to internal changes and/or external stimuli</p> <p>LS-H-F4 recognizing that behavior patterns have adaptive value</p> <p><b>G. PERSONAL AND COMMUNITY HEALTH</b></p> <p>LS-H-G1 relating fitness and health to longevity</p> <p>LS-H-G2 contrasting how organisms cause disease</p> |



| <b>K–4</b>  | <b>5–8</b>   | <b>9–12</b>  |
|---|--|--|
| <p style="text-align: center;"><b>EARTH AND SPACE SCIENCE</b></p> <p><b>A. PROPERTIES OF EARTH MATERIALS</b></p> <p>ESS-E-A1 understanding that earth materials are rocks, minerals, and soils</p> <p>ESS-E-A2 understanding that approximately three-fourths of Earth’s surface is covered with water and how this condition affects weather patterns and climates</p> <p>ESS-E-A3 investigating, observing, and describing how water changes from one form to another and interacts with the atmosphere</p> <p>ESS-E-A4 investigating, observing, measuring, and describing changes in daily weather patterns and phenomena</p> | <p style="text-align: center;"><b>EARTH AND SPACE SCIENCE</b></p> <p><b>A. STRUCTURE OF EARTH</b></p> <p>ESS-M-A1 understanding that Earth is layered by density with an inner and outer core, a mantle, and a thin outer crust</p> <p>ESS-M-A2 understanding that Earth’s crust and solid upper mantle are dividing plates that move in response to convection currents (energy transfers) in the mantle</p> <p>ESS-M-A3 investigating the characteristics of earthquakes and volcanoes and identifying zones where they may occur</p> <p>ESS-M-A4 investigating how soils are formed from weathered rock and decomposed organic material</p> | <p>LS-H-G3 explaining the role of the immune system in fighting disease</p> <p>LS-H-G4 exploring current research on the major diseases with regard to cause, symptoms, treatment, prevention, and cure</p> <p>LS-H-G5 researching technology used in prevention, diagnosis, and treatment of diseases/ disorders</p> <p style="text-align: center;"><b>EARTH AND SPACE SCIENCE</b></p> <p><b>A. ENERGY IN EARTH’S SYSTEM</b></p> <p>ESS-H-A1 investigating the methods of energy transfer and identifying the Sun as the major source of energy for most of Earth’s systems</p> <p>ESS-H-A2 modeling the seasonal changes in the relative position and appearance of the Sun and inferring the consequences with respect to Earth’s temperature</p> <p>ESS-H-A3 explaining fission and fusion in relation to Earth’s internal and external heat sources</p> <p>ESS-H-A4 explaining how decay of radioactive isotopes and the gravitational energy from Earth’s original formation generates Earth’s internal heat</p> |

| K–4   | 5–8  | 9–12   |
|---|--|--|
| <p>ESS-E-A5 observing and communicating that rocks are composed of various substances</p> <p>ESS-E-A6 observing and describing variations in soil</p> <p>ESS-E-A7 investigating fossils and describing how they provide evidence about plants and animals that lived long ago and the environment in which they lived</p> <p><b>B. OBJECTS IN THE SKY</b></p> <p>ESS-E-B1 observing and describing the characteristics of objects in the sky</p> <p>ESS-E-B2 demonstrating how the relationship of Earth, the Moon, and the Sun causes eclipses and moon phases</p> <p>ESS-E-B3 observing and recording the changing appearances and positions of the Moon in the sky at night and determining the monthly pattern of lunar change</p> <p>ESS-E-B4 modeling changes that occur because of the rotation of Earth (alternation of night and day) and the revolution of Earth around the Sun</p> <p>ESS-E-B5 understanding that the Sun, a star, is a source of heat and light energy and identifying its effects upon Earth</p> | <p>ESS-M-A5 identifying the characteristics and uses of minerals and rocks and recognizing that rocks are mixtures of minerals</p> <p>ESS-M-A6 explaining the processes involved in the rock cycle</p> <p>ESS-M-A7 modeling how landforms result from the interaction of constructive and destructive forces</p> <p>ESS-M-A8 identifying the man-made and natural causes of coastal erosion and the steps taken to combat it</p> <p>ESS-M-A9 compare and contrast topographic features of the ocean floor to those formed above sea level</p> <p>ESS-M-A10 explaining (illustrating) how water circulates—on and through the crust, in the oceans, and in the atmosphere—in the water cycle</p> <p>ESS-M-A11 understanding that the atmosphere interacts with the hydrosphere to affect weather and climate conditions</p> <p>ESS-M-A12 predicting weather patterns through use of a weather map</p> <p><b>B. EARTH HISTORY</b></p> <p>ESS-M-B1 investigating how fossils show the development of life over time</p> | <p>ESS-H-A5 demonstrating how the Sun’s radiant energy causes convection currents within the atmosphere and the oceans</p> <p>ESS-H-A6 describing the energy transfer from the Sun to Earth and its atmosphere as it relates to the development of weather and climate patterns</p> <p>ESS-H-A7 modeling the transfer of Earth’s internal heat by way of convection currents in the mantle which powers the movement of the lithospheric plates</p> <p><b>B. GEOCHEMICAL CYCLES</b></p> <p>ESS-H-B1 illustrating how stable chemical atoms or elements are recycled through the solid earth, oceans, atmosphere, and organisms</p> <p>ESS-H-B2 demonstrating Earth’s internal and external energy sources as forces in moving chemical atoms or elements</p> <p><b>C. THE ORIGIN AND EVOLUTION OF THE EARTH SYSTEM</b></p> <p>ESS-H-C1 explaining the formation of the solar system from a nebular cloud of dust and gas</p> |

| K–4  | 5–8  | 9–12   |
|--|--|--|
| <p>ESS-E-B6 understanding that knowledge of Earth as well as of the universe is gained through space exploration</p> | <p>ESS-M-B2 devising a model that demonstrates supporting evidence that Earth has existed for a vast period of time</p> <p>ESS-M-B3 understanding that the Earth processes, such as erosion and weathering, that affect Earth today are similar to those which occurred in the past</p> <p><b>C. EARTH IN THE SOLAR SYSTEM</b></p> <p>ESS-M-C1 identifying the characteristics of the Sun and other stars</p> <p>ESS-M-C2 comparing and contrasting the celestial bodies in our solar system</p> <p>ESS-M-C3 investigating the force of gravity and the ways gravity governs motion in the solar system and objects on Earth</p> <p>ESS-M-C4 modeling the motions of the Earth-Moon-Sun system to explain day and night, a year, eclipses, moon phases, and tides</p> <p>ESS-M-C5 modeling the position of Earth in relationship to other objects in the solar system</p> <p>ESS-M-C6 modeling and describing how radiant energy from the Sun affects phenomena on the Earth’s surface, such as winds, ocean currents, and the water cycle</p> | <p>ESS-H-C2 estimating the age of Earth by using dating techniques</p> <p>ESS-H-C3 communicating the geologic development of Louisiana</p> <p>ESS-H-C4 examining fossil evidence as it relates to the evolution of life and the resulting changes in the amount of oxygen in the atmosphere</p> <p>ESS-H-C5 explaining that natural processes and changes in Earth’s system may take place in a matter of seconds or develop over billions of years</p> <p><b>D. THE ORIGIN AND EVOLUTION OF THE UNIVERSE</b></p> <p>ESS-H-D1 identifying scientific evidence that supports the latest theory of the age and origin of the universe</p> <p>ESS-H-D2 describing the organization of the known universe</p> <p>ESS-H-D3 comparing and contrasting the Sun with other stars</p> <p>ESS-H-D4 identifying the elements found in the Sun and other stars by investigating the spectra</p> <p>ESS-H-D5 describing the role of hydrogen in the formation of all the natural elements</p> |

| K–4  | 5–8   | 9–12  |
|--|---|---|
| <p style="text-align: center;"><b>SCIENCE AND THE ENVIRONMENT</b></p> <p>SE-E-A1 understanding that an ecosystem is made of living and non-living components</p> <p>SE-E-A2 understanding the components of a food chain</p> <p>SE-E-A3 identifying ways in which humans have altered their environment, both in positive and negative ways, either for themselves or for other living things</p> <p>SE-E-A4 understanding that the original sources of all material goods are natural resources and that the conserving and recycling of natural resources is a form of stewardship</p> | <p>ESS-M-C7 modeling and explaining how seasons result from variations in amount of the Sun’s energy hitting the surface due to the tilt of Earth’s rotation on its axis and the length of the day</p> <p>ESS-M-C8 understanding that space exploration is an active area of scientific and technological research and development</p> <p style="text-align: center;"><b>SCIENCE AND THE ENVIRONMENT</b></p> <p>SE-M-A1 demonstrating knowledge that an ecosystem includes living and nonliving factors and that humans are an integral part of ecosystems</p> <p>SE-M-A2 demonstrating an understanding of how carrying capacity and limiting factors affect plant and animal populations</p> <p>SE-M-A3 defining the concept of pollutant and describing the effects of various pollutants on ecosystems</p> <p>SE-M-A4 understanding that human actions can create risks and consequences in the environment</p> | <p>ESS-H-D6 demonstrating the laws of motion for orbiting bodies</p> <p>ESS-H-D7 describing the impact of technology on the study of Earth, the solar system, and the universe</p> <p style="text-align: center;"><b>SCIENCE AND THE ENVIRONMENT</b></p> <p><b>A. ECOLOGICAL SYSTEMS AND INTERACTIONS</b></p> <p>SE-H-A1 demonstrating an understanding of the functions of Earth’s major ecological systems</p> <p>SE-H-A2 investigating the flow of energy in ecological systems</p> <p>SE-H-A3 describing how habitat, carrying capacity, and limiting factors influence plant and animal populations (including humans)</p> <p>SE-H-A4 understanding that change is a fundamental characteristic of every ecosystem and that ecosystems have varying capacities for change and recovery</p> |

| K–4  | 5–8   | 9–12   |
|--|---|--|
| <p>SE-E-A5 understanding that most plant and animal species are threatened or endangered today due to habitat loss or change</p> | <p>SE-M-A5 tracing the flow of energy through an ecosystem and demonstrating a knowledge of the roles of producers, consumers, and decomposers in the ecosystem</p> <p>SE-E-A6 distinguishing between renewable and nonrenewable resources and understanding that nonrenewable natural resources are not replenished through the natural cycles and thus are strictly limited in quantity</p> <p>SE-M-A7 demonstrating knowledge of the natural cycles, such as the carbon cycle, nitrogen cycle, water cycle, and oxygen cycle</p> <p>SE-M-A8 investigating and analyzing how technology affects the physical, chemical, and biological factors in an ecosystem</p> <p>SE-M-A9 demonstrating relationships of characteristics of soil types to agricultural practices and productivity</p> <p>SE-M-A10 identifying types of soil erosion and preventive measures</p> | <p>SE-H-A5 describing the dynamic interactions between divisions of the biosphere</p> <p>SE-H-A6 describing and explaining Earth’s biochemical and geochemical cycles and their relationship to ecosystem stability</p> <p>SE-H-A7 comparing and contrasting the dynamic interaction within the biosphere</p> <p>SE-H-A8 analyzing evidence that plant and animal species have evolved physical, biochemical, and/or behavioral adaptations to their environments</p> <p>SE-H-A9 demonstrating an understanding of influencing factors of biodiversity</p> <p>SE-H-A10 explaining that all species represent a vital link in a complex web of interaction</p> <p>SE-H-A11 understanding how pollutants can affect living systems</p> <p><b>B. RESOURCES AND RESOURCE MANAGEMENT</b></p> <p>SE-H-B1 explaining the relationships between renewable and nonrenewable resources</p> |

| K–4 | 5–8 | 9–12   |
|-----|-----|--|
|     |     | <p>SE-H-B2 comparing and contrasting conserving and preserving resources</p> <p>SE-H-B3 recognizing that population size and geographic and economic factors result in the inequitable distribution of Earth’s resources</p> <p>SE-H-B4 comparing and contrasting long and short-term consequences of resource management</p> <p>SE-H-B5 analyzing resource management</p> <p>SE-H-B6 recognizing that sustainable development is a process of change in which resource use, investment direction, technological development, and institutional change meet society’s present as well as future needs</p> <p><b>C. ENVIRONMENTAL AWARENESS AND PROTECTION</b></p> <p>SE-H-C1 evaluating the dynamic interaction of land, water, and air and its relationship to living things in maintaining a healthy environment</p> <p>SE-H-C2 evaluating the relationships between quality of life and environmental quality</p> |

| K–4 | 5–8 | 9–12  |
|-----|-----|---|
|     |     | <p>SE-H-C3 investigating and communicating how environmental policy is formed by the interaction of social, economic, technological, and political considerations</p> <p>SE-H-C4 demonstrating that environmental decisions include analyses that incorporate ecological, health, social, and economic factors</p> <p>SE-H-C5 analyzing how public support affects the creation and enforcement of environmental laws and regulations</p> <p><b>D. PERSONAL CHOICES AND RESPONSIBLE ACTIONS</b></p> <p>SE-H-D1 demonstrating the effects of personal choices and actions on the natural environment</p> <p>SE-H-D2 analyzing how individuals are capable of reducing and reversing their impact on the environment through thinking, planning, education, collaboration, and action</p> <p>SE-H-D3 demonstrating that the most important factor in prevention and control of pollution is education</p> <p>SE-H-D4 demonstrating a knowledge that environmental issues should be a local and global concern</p> |

| K-4 | 5-8 | 9-12   |
|-----|-----|--|
|     |     | <p>SE-H-D5 recognizing that the development of accountability toward the environment is essential for sustainability</p> <p>SE-H-D6 developing an awareness of personal responsibility as stewards of the local and global environment</p> |



**Louisiana Educational Assessment Program  
Graduation Exit Exam  
Science Achievement Level Descriptors: Grade 11**

**Note:** These descriptors have been modified slightly from the 2002 publication to match the condensed descriptors on the updated 2006 Individual Student Reports.

| Achievement Level | Descriptors   |
|-------------------|---|
| <b>Advanced</b>   | <p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• have a qualitative and quantitative grasp of scientific principles, relating them to one another and to other phenomena, and being aware of their development and limitations;</li> <li>• formulate scientific questions, compare experimental designs, and devise valid experiments to answer their questions;</li> <li>• collect the relevant quantitative and qualitative data using appropriate instrumentation;</li> <li>• provide a scientifically valid interpretation of the data they collect;</li> <li>• engage in self assessment, discard unnecessary data, and recognize gaps in information;</li> <li>• locate needed information in primary or secondary sources; and</li> <li>• communicate their ideas by interpolating, extrapolating, and interpreting patterns of change in graphic and symbolic representations.</li> </ul> <p>With inquiry as the core, students at the Advanced level demonstrate an understanding that unifying concepts and processes can be applied throughout the science disciplines—physical, life, earth/space, and the environmental sciences.</p> |
| <b>Mastery</b>    | <p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• grasp scientific principles on both a qualitative and quantitative basis;</li> <li>• understand that scientific knowledge is tentative and subject to change;</li> <li>• identify more than one way to solve a given problem and select the method with the most promise;</li> <li>• manipulate data through various mathematical models;</li> <li>• integrate several abstract facts in order to understand overarching scientific principles; and</li> <li>• apply those principles to human activities.</li> </ul> <p>With inquiry as the core, students at the Mastery level will identify unifying concepts and processes among the science disciplines—physical, life, earth/space, and the environment sciences.</p>   |

|   |   |
|---|---|
| <p style="text-align: center;"><b>Basic</b></p>             | <p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• formulate valid hypotheses;</li> <li>• design a simple experiment;</li> <li>• draw appropriate conclusions;</li> <li>• develop inferences from experimentation and apply that information to new situations;</li> <li>• distinguish scientific principles from pseudoscience; and</li> <li>• apply scientific principles to their everyday lives.</li> </ul> <p>With inquiry as the core, students at the Basic level begin to identify unifying concepts and processes among the science disciplines—physical, life, earth/space, and the environmental sciences.</p>                  |
| <p style="text-align: center;"><b>Approaching Basic</b></p> | <p>Students scoring at this level generally exhibit the ability to</p> <ul style="list-style-type: none"> <li>• know and understand fundamental science facts and concepts concerning the world; and</li> <li>• conduct a simple experiment that includes: making observations; forming a reasonable hypothesis; identifying variables; collecting, displaying, and interpreting data; and drawing conclusions.</li> </ul> <p>These skills should be demonstrated through the science disciplines—physical, life, earth/space, and the environmental sciences.</p>  |
| <p style="text-align: center;"><b>Unsatisfactory</b></p>    | <p>Students scoring at this level have not demonstrated the fundamental knowledge and skills needed for the next level of schooling. Students at this level generally have not exhibited the ability to</p> <ul style="list-style-type: none"> <li>• know and understand fundamental science facts and concepts concerning the world; and</li> <li>• conduct a simple experiment that includes: making observations; forming a reasonable hypothesis; identifying variables; collecting, displaying, and interpreting data; and drawing conclusions.</li> </ul> <p>These skills should be demonstrated through the science disciplines—physical, life, earth/space, and the environmental sciences.</p> |

## Chapter 4: GEE Social Studies, Grade 11

This chapter provides specifications for the Social Studies test for grade 11 GEE. It describes the content and the format of the test, provides the number and types of items, and explains how the standards and benchmarks for Social Studies are assessed.

### Test Structure

The Social Studies test consists of two sessions and is administered in one day. Students are allowed as much time as they need to complete each session, but suggested times are provided in the *Test Administration Manual*; it explains the procedures for allowing students additional time to complete a session of the test.

**Session 1:** 60 multiple-choice items

**Session 2:** 4 constructed-response items

### Item Types

The multiple-choice items consist of a stem and four answer options. They measure all Social Studies strands: Geography, Civics, Economics, and History.

The constructed-response items require students to construct or interpret a chart, graph, map, timeline, or other graphic representation, or to supply a written answer.

### Test Description

Each constructed-response item assesses a different Social Studies strand. The constructed-response items require higher-order thinking (for example, grasp of a concept, analysis of information, or application of a skill.)

Both multiple-choice items and constructed-response items may use stimulus material, for example:

- a map or illustration of a globe
- a table or graph presenting numerical data to be read or interpreted
- a timeline, chart, illustration, photograph, or graphic organizer
- an excerpt or article from a newspaper or magazine
- an excerpt from a primary source
- an excerpt from a secondary source

The reading level of test items is minimized to the extent possible (except for necessary Social Studies terms) so that students' reading ability does not interfere with their ability to demonstrate their Social Studies knowledge and skills.

## Scoring the Social Studies Sessions

Each multiple-choice item has four response options (A, B, C, and D) and is scored right/wrong. Correct answers receive a score of 1; incorrect answers receive a score of 0.

Each constructed-response item is scored using a 4-point scoring rubric. The specific rubric for each item is developed from the general 4-point scoring rubric for LEAP, GEE, and iLEAP.

This general rubric (scoring guide) explains the scale that is used to score constructed-response items. Each score level description presents the general characteristics of a response that would earn the associated rating (0, 1, 2, 3, or 4). For the actual test, an item-specific rubric is developed for each constructed-response item.

### General Scoring Rubric—Constructed-Response Items

| Score Level | Description of Score Level   |
|-------------|--|
| 4           | <ul style="list-style-type: none"><li>• The response demonstrates in-depth understanding of the relevant content and/or procedures.</li><li>• The student completes all important components of the task accurately and communicates ideas effectively.</li><li>• Where appropriate, the student offers insightful interpretations and/or extensions.</li><li>• Where appropriate, the student chooses more sophisticated reasoning and/or efficient procedures.</li></ul> |
| 3           | <ul style="list-style-type: none"><li>• The response demonstrates understanding of major concepts and/or processes, although less important ideas or details may be overlooked or misunderstood.</li><li>• The student completes the most important aspects of the task accurately and communicates clearly.</li><li>• The student's logic and reasoning may contain minor flaws.</li></ul>  |
| 2           | <ul style="list-style-type: none"><li>• The student completes some parts of the task successfully.</li><li>• The response demonstrates gaps in conceptual understanding.</li></ul>   |
| 1           | <ul style="list-style-type: none"><li>• The student completes only a small portion of the task and/or shows minimal understanding of the concepts and/or processes.</li></ul>  |
| 0           | <ul style="list-style-type: none"><li>• The student's response is incorrect, irrelevant to the skill/concept being measured, too brief to evaluate, or blank.</li></ul>  |

## Social Studies Test Specifications

### Number of Multiple-Choice Items in Strands/Categories

| Strands/Categories   | Items     | % of Total Points |
|--|-----------|-------------------|
| <b>GEOGRAPHY</b><br>A. The World in Spatial Terms<br>B. Places and Regions<br>C. Physical and Human Systems<br>D. Environment and Society                                | <b>9</b>  | <b>15</b>         |
| <b>CIVICS</b><br>A. Structure and Purposes of Government<br>B. Foundations of the American Political System<br>C. International Relationships<br>D. Roles of the Citizen | <b>15</b> | <b>25</b>         |
| <b>ECONOMICS</b><br>A. Fundamental Economic Concepts<br>B. Individuals, Households, Businesses, and Governments<br>C. The Economy as a Whole                             | <b>12</b> | <b>20</b>         |
| <b>HISTORY</b><br>A. Historical Thinking Skills<br>B. United States History<br>C. World History  | <b>24</b> | <b>40</b>         |
| <b>TOTAL</b>   | <b>60</b> | <b>100</b>        |

## STRANDS, STANDARDS, AND BENCHMARKS ASSESSED

This section presents the strands, standards, and benchmarks assessed on the grade 11 GEE Social Studies assessment. The section includes the text of each benchmark, followed by a list of key concepts explaining what students **may** be expected to know and be able to do to demonstrate the content knowledge and skills described in each benchmark.

The information is organized by the four social studies strands: Geography, Civics, Economics, and History. Each strand is further organized by categories. Benchmarks are organized into thematic categories within each strand. These categories (for example, Places and Regions, or Historical Thinking Skills) provide further content definition by highlighting the underlying themes within the domain of each strand.

### **Strand G: Geography—Physical and Cultural Systems**

**Standard:** Students develop a spatial understanding of Earth’s surface and the processes that shape it, the connections between people and places, and the relationship between man and his environment.

### **Strand C: Civics—Citizenship and Government**

**Standard:** Students develop an understanding of the structure and purposes of government, the foundations of the American democratic system, and the role of the United States in the world, while learning about the rights and responsibilities of citizenship.

### **Strand E: Economics—Interdependence and Decision Making**

**Standard:** Students develop an understanding of fundamental economic concepts as they apply to the interdependence and decision making of individuals, households, businesses, and governments in the United States and the world.

### **Strand H: History—Time, Continuity, and Change**

**Standard:** Students develop a sense of historical time and historical perspective as they study the history of their community, state, nation, and world.

The following information is presented for each category:

**Benchmarks Assessed:** the text of all benchmarks eligible for GEE

**Assessment Limits:**

- any benchmarks that are excluded from GEE
- any special restrictions on test content
- any content barred from testing of an assessed benchmark
- any content emphasis for GEE

**Key Concepts:** important concepts and related skills that may be assessed

## Explanation of Codes

The benchmarks in each grade level are grouped by strand and thematic category. For example:

- Strand:* Geography
- Categories:*
- A. The World in Spatial Terms
  - B. Places and Regions
  - C. Physical and Human Systems
  - D. Environment and Society

Benchmarks are coded by strand, standard, category, and grade cluster (E, M, H). The first term in the code always refers to the strand. The second term gives the standard number and category. The third term indicates the grade cluster and benchmark number.

### Examples of Social Studies Codes

| Code    | Translation  |
|---------|--|
| G-1B-E1 | Geography - standard 1, category B - elementary, benchmark 1 |
| H-1A-H3 | History - standard 1, category A - high school, benchmark 3  |

## Strand G: Geography

**Note:** World Geography is an elective course—one of three options (along with World History and Western Civilization) for fulfilling current graduation requirements. To help ensure that all students are properly prepared for GEE, items on areas of the world other than the United States are limited to *conceptual understanding* or *application of skills*. That is, no test question in either session 1 or session 2 requires students to recall facts or details about the geography of any area outside the United States.

|                               |  |
|-------------------------------|--|
| A. The World in Spatial Terms |  |
| <b>Benchmark Assessed</b>     |  |
| G-1A-H1                       | using geographic representations, tools, and technologies to explain, analyze, and solve geographic problems |

### Assessment Limits:

- Benchmark G-1A-H2 (organizing geographic information and answering complex questions by formulating mental maps of places and regions) is not assessed on GEE due to its focus on mental mapping skills.
- If a question requires students to construct or complete a map, any information required to do so is presented in stimulus material. Students are not required to rely on their own mental picture of an area to perform this task.
- A two-dimensional illustration of a globe may reflect either a side view or a top-down view of Earth.
- G-1A-H1 may be assessed either by multiple-choice or constructed-response items.

### Key Concepts:

- Compare or contrast various types of maps, for example:
  - distribution (population, vegetation, climate, precipitation, natural resources)*
  - physical (landforms, bodies of water, elevation)*
  - political (state or national boundaries, major cities)*
  - historical or economic*
- Interpret a map or representation of a globe to locate places, areas, or geographical features, including using the following map elements:
  - map key (legend) and map symbols*
  - distance scale, compass rose, and cardinal or intermediate directions*
  - map projections*
  - time zones and the International Date Line*
  - latitude (parallels) and longitude (meridians, Prime Meridian)*
  - the equator, the hemispheres, and the North and South Poles*



- Use a city map or a road map to plot a route from one place to another, or to identify the shortest route.
- Construct a map based on given narrative information.
- Add features to a map based on given narrative information, such as showing the location of key cities, major landforms, bodies of water, or battle sites.
- Analyze, interpret, and use information in a graph, chart, diagram, or graphic organizer.
- Construct a chart, diagram, or graphic organizer to display geographical information in an organized way.
- Construct a circle graph, bar graph, pictograph, or line graph to represent given data.

## B. Places and Regions

### Benchmarks Assessed

|         |  |
|---------|--|
| G-1B-H1 | determining how location and social, cultural, and economic processes affect the features and significance of places |
| G-1B-H2 | analyzing the ways in which physical and human characteristics of places and regions have affected historic events   |
| G-1B-H3 | analyzing the various ways in which physical and human regions are structured and interconnected                     |
| G-1B-H4 | explaining and evaluating the importance of places and regions to cultural identity                                  |

### Assessment Limits:

- Testing of G-1B-H1 avoids overlap with testing of benchmarks G-1C-H2 and G-1D-H3 in regard to motivating factors for migration and settlement.
- For G-1B-H1 and G-1B-H2, all test items have a distinctly geographical emphasis to avoid overlap with benchmarks in the Economics and History strands.
- Test items involving both geographical concepts and recall of specific historical facts are keyed to the relevant History benchmark (rather than to G-1B-H2) and are in keeping with content limits regarding the historical eras eligible for GEE.
- G-1B-H1 and G-1B-H2 are particularly well suited for constructed-response items.

### Key Concepts:

- Analyze the distinguishing physical characteristics of a given place, for example:
  - distance from the equator or the poles*
  - relationship between altitude and climate zones*
  - amount/type of precipitation*
  - vegetation*

- borders*
- coastlines*
- time zones*
- major bodies of water, major landforms (for example, mountains, islands)*
- natural resources (for example, coal, oil, gold, silver, forests)*
- Analyze the distinguishing human characteristics of a given place, for example:
  - migration/immigration patterns*
  - settlement patterns*
  - land use (for example, agricultural, industrial)*
  - cultural diversity (for example, religion, language, customs, clothing)*
  - economic development and economic activities*
  - demography (for example, population centers, population density)*
- Describe how location, topography, and other significant physical characteristics affect human activities (for example, plantation vs. subsistence farming).
- Draw conclusions about a place or area from its geographic and physical features.
- Examine the role of topology, climate, soil, vegetation, and natural resources in shaping the history of a region.
- Explain how location and physical features of places have influenced historical events, for example:
  - cultural diffusion*
  - spread of religion*
  - major human migrations*
  - imperialism*
  - major wars and battles*
  - conflicts over natural resources*
  - religious conflicts, ethnic cleansing*
- Distinguish regions in terms of the countries they comprise, using a map.
- Explain ways in which regional systems are interconnected (for example, interstate transportation and trade, interconnecting rivers and canals).
- Analyze world regions in terms of given characteristics (for example, climate zones, population density, natural resources, economic activities, time zones).
- Explain how physical or geographical characteristics (for example, mountain ranges, interconnecting waterways) facilitate or hinder regional interactions.
- Explain how technological advances have led to increasing interaction between regions (for example, use of satellites for monitoring and exploration).
- Analyze how human activities and physical characteristics of regions have led to regional labels (for example, Dust Bowl, New South, Sunbelt).
- Describe how physical and cultural characteristics give definition to a place or region (for example, the New South, Jerusalem as the home of three major world religions).

| C. Physical and Human Systems |  |
|-------------------------------|--|
| Benchmarks Assessed           |  |
| G-1C-H1                       | analyzing the ways in which Earth’s dynamic and interactive physical processes affect different regions of the world   |
| G-1C-H2                       | determining the economic, political, and social factors that contribute to human migration and settlement patterns and evaluating their impact on physical and human systems |
| G-1C-H3                       | analyzing trends in world population numbers and patterns and predicting their consequences  |
| G-1C-H4                       | analyzing the characteristics, distribution, and interrelationships of the world’s cultures  |
| G-1C-H5                       | describing and evaluating spatial distribution of economic systems and how economic systems affect regions   |
| G-1C-H6                       | analyzing how cooperation, conflict, and self-interests impact social, political, and economic entities on Earth   |

**Assessment Limits:**

- All category C items have a distinctly geographical emphasis to distinguish them from testing of related concepts in the Economics and History strands, especially in regard to G-1C-H5 (spatial distribution of economic systems and how they affect regions) and G-1C- H6 (concepts of international cooperation, conflict, and self-interests).
- For G-1C-H1, test items on the effects of physical processes do not overlap assessment of G-1D-H2 regarding environmental challenges to human systems.
- G-1C-H2 through G-1C-H5 are particularly well suited for constructed-response items.

**Key Concepts:**

- Examine the physical effects of Earth-Sun relationships.
- Explain the movement of wind patterns across Earth, its relationship to ocean currents, and its climatic effects on various regions of the world.
- Examine the effects of a physical process (for example, erosion and depository processes, global warming, El Niño) on the natural environment or human life of an area.
- Describe physical processes that affect regions, for example:
  - ocean currents, monsoons, hurricanes*
  - volcanic activity, plate tectonics, earthquakes, global warming*
  - erosion by water currents, flood, coastal storm, wind, or ice*
- Characterize areas or regions in terms of the physical processes that affect them (for example, Pacific Ocean/“Rim of Fire,” San Andreas fault) and related factors.

- Examine the effects of physical processes on the climate, land, land use, agriculture, health, and economic welfare of a country/region.
- Characterize, compare, or contrast past and present trends in human migration.
- Explain or assess the role of environmental changes, economic scarcity, conflict, political developments, cultural factors, and prosperity in human migration (for example, escape from persecution or famine, migration to the suburbs or to the U.S. Sunbelt).
- Explain how the physical environment provides opportunities or creates obstacles for human settlement.
- Examine social and cultural factors that influence settlement sites and the impact of migration and settlement on human systems.
- Analyze ways in which human migration and settlement have led to physical changes in the environment.
- Analyze push/pull factors contributing to migration and settlement patterns, for example:
  - physical (for example, climate, soil, drought, famine, scarcity of natural resources)*
  - political (for example, war, oppression/persecution)*
  - socioeconomic (for example, unemployment rate, job opportunities, lifestyle change)*
- Analyze patterns of urban development in an area or region.
- Compare, contrast, or analyze the distribution, growth rates, and other demographic characteristics of human populations in various countries/regions, for example:
  - population size, density, growth*
  - birth rate, death rate*
  - infant mortality, life expectancy*
  - literacy rate, standard of living*
  - age, gender, religion, race/ethnicity*
- Analyze or assess the current or future impact of population growth on the world (for example, in terms of natural resources, food supply, and standard of living).
- Analyze ways in which cultural characteristics can link or divide regions, or the distribution of cultural characteristics in an area of the world, for example:
  - cultural diffusion, assimilation*
  - cultural diversity*
  - language, ethnic heritage, religion*
- Describe migration and settlement patterns, for example:
  - emigration/immigration (for example, New Immigration, boat people)*
  - internal migration (for example, urbanization, ghettos, migration to suburbs or the Sunbelt)*
- Describe or assess the geographical distribution of economic systems.
- Characterize or distinguish between developed and developing countries.

- Assess ways in which varying degrees of economic development relate to differences in the quality of life in a region.
- Analyze ways in which the distribution of economic systems relates to regional tensions or regional cooperation (for example, North and South Korea).
- Analyze the role of differing points of view and national self-interest in disputes over territory and natural resources.
- Analyze the role of trade agreements, world trade, and dollar diplomacy in strengthening regional or international ties.
- Analyze regional issues and alliances in terms of common interests related to territory and resources.
- Assess the role of international organizations in promoting international cooperation related to natural resources, the environment, and wildlife.
- Identify important trade agreements, multinational entities, and international organizations, for example:
  - North Atlantic Free Trade Agreement (NAFTA)*
  - General Agreement of Tariffs and Trade (GATT)*
  - Organization of Petroleum Exporting Countries (OPEC)*
  - Association of Southeast Asian Nations (ASEAN)*
  - European Union (EU)*
  - Peace Corps*
  - Greenpeace*
  - Red Cross*

## D. Environment and Society

### Benchmarks Assessed

|         |  |
|---------|--|
| G-1D-H1 | describing and evaluating the ways in which technology has expanded the human capability to modify the physical environment                            |
| G-1D-H2 | examining the challenges placed on human systems by the physical environment and formulating strategies to deal with these challenges                  |
| G-1D-H3 | analyzing the relationship between natural resources and the exploration, colonization, settlement, and uses of land of different regions of the world |
| G-1D-H4 | evaluating policies and programs related to the use of natural resources   |
| G-1D-H5 | developing plans to solve local and regional geographic problems related to contemporary issues  |

### Assessment Limits:

- G-1D-H2 through G-1D-H5 are particularly well suited for constructed-response items.

## Key Concepts:

- Identify technological advances that expanded human capacity to modify the environment (for example, steam, electric, and nuclear power; jet propulsion; telephone).
- Describe the significance of technological advances in relation to challenges posed by the physical environment.
- Describe challenges to human systems and activities posed by the physical environment, for example:
  - areas prone to floods, earthquakes, or drought*
  - extremes of climate (for example, severe heat or cold, lack of precipitation)*
  - physical attributes (for example, deserts, wetlands, swamps, dead zones)*
  - acid rain, global warming, climate conditions (for example, El Niño)*
  - geographic isolation, landlocked borders, obstruction by mountain ranges*
  - challenges faced by island or archipelago nations*
  - limited natural resources (for example, sources of fresh water or energy)*
- Describe the impact of natural processes and disasters on human systems.
- Identify, analyze, or evaluate strategies for dealing with environmental challenges, for example:
  - infrastructure (for example, bridges, tunnels, canals, levees, dams, dikes, flood/sea walls)*
  - engineering (for example, extra protections against earthquakes)*
  - agriculture (for example, irrigation, terracing, hardy plants, multiple planting seasons)*
  - international efforts (for example, trade alliances, importation, humanitarian aid)*
  - human efforts to limit damage from natural disasters*
  - agricultural strategies used to cope with harsh climates or terrains*
- Analyze the relationship between the discovery of natural resources in a region and human settlement patterns.
- Analyze the relationship between the development of natural resources in a region and regional variations in land use.
- Assess the ways in which unequal distribution of natural resources has led to exploration, colonization, and conflict.
- Analyze world or regional distribution of natural resources in terms of the need to import or the capacity to export.
- Analyze the relationship between a country's standard of living and its local or accessible natural resources (for example, the effects of oil or natural gas reserves in a region).
- Describe the impact/implications of scarcity of natural resources (for example, water shortage) or pollution of natural resources (for example, air, water).

- Assess the role of government in preserving natural resources and protecting the physical environment.
- Evaluate the effectiveness of policies and programs related to the conservation and use of natural resources, for example:
  - conservation programs (for example, conserving water or electricity, recycling)*
  - antipollution measures and laws (for example, emission controls)*
  - land clearing, land reclamation, land use measures (for example, zoning laws)*
  - Tennessee Valley Authority (TVA), Environmental Protection Agency (EPA)*
- Defend a position on an environmental issue involving conservation or the use of natural resources (for example, private vs. public interests regarding deforestation).
- Evaluate options for solving a local or regional problem involving physical processes or environmental challenges (for example, government aid to disaster areas, responsibility for bearing the cost of environmental cleanup).

## Strand C: Civics

| A. Structure and Purposes of Government |  |
|---|--|
| Benchmarks Assessed                     |  |
| C-1A-H1                                 | analyzing the necessity and purposes of politics and government and identifying examples of programs that fit within those purposes                  |
| C-1A-H2                                 | comparing and evaluating the essential characteristics of various systems of government and identifying historical and contemporary examples of each |
| C-1A-H3                                 | explaining and evaluating issues related to the distribution of powers and responsibilities within the federal system                                |
| C-1A-H4                                 | explaining the organization and functions of local, state, and national governments and evaluating their relationship                                |
| C-1A-H5                                 | evaluating the role and importance of law in the American political system and applying criteria to evaluate laws                                    |
| C-1A-H6                                 | examining the major responsibilities of the national government for domestic and foreign policy  |
| C-1A-H7                                 | explaining how government is financed through taxation   |

### Assessment Limits:

- For C-1A-H1, the concept *general welfare* shall be understood to include economic purposes of government (for example, promoting *economic prosperity*, per E-1A-H6).
- For C-1A-H2, test items may address forms of government but do not address types of economic systems (for example, capitalism, socialism). Types of economic systems are assessed under Economics benchmark E-1A-H4.
- Also for C-1A-H2, examples of historical and contemporary forms of government respect the content limits for World Geography and World History to the extent possible. Nevertheless, students are expected to know the form of government of major nations studied, particularly those of strategic interest to the United States.
- For C-1A-H6, items assess the individuals and groups responsible for implementing and developing foreign policy; they do not require knowledge of policies adopted at specific times in history. Historical policies are assessed under the History strand (in H-1B-H10, H-1B-H14, H-1B-H18, or H-1C-H15).
- For C-1A-H7, test items focus on types of taxes and uses of tax dollars, but do not duplicate assessment of Economics benchmark E-1B-H3 (*impact* of taxation on various groups).



- Benchmark C-1A-H5 is assessed only with a constructed-response item. Stimulus material may include excerpts from the U.S. Constitution or amendments, primary or secondary source documents, examples of laws or court rulings, diagrams or charts, political cartoons, scenarios, or other narrative material.

**Key Concepts:**

- Analyze ways in which government upholds justice (individual rights), promotes domestic tranquility (social order), provides for common defense (security), supports general welfare (the common good), and advances liberty and economic prosperity.
- Identify programs, institutions, and activities that fulfill a given governmental or political purpose (for example, the court system, the military, revenue sharing, block grants).
- Compare or contrast various forms of government in terms of defining characteristics, for example:
  - unlimited vs. limited government*
  - direct democracy*
  - indirect democracy (republic, parliamentary)*
  - oligarchy*
  - monarchy (absolute, constitutional)*
  - dictatorship*
- Evaluate various forms of government and explain how these forms of government would handle a given social, economic, or political issue.
- Identify terms used to discuss the political spectrum, for example:
  - right wing, left wing*
  - reactionary, conservative, moderate, liberal, radical, independent*
  - hawk, dove*
- Identify historical examples of various forms of government among nations that have been significant in U.S. history (for example, absolute monarchy in England or France, dictatorship in Mussolini’s Italy, constitutional monarchy in pre-1979 Iran).
- Identify examples of various forms of government among nations (for example, Iraq, North Korea) important to current U.S. strategic interests.
- Explain the distribution of powers and responsibilities of the U.S. federal government.
- Explain limits on government in the U.S. federal system, for example:
  - checks and balances*
  - separation of powers*
  - federalism*
  - judicial review*
  - supremacy clause*
  - line item veto*
  - amendments*
  - impeachment*
  - customs and traditions*

- Categorize governmental powers as delegated, reserved, concurrent, or implied (necessary and proper/elastic clause).
- Identify powers denied to federal or state governments by the U.S. Constitution.
- Analyze or assess issues related to the distribution of powers at the federal level (for example, why certain provisions of the U.S. Constitution may result in tensions among the three branches of government).
- Explain the structure and functions of the three branches of the federal government (executive, legislative, judicial), for example:
  - president, vice president, cabinet*
  - Congress*
  - Supreme Court, district court, court of appeals*
  - regulatory and independent agencies*
- Explain the intent of the 20th, 22nd, and 25th Amendments to the U.S. Constitution.
- Cite the roles/duties, qualifications, and terms of office for key elected and appointed officials at both the state and national level.
- Explain the structure and functions of state and local governments:
  - state government:***
    - *governor*
    - *lieutenant governor*
    - *attorney general*
    - *legislature*
    - *state court system*
  - parish government:***
    - *district attorney*
    - *district court, clerk of court*
    - *sheriff*
    - *police jury/parish council*
    - *assessor*
    - *coroner*
    - *ward/precinct*
    - *parish seat*
  - city/local government:***
    - *mayor*
    - *city council*
    - *city manager*
    - *commission plan*
- Discuss the advantages and disadvantages of various types of local governments.
- Examine constitutional provisions concerning the relationship between federal and state governments.
- Explain how a bill becomes a law at the federal or state level.

- Analyze or assess the role of law in the American political system, for example:
  - establishing limits on those who govern and on the governed*
  - protecting individual liberties and rights of the accused*
  - promoting social order and the common good*
- Analyze or assess the importance of law in American society in regard to a given issue (for example, assess the argument that Americans rely too much on the legal system to solve problems that could be solved by other means).
- Examine ways in which unalienable rights are protected by the Constitution through judicial review and due process of law.
- Evaluate a specific law or court ruling on given criteria.
- Examine the meaning, implications, or applications of the 5th and 14th Amendments (for example, regarding self-incrimination, double jeopardy, due process of law).
- Explain concepts as they relate to the implementation of foreign policy, for example:
  - diplomatic recognition*
  - international organizations*
  - human rights*
  - interdependence*
  - balance of trade*
  - trade deficit*
  - economic sanction*
- Characterize or analyze responsibilities of the federal government for domestic and foreign policy.
- Explain the roles/duties of the Congress, the president, and the judiciary in regard to foreign affairs.
- Explain the roles of the National Security Council, the Joint Chiefs of Staff, and the secretary of state in forming or carrying out foreign policy.
- Explain the nature of proportional, progressive, and regressive taxes, and identify key examples of each type (for example, income tax, sales tax).
- Explain how government is financed through taxation, including the major sources of tax revenues at the federal, state, and local levels.
- Identify major sources of government revenue and relate taxes to other forms of revenue (for example, fines, licenses, user fees, borrowing).
- Analyze or evaluate various uses of tax dollars (for example, in terms of public need for services vs. the public reaction to taxation).
- Explain the intent of the 16th and 24th Amendments to the U.S. Constitution.
- Use the rules of taxation (ability, equity, ease of payment, convenient times to pay) to analyze or evaluate a given tax practice.

- Define these terms as they relate to the structure and purposes of government:
  - charter*
  - proposition*
  - home rule*
  - ordinance*
  - warrant*
  - extradition*

| B. Foundations of the American Political System |  |
|---|--|
| Benchmarks Assessed                             |  |
| C-1B-H1   | analyzing the central ideas and historical origins of American constitutional government and evaluating how this form of government has helped to shape American society             |
| C-1B-H2   | explaining basic democratic beliefs and principles of constitutional democracy in American society and applying them to the analysis of issues of conflicting beliefs and principles |
| C-1B-H3   | analyzing the nature of American political and social conflict   |
| C-1B-H4   | evaluating issues related to the differences between American ideals and the realities of American social and political life   |
| C-1B-H5   | evaluating the roles of political parties, campaigns, and elections in American politics   |
| C-1B-H6   | analyzing the historical and contemporary roles of associations and groups in local, state, and national politics  |

**Assessment Limits:**

- Benchmark C-1B-H4 is assessed only with a constructed-response item.
- Benchmarks C-1B-H2 through C-1B-H5 are particularly well suited to constructed-response items. Stimulus material may include excerpts from historical documents or other political material that shaped American society (for example, from a campaign platform, campaign speech, political essay, news story, editorial, or court case).

**Key Concepts:**

- Analyze the significance of the Magna Carta, English common law, and the English Bill of Rights in influencing the creation of limited government in the United States.
- Explain how European philosophers helped shape American democratic ideas, for example:
  - Rousseau’s natural rights of man*
  - Locke’s social contract*
  - Montesquieu’s three branches of government*
  - Voltaire’s freedom of speech and press*

- Explain the role of compromises and plans related to the development of constitutional government in the United States, for example:
  - bicameral plans*
  - Virginia Plan*
  - New Jersey Plan*
  - Great (Connecticut) Compromise*
  - Commerce Compromise*
  - Three-Fifths Compromise*
  - Presidential Compromise (Electoral College)*
- Analyze central ideas in an American historical document ( for example, Bill of Rights, Mayflower Compact, Declaration of Independence, Articles of Confederation, Gettysburg Address, or the U.S. Constitution).
- Explain the significance of various documents in shaping the ideas found in the U.S. Constitution, for example:
  - Magna Carta*
  - English Bill of Rights*
  - Mayflower Compact*
  - Declaration of Independence*
  - Articles of Confederation*
  - Federalist Papers*
- Identify the author or title of a significant historical document from an excerpt.
- Interpret, analyze, or apply ideas presented in a given excerpt from any political document or material (for example, a speech, essay, editorial, or court case).
- Explain the meaning and importance of principles of U.S. constitutional democracy in American society, for example:
  - federal union*
  - separation of powers*
  - checks and balances*
  - consent of the governed*
  - popular sovereignty*
  - due process of law*
  - individual liberties*
- Assess the importance of the U.S. Constitution as the supreme law of the land.
- Describe ways in which the constitutional government of the United States has helped shape American society.
- Apply principles of constitutional democracy to instances of conflicting beliefs or principles within American society, or between American and foreign societies (for example, individual rights, human rights, affirmative action, immigration quotas).
- Discuss discrepancies between American ideals and social/political realities of life (for example, equality vs. prejudice, consent of the governed vs. citizen apathy).

- Analyze a given example of an American political or social conflict, or state and defend a position on the issue, for example:
  - right of the public to know vs. need for national security*
  - right to property vs. protection of the environment*
  - positions on capital punishment/death penalty*
- Explain these terms as they relate to the election process:
  - primary election, general election*
  - run-off election*
  - secret (Australian) ballot*
  - party platform*
- Explain the two-party system and assess the role of third parties in the election process.
- Examine the role of political parties in the U.S. political system.
- Assess the significance of campaigns, elections, the Electoral College, national party conventions, and the U.S. census in the American political system.
- Evaluate the role of the media and public opinion in American politics.
- Analyze the use and effects of propaganda or persuasive techniques, for example:
  - bandwagon*
  - testimonial/endorsement*
  - plain folks*
  - card stacking*
  - transfer/association*
  - glittering generalities*
  - name calling*
- Explain the role of lobbyists and political action committees (PACs).
- Explain historical or contemporary roles of special interest groups and associations in U.S. and Louisiana politics (for example, NAACP, ACLU, AARP, NRA, MADD, LABI, tobacco lobby, public interest research groups).

## C. International Relationships

### Benchmarks Assessed

|         |   |
|---------|---|
| C-1C-H1 | analyzing how the world is organized politically and evaluating how the interaction of political entities, such as nation-states and international organizations, affects the United States |
| C-1C-H2 | analyzing the major foreign policy positions of the United States and evaluating their consequences   |
| C-1C-H3 | evaluating the impact of American ideas and actions on the world and analyzing the effects of significant international developments on the United States                                   |

### Assessment Limits:

- Test items in category C focus on general concepts or principles and on current events. Some may entail historical contexts consistent with eras eligible for testing under the History strand. Items calling for specific historical knowledge are keyed to a benchmark in the History strand, rather than to a benchmark in category C. For example, items on historical U.S. foreign policy positions are keyed to a relevant History benchmark.
- For C-1C-H2, test items on the consequences of major U.S. foreign policy positions do not address effects of domestic policies on international trade (see E-1B-H5).
- For C-1C-H3, test items on international *economic* developments do not overlap assessment of Economics benchmark E-1B-H4.

### Key Concepts:

- Examine the political divisions of the world and factors that contribute to those divisions.
- Analyze or assess the various ways that nation-states interact, for example:
  - trade*
  - treaty (political, economic, military)*
  - diplomacy*
  - summit meetings*
  - embassies, ambassadors*
  - conflicts*
- Explain, analyze, or assess the role of the United Nations or other international organizations in political interactions and conflicts.
- Analyze ways in which the interactions of nation-states or international organizations (for example, NATO, EU, UN, OPEC) affect the United States.
- Explain how domestic policies and constitutional principles of the United States affect its relations with the world.

- Examine the means by which the United States upholds national security, protects its economic welfare and strategic interests, and attains its foreign policy objectives (for example, aid, sanctions, embargo, treaties).
- Explain various foreign policy positions of the United States, for example:
  - isolationism*
  - protectionism*
  - neutrality*
  - strategic interests*
  - national security*
  - peacekeeping*
  - foreign aid (humanitarian, economic, or military), Marshall Plan*
  - Washington’s Farewell Address, Monroe Doctrine, Truman Doctrine*
- Assess the extent to which a given U.S. foreign policy position has helped or hindered the United States’ relations with the rest of the world, for example:
  - implementing a trade embargo*
  - enacting the North American Free Trade Agreement (NAFTA)*
  - responding to terrorist threats*
  - defending human rights*
- Evaluate the role of the United States as a peacekeeper in foreign affairs.
- Characterize or analyze foreign policy issues or positions in a given description (for example, in a news article or editorial).
- Describe principal economic, technological, and cultural effects the United States has had on the world.
- Examine ways in which ideas, actions, and problems of other nations (for example, breakup of the Soviet Union, conflicts in the Middle East) impact the United States.

| D. Roles of the Citizen |   |
|-------------------------|---|
| Benchmarks Assessed     |   |
| C-1D-H1                 | evaluating and defending positions on issues regarding the personal, political, and economic rights of citizens   |
| C-1D-H2                 | evaluating and defending positions regarding the personal and civic responsibilities of citizens in American constitutional democracy                               |
| C-1D-H3                 | explaining and evaluating the various forms of political participation that citizens can use to monitor and shape the formation and implementation of public policy |
| C-1D-H4                 | analyzing and evaluating the importance of political leadership, public service, and a knowledgeable citizenry to American constitutional democracy                 |



### **Assessment Limits:**

- All benchmarks in category D may be tested either by multiple-choice or constructed-response items.

### **Key Concepts:**

- Explain ways in which a person can become a U.S. citizen (for example, birth, naturalization).
- Distinguish between personal, political, and economic rights of citizenship, for example:
  - personal rights (gun control, doctor-assisted suicide)*
  - economic rights (right to work, minimum wage, equal opportunity)*
  - political rights (due process, minimum voting age)*
- Evaluate a given situation or issue in terms of the personal, political, or economic rights of citizens.
- Examine the scope and limits of a particular right of citizenship.
- Examine the importance of various rights of citizenship to the individual or to society at large (for example, the right to vote).
- Analyze or discuss an amendment or law concerning the rights of citizens in terms of its effect on public policy or American society, for example:
  - amendments concerning suffrage (15th, 19th, 23rd, 24th, and 26th)*
  - amendments concerning civil rights*
  - Americans with Disabilities Act (ADA)*
- Explain and defend a position on an issue involving the rights of citizens.
- Distinguish between personal and civic responsibilities.
- Examine or assess the importance of various responsibilities of citizenship to the individual or to society, for example:
  - voting*
  - paying taxes*
  - jury duty*
  - civic participation*
  - public service*
  - obeying the law*
  - military service/registering with Selective Service*
- Formulate opinions concerning civic duties vs. personal interests.
- Evaluate a given situation or issue in terms of the responsibilities of citizens.
- Explain and defend a position on an issue involving a responsibility of citizens.
- Discuss the importance of political leadership to American society, and examine ways in which citizens can exercise leadership.
- Characterize examples of public service, and discuss the importance of public service to American society (for example, volunteering).

- Characterize or explore various forms of political participation, for example:
  - contributing time/money to a campaign*
  - running for office*
  - campaigning for candidates*
  - signing petitions*
  - participating in peaceful demonstrations (or other forms of civil disobedience)*
  - joining/supporting a special interest group*
  - attending political conventions*
  - participating in public hearings/town meetings*
  - keeping informed on public issues*
- Assess the value of being knowledgeable about public affairs.
- Evaluate the claim that American constitutional democracy requires the participation of an attentive, knowledgeable, and competent citizenry.
- Evaluate the role of patriotism in the preservation of American constitutional democracy.

## Strand E: Economics

| A. Fundamental Economic Concepts |   |
|----------------------------------|---|
| Benchmarks Assessed              |   |
| E-1A-H1                          | analyzing the impact of the scarcity of productive resources and examining the choices and opportunity cost that result |
| E-1A-H2                          | analyzing the roles that production, distribution, and consumption play in economic decisions                           |
| E-1A-H3                          | applying the skills and knowledge necessary in making decisions about career options                                    |
| E-1A-H4                          | comparing and evaluating economic systems   |
| E-1A-H5                          | explaining the basic features of market structures and exchanges  |
| E-1A-H6                          | analyzing the roles of economic institutions, such as corporations and labor unions, that compose economic systems      |
| E-1A-H7                          | analyzing the roles of money and banking in an economic system  |
| E-1A-H8                          | applying economic concepts to understand and evaluate historical and contemporary issues                                |

### Assessment Limits:

- Benchmark E-1A-H3 is reflected on every test form (that is, tested in some way in every assessment cycle).
- Testing of E-1A-H8 does not require independent knowledge of economic conditions or changes in U.S. or world history. Any such knowledge would be tested under the History strand (in H-1B-H12, H-1B-H15, or H-1C-H15).
- Benchmarks E-1A-H2, E-1A-H3, E-1A-H7, and E-1A-H8 are particularly well suited for constructed-response items.

### Key Concepts:

- Analyze situations involving scarcity to determine the impact or implications of insufficient resources to satisfy all needs and wants.
- Analyze economic choices/decisions in terms of incentives, benefits, costs (including marginal costs), trade-offs, or consequences.
- Analyze an economic choice at the personal, family, or societal level to identify its opportunity cost.
- Explain the interdependence of resources and the availability of products in a free enterprise system.

- Explain the role of resources in the production of goods and services:
  - natural resources*
  - capital resources*
  - human resources (including human capital)*
- Analyze choices and decisions related to the four basic economic questions (what to produce, how to produce it, how much to produce, and who gets what is produced).
- Analyze actions or conditions that increase productivity or output of the economy, for example:
  - providing labor with additional capital goods*
  - division of labor and specialization*
  - technological change*
- Define productivity and characterize the relationship between productivity and standard of living.
- Examine the role of marketing and channels of distribution in economic decisions.
- Evaluate various careers in terms of availability, educational and skill requirements, salary and benefits, and intrinsic job satisfaction.
- Explain the skills, knowledge, talents, personal characteristics, and efforts likely to enhance prospects of success in finding a job in a particular field.
- Explain the types of jobs important to meeting the needs of Louisiana industries in an information-based society.
- Characterize or compare various types of economic systems in terms of ownership/control of the means of production and distribution, determination of wages and prices, economic decision making, etc.:
  - capitalism (free enterprise), market system*
  - traditional system*
  - command economy*
  - mixed system*
- Evaluate economic systems in terms of their ability to achieve given social goals (for example, freedom, equity, efficiency, security, growth).
- Explain or compare/contrast features of various market structures, for example:
  - pure competition*
  - oligopoly*
  - monopolistic competition*
  - monopoly*
- Cite the advantages and disadvantages of a given market structure.
- Examine the role of government as producer, employer, and consumer in economic systems.
- Explain or analyze the effects of competition on producers and consumers; for example:
  - competition among sellers results in lower prices and profit levels*
  - competition among buyers results in higher prices for the product*

- Explain factors affecting level of competition in a market, for example:
  - number of buyers and sellers*
  - profit motive*
  - collusion among buyers or sellers*
  - presence of cartels*
- Characterize or analyze the role of various institutions in economic systems, for example:
  - banks in increasing the money supply by making loans*
  - government in promoting economic growth or stable prices*
  - labor unions and labor or management actions on productivity*
  - multinational corporations*
  - stock market*
  - businesses (for example, corporations, partnerships, individual proprietorships, cooperatives)*
- Explain various terms as they relate to labor unions, for example:
  - labor contract, negotiation*
  - open/closed shop*
  - slowdown, strike*
  - right to strike, right to work laws*
  - lockout*
  - injunction*
  - scab*
- Analyze the importance of labor-management relations and the effects of given labor and management practices on productivity or business profitability.
- Examine the economic consequences of actions related to labor unrest (for example, slowdown, strike, lockout), including effects on production/productivity levels.
- Compare and contrast characteristics of various forms of business ownership.
- Explain ways in which businesses have changed to meet rising production costs or to compete more effectively in a global market.
- Analyze or evaluate a given issue or situation as an example of a particular fundamental economic principle.
- Analyze information about a current economic system undergoing change from a largely command or traditional system to a more mixed system (for example, Eastern European countries, China, or other developing economies).
- Define the following fundamental economic concepts:
  - economic incentives*
  - economic self-interest*
  - profit*
  - risk*
  - forms of exchange (that is, barter and money)*

## B. Individuals, Households, Businesses, and Governments

### Benchmarks Assessed

|         |  |
|---------|--|
| E-1B-H1 | identifying factors that cause changes in supply and demand  |
| E-1B-H2 | analyzing how changes in supply and demand, price, incentives, and profit influence production and distribution in a competitive market system |
| E-1B-H3 | analyzing the impact of governmental taxation, spending, and regulation on different groups in a market economy                                |
| E-1B-H4 | analyzing the causes and consequences of worldwide economic interdependence  |
| E-1B-H5 | evaluating the effects of domestic policies on international trade   |
| E-1B-H6 | analyzing Louisiana’s role in the national and world economies   |

### Assessment Limits:

- For E-1B-H4, test items on worldwide economic interdependence do not overlap testing of World History benchmark H-1C-15.
- Testing of E-1B-H4 and E-1B-H5 does not require independent knowledge of specific historical or contemporary facts, such as specific domestic policies or international trade practices. Rather, test items require general understanding or application of these concepts in a given situation or context.
- Testing of E-1B-H3 is limited to the impact of governmental taxation, spending, and regulation on a market economy in general, or their differential impact on various groups. Effects of fiscal policy and regulation in the U.S. economy are covered under category C (see E-1C-H4).
- Distinguishing among different types of taxes is assessed under Civics benchmark C-1A-H7.
- E-1B-H3 through E-1B-H6 are particularly well suited for constructed-response items.

### Key Concepts:

- Interpret a supply curve or a demand curve.
- Explain, analyze, or apply principles of supply and demand, including concepts of price, incentives, and profit, for example:
  - how a change in supply or demand affects a product’s price*
    - *as price goes up, quantity demanded decreases or quantity supplied increases*
    - *as price decreases, quantity demanded increases or quantity supplied decreases*

- Identify factors that cause changes in supply or demand for a product, for example:
  - changes in consumer preferences or income levels, or change in prices of related products (complements, substitutes) affecting demand*
  - changes in number of producers, production costs, or prices of inputs*
  - the effect of changes in technology on supply*
  - degree of competition among producers or buyers affecting supply and demand*
- Apply the concepts of inelastic and elastic supply and demand.
- Explain the concept of equilibrium price.
- Analyze the circular flow of goods, services, and money payments from a diagram.
- Explore the role of the factors of production in the economy:
  - land*
  - labor*
  - capital*
  - entrepreneurship*
- Examine factors affecting the production and allocation of goods and services, and characterize their effects, for example:
  - incentive, profit, risk*
  - price, relative price*
  - capital investment*
  - supply and demand*
  - consumption vs. saving*
  - entrepreneurship*
- Analyze the uniform or differential impact of a given tax policy or government spending practice on individuals and businesses in a market economy, for example:
  - income tax, sales tax, excise taxes, Social Security tax*
  - shifting resources from the private to the public sector or vice versa*
  - spending programs targeting a particular income group, business sector, or business activity*
- Analyze the impact of given tax exemptions or credits on individuals and businesses (for example, tax deduction for interest paid on a home mortgage, tax incentives for business development).
- Analyze the impact of either proportional or progressive taxation on society (for example, the redistribution of income).
- Examine the worldwide exchange of goods and services in terms of its effect in increasing global interdependence and global competition.
- Explain the relationship between economic interdependence and standard of living.
- Examine the fundamental concept of the value of currency/foreign exchange and its role in a global economy.

- Analyze the effects of governmental action/intervention in a market economy, for example:
  - taxation*
  - government spending*
  - antitrust laws, consumer protection laws*
  - regulation/deregulation of industry*
  - distribution of income*
  - economic growth*
  - competition, monopoly*
  - merger, acquisition*
- Explain or analyze the causes of global economic interdependence, for example:
  - imports and exports*
  - trade agreements*
  - trade surplus*
  - trade deficit*
  - balance of trade*
  - value of currency*
  - foreign exchange*
  - specialization*
- Explain how the economy of one country can affect the economies of other countries or the balance of trade among nations.
- Explain the role of the International Monetary Fund (IMF) in supporting world economies.
- Assess international differences in resources, productivity, and prices, and analyze their relationship to international trade.
- Analyze or assess ways in which economic trends affect international trade policy.
- Explain reasons why nations often restrict free trade.
- Evaluate the effects of various barriers to free trade among nations (for example, tariffs/duties, quotas).
- Argue a position on the issue of free trade vs. protectionism.
- Evaluate the role and importance of Louisiana ports in the national economy.
- Analyze the value or impact of Louisiana products in the world market.



## C. The Economy as a Whole

### Benchmarks Assessed

|         |  |
|---------|--|
| E-1C-H1 | explaining the meanings of such economic indicators as GDP, per capita GDP, real GDP, CPI, and unemployment rate                           |
| E-1C-H2 | explaining how interest rates, investments, and inflation/deflation impact the economy   |
| E-1C-H3 | analyzing the causes and consequences of unemployment, underemployment, and income distribution in a market economy                        |
| E-1C-H4 | explaining the basic concepts of United States fiscal policy, monetary policy, and regulations and describing their effects on the economy |

### Assessment Limits:

- E-1C-H3 and E-1C-H4 are particularly well suited for constructed-response items.
- Benchmark E-1C-H3 is reflected on every test form (that is, tested in some way in every assessment cycle).
- For E-1C-H1, test items do not assess Gross National Product (GNP), as this measure is less commonly used than GDP.
- For E-1C-H4, test items on fiscal policy and regulation do not overlap assessment of benchmark E-1B-H3.

### Key Concepts:

- Explain the meaning and use of various economic indicators or their implications as measures of economic well-being, for example:
  - Gross Domestic Product (GDP)*
  - per capita GDP, real GDP*
  - Consumer Price Index (CPI)*
  - stock market indices*
  - rate of inflation*
  - unemployment rate*
  - per capita income*
  - interest rate*
  - value of currency*
  - foreign exchange rate*
- Relate economic indicators in describing the health of an economy.
- Interpret various economic indicators used in a chart, graph, table, or news article.
- Draw conclusions about two different economies based on given economic indicators.

- Characterize inflation and deflation as a sustained increase or decrease in average price levels of an entire economy, and explain reflections in the Consumer Price Index.
- Explain the impact of inflation and deflation on individuals, nations, and the world.
- Describe the effects of interest rates on businesses and consumers.
- Predict the consequences of investment decisions made by individuals, businesses, and governments.
- Explain various causes and consequences of unemployment in a market economy, for example:
  - available jobs*
  - lack of work experience, training, or skills*
  - labor force immobility*
  - employment discrimination*
  - minimum wage*
  - costs/benefits of looking for a job*
- Analyze regional, national, or demographic differences in rates of unemployment.
- Analyze the relationship between the business cycle and employment.
- Explain the causes and analyze the consequences of *underemployment*.
- Explain factors contributing to unequal distribution of income in a market economy.
- Interpret a chart/graph displaying various income distributions (for example, in the United States vs. a third world nation).
- Examine the socioeconomic impact of unequal distribution of income (income disparity) in the distribution of wealth in a market economy.
- Distinguish monetary policy (policies that change the supply of money in an economy) from fiscal policy (government spending and taxation policies).
- Identify and describe various fiscal policies, for example:
  - government spending*
  - government revenue*
  - taxation programs*
  - balanced budget*
  - budget deficit/surplus*
  - national debt*
- Identify and describe various monetary policies, for example:
  - banking*
  - money supply*
  - availability of credit*
  - bank reserves*
  - loans, interest rates*
- Explain the goals of U.S. fiscal and monetary policy (for example, promoting price stability, maximum employment, and economic growth).

- Explain the role the Federal Reserve System (the FED) as the central banking system of the United States.
- Explain the purpose of the Federal Deposit Insurance Corporation (FDIC).
- Distinguish between interest rates charged by the Federal Reserve (discount rate) and by commercial banks (for example, prime rate).
- Analyze the effects of a given fiscal or monetary policy on the U.S. economy (for example, leading to change in the availability of credit, or affecting the national debt).
- Explain the role of regulatory agencies in the U.S. economy, for example:
  - Federal Trade Commission (FTC)*
  - Environmental Protection Agency (EPA)*
  - Consumer Protection Agency (CPA)*
  - Securities and Exchange Commission (SEC)*
- Examine examples of U.S. regulations and their effects on the U.S. economy.

## Strand H: History

### *United States History*

**Note:** Multiple-choice test items requiring *knowledge* of U.S. History are limited to Eras 6–9. This restriction designates separate domains of content for the grade 11 and grade 8 tests. Moreover, the restriction gives the GEE a more concentrated focus on eras studied in depth at the high school level.

Eras 1–5 (those targeted for mastery by grade 8) may be reflected in either multiple-choice or constructed-response items on the GEE, but only as context or as the subject of stimulus material for items measuring *conceptual understanding* or *application of skills*. Even for concepts/skills assessment, the large majority of U.S. History items are related to Eras 6–9 in keeping with instructional emphasis at the high school level.

### *World History*

**Note:** World History is more tightly restricted because it is an elective course—one of three options (along with World Geography and Western Civilization)—for fulfilling current graduation requirements. To ensure that all students are properly prepared for GEE, World History *knowledge* is required in multiple-choice items only in regard to *Eras 8 and 9*. Benchmarks for these eras are the ones most easily integrated into U.S. History, which all students must study. Multiple-choice or constructed-response items assessing *concepts or skills* may reflect any of Eras 6–9.

| A. Historical Thinking Skills |  |
|-------------------------------|--|
| Benchmarks Assessed           |  |
| H-1A-H1                       | applying key concepts, such as chronology and conflict, to explain and analyze patterns of historical change and continuity                  |
| H-1A-H2                       | explaining and analyzing events, ideas, and issues within a historical context   |
| H-1A-H3                       | interpreting and evaluating the historical evidence presented in primary and secondary sources   |
| H-1A-H4                       | utilizing knowledge of facts and concepts drawn from history and methods of historical inquiry to analyze historical and contemporary issues |
| H-1A-H6                       | analyzing cause-effect relationships   |

### **Assessment Limits:**

- H-1A-H5 (conducting research in efforts to analyze historical questions and issues) is not assessed on GEE.

- Generally, benchmarks for Historical Thinking Skills (category A) are not *directly* assessed. Although the skills may be needed to answer a test item, the question is usually keyed to a benchmark in one of the other History categories.
- If a question applies key concepts such as chronology, continuity, or change to events that span more than one historical Era or more than one History benchmark, the item is keyed to H-1A-H1.
- Items requiring use of primary or secondary source material are keyed to another History benchmark, rather than to H-1A-E3.
- A test item requiring cause-effect analysis is keyed to the benchmark for the relevant historical era, rather than to H-1A-H6.
- Similarly, any item calling for historical explanation or analysis is keyed to a benchmark for the relevant era, rather than to H-1A-H2.
- H-1A-H4, however, may be the primary focus of either a multiple-choice or a constructed-response item.

**Key Concepts:**

- Design or utilize a timeline in addressing a specific historical period.
- Chronologically organize major events and leading figures in U.S. or world history.
- Compare historical periods or historical conflicts in terms of similar issues, actions, or trends.
- Contrast past and present events or ideas, demonstrating awareness of differing political, social, or economic context.
- Analyze change or continuity over time (for example, cultural changes over a given period) based on information in stimulus material.
- Examine multiple perspectives on a historical issue or event.
- Analyze the point of view of a historical figure or group.
- Analyze or interpret a given historical event, idea, or issue.
- Defend a point of view on a historical issue or event, with supporting evidence drawn from stimulus material.
- Utilize given primary or secondary material to interpret historical facts, ideas, or issues.
- Determine alternative courses of action to address a historical or contemporary issue.
- Analyze or evaluate alternative courses of action in terms of positive and negative implications or consequences.
- Analyze or evaluate the credibility of a given historical treatise in terms of its source, unstated assumptions, etc.
- Analyze source material to distinguish opinion/propaganda from fact, or to identify persuasive techniques.

- Interpret a political cartoon depicting a historical event, issue, or perspective.
- Interpret or analyze historical data in a map, table, or graph to illuminate historical factors or trends (including applying necessary mathematical skills).
- Analyze causes or effects (or explore cause-effect relationships) in historical and contemporary events.

## B. United States History

### **Benchmarks Assessed**

#### Era 6: The Development of the Industrial United States (1870–1900)

H-1B-H6 analyzing the development of industrialization and examining its impact on American society

H-1B-H7 describing the immigration and internal migration patterns that have occurred in the history of the United States and examining the cultural and social changes that have resulted

#### Era 7: The Emergence of Modern America (1890–1930)

H-1B-H8 evaluating the significance of the Progressive Movement

H-1B-H9 analyzing the rise of the labor and agrarian movements

H-1B-H10 explaining the changing role of the United States in world affairs through World War I

H-1B-H11 analyzing the significant changes that evolved in the United States between World War I and the Great Depression

#### Era 8: The Great Depression and World War II (1929–1945)

H-1B-H12 analyzing the causes, developments, and effects of the Great Depression and the New Deal

H-1B-H13 analyzing the origins, course, and results of World War II

#### Era 9: Contemporary United States (1945 to the Present)

H-1B-H14 examining and summarizing key developments and issues in foreign and domestic policies during the cold war era

H-1B-H15 analyzing the economic, political, social, and cultural transformation of the United States since World War II

H-1B-H16 explaining the major changes that have resulted as the United States has moved from an industrial to an information society

H-1B-H17 analyzing developments and issues in contemporary American society

H-1B-H18 discussing and demonstrating an understanding of recent developments in foreign and domestic policies

### **Assessment Limits:**

- GEE requires *knowledge* of U.S. history only in relation to benchmarks in Eras 6–9 (see H-1B-H6 through H-1B-H18 listed above). These benchmarks alone are eligible for multiple-choice items demanding recall of historical facts or details.
- For H-1B-H8, test items on reform measures do not duplicate assessment of the Civics strand.
- For H-1B-H12, items on socioeconomic conditions during the Great Depression do not overlap assessment of Economics benchmarks E-1C-H1 or E-1C-H2, which entail indicators of a healthy economy in general.
- Test items on World War I, World War II, and the cold war take a distinctly American perspective, so as not to overlap their treatment under World History (category C).
- Benchmarks H-1B-H2, H-1B-H3, and H-1B-H17 are particularly well suited for constructed-response items.
- Test items may require students to *apply* historical thinking skills to events and issues from Eras 1–5.

### **Key Concepts:**

#### Era 6: The Development of the United States (1870–1900)

- Examine the causes of industrialization and analyze its impact on production and business structures in the United States.
- Explain these terms as they relate to the development of the United States:
  - robber barons*
  - assembly line*
  - corporation*
  - industrial giants*
- Describe the emergence of big business and explain how it changed American society in the late 1800s.
- Identify and describe the accomplishments of industrial giants, for example:
  - Cornelius Vanderbilt*
  - Andrew Carnegie*
  - John D. Rockefeller*
  - J. P. Morgan*
- Identify important inventors and describe the significance of their inventions (for example, Alexander Graham Bell, Thomas Edison).
- Explain or analyze the changing relationship between the federal government and private industry (for example, Sherman Anti-Trust Act, Interstate Commerce Commission).
- Examine the phases, geographic origins, and motivations behind mass immigration to the United States.

- Explain or analyze how immigration precipitated the urbanization of America and discuss its impact (for example, on housing, political structures, and public health).
- Explain the following terms as they relate to immigration:
  - Ellis Island, Statue of Liberty*
  - Chinese Exclusion Act*
  - melting pot*
  - urbanization*
  - ghettos, tenements*
- Analyze the impact of legislation, technological developments, and economic policies on established social and migratory groups in the settlement of western United States (for example, the Dawes Act).

#### Era 7: The Emergence of Modern America (1890–1930)

- Assess the role of the media, political leaders, and intellectuals in raising awareness of social problems among Americans in the United States, for example:
  - Teddy Roosevelt*
  - William Howard Taft*
  - Woodrow Wilson*
  - Jane Addams*
  - Carrie Chapman Catt*
  - Thomas Nast*
  - Upton Sinclair*
  - Ida Tarbell*
- Identify and describe various reform measures, for example:
  - Australian ballot*
  - direct primary*
  - initiative, referendum, recall*
  - Amendments 16, 17, 18, 19*
  - Pure Food & Drug Act, Meat Inspection Act*
  - Federal Reserve Act*
  - Clayton Act*
  - Federal Trade Commission*
  - Prohibition*
- Evaluate aspects of the Progressive Movement in terms of its goals and resulting accomplishments.
- Describe problems facing farmers and laborers, the ways they sought to enact change, and the responses of the government and business community, for example:
  - Agrarian movement*
  - Populist Party*
  - Grangers*
  - American Federation of Labor*
  - Samuel Gompers*
  - Eugene V. Debs*



- Explain these political and economic concepts as they relate to the South during this Era, for example:
  - sharecropping, tenant farming*
  - Solid South*
  - Jim Crow laws*
  - Plessy v. Ferguson*
  - Booker T. Washington*
  - W. E. B. DuBois*
  - George Washington Carver*
- Explain the following terms in regard to the emergence of American foreign policy:
  - Open Door Policy*
  - dollar diplomacy*
  - Roosevelt Corollary to the Monroe Doctrine*
  - Big Stick policy*
  - neutrality*
- Describe the U.S. policy of imperialism and how it increased U.S. involvement in world affairs, for example:
  - annexation of Hawaii*
  - involvement in the Spanish-American War*
  - construction of the Panama Canal*
  - acquisition of protectorates (for example, Philippines, Guam, Puerto Rico)*
- Explain the significance of the term *yellow journalism*.
- Examine the causes of World War I and the events that compelled U.S. involvement (see World History key concepts in category D for more details).
- Describe significant elements in the course of World War I, including the home front, for example:
  - Zimmermann Note*
  - submarine warfare*
  - Allied Powers/Big Four*
  - Bolshevik Revolution (Lenin)*
  - Armistice*
  - Selective Service*
  - financing the war*
  - patriotic activities*
  - mobilization*
- Identify the role of key U.S. leaders during World War I (for example, Teddy Roosevelt, Woodrow Wilson, John J. “Black Jack” Pershing).
- Explain the consequences of World War I in terms of changes in U.S. foreign and domestic policy (for example, disillusionment with involvement in foreign affairs, debt default, immigration).
- Summarize the major events and accomplishments of the presidencies of Warren G. Harding, Calvin Coolidge, and Herbert Hoover.

- Describe the characteristics of the 1920s and the cultural changes that resulted, for example:
  - Great Red Scare (1919–)*
  - racism, prejudice*
  - Scopes trial*
  - immigration quotas*
  - Roaring '20s*
  - jazz*
  - organized crime*
  - political scandals*
  - women's rights*
  - Harlem Renaissance:*
    - *Langston Hughes*
    - *Countée Cullen*
  - talkies*
  - Palmer Raids*
  - Sacco and Vanzetti trial*
  - phonograph*
  - radio*
  - airplane:*
    - *Wright brothers*
    - *Charles Lindbergh*
  - automobile*
    - *Model T*
    - *Henry Ford*
  - assembly line*
  - mass production*
  - agricultural depression*
  - installment buying*
  - protective tariffs*
- Examine U.S. domestic and foreign policies of the 1920s (for example, Fourteen Points, League of Nations, Treaty of Versailles).

#### Era 8: The Great Depression and World War II (1929–1945)

- Explain the results of the presidential election of 1932.
- Analyze the causes of the Great Depression and its impact on American society, for example:
  - overproduction*
  - overspeculation/underconsumption*
  - protective tariffs*
  - unequal distribution of income*
  - psychological causes: pessimism, panic*
  - stock market crash*
- Describe various aspects of the New Deal, for example:
  - first 100 days*
  - relief, recovery, and reform programs (for example, TVA, WPA, CCC, AAA, SSA, FDIC)*
  - fireside chats*
  - FDR, Eleanor Roosevelt, Frances Perkins*
  - Huey Long*
  - Black Cabinet*
  - Brain Trust*
- Evaluate the expanding role of government as a result of the Great Depression and the New Deal, and assess the effects of the New Deal legislation, for example:
  - Amendments 20, 21*
  - Good Neighbor Policy*
  - Supreme Court packing plan*

- Describe conditions that precipitated the outbreak of World War II (see World History key concepts in category D for more details).
- Describe U.S. foreign policy leading up to World War II, for example:
  - isolation, neutrality, involvement*
  - Neutrality Acts*
    - *lend/lease*
    - *cash/carry*
- Explain the course of events that led to U.S. entry into World War II, and trace the course of the war, for example:
  - Pearl Harbor*
  - island hopping*
  - atomic bomb*
- Describe the effects of World War II on the American home front, for example:
  - Selective Service*
  - mobilization (for example, Office of War Mobilization)*
  - financing the war*
  - role of women (for example, Rosie the Riveter)*
  - censorship*
  - Japanese internment (Nisei)*
  - rationing*
  - black market*
  - price controls*
  - patriotic activities (for example, victory gardens, USO, newsreels)*
- Explain the role of important political leaders during World War II, for example:
  - Franklin D. Roosevelt*
  - Harry Truman*
  - Winston Churchill*
  - Joseph Stalin*
  - Adolf Hitler*
  - Benito Mussolini*
  - Emperor Hirohito*
  - Hideki Tojo*
- Explain the role of important military leaders of World War II, for example:
  - George C. Marshall*
  - Dwight D. Eisenhower*
  - Douglas MacArthur*
  - George S. Patton*
  - Chester Nimitz*
  - Bernard L. Montgomery*
  - Charles de Gaulle*
- Explain or analyze the consequences of World II in terms of its impact on the United States (for example, the G.I. Bill of Rights).

## Era 9: Contemporary United States (1945 to the Present)

- Examine the spread of communism after World War II in terms of its impact on U.S. foreign policy and the U.S. response to it, for example:
  - Marshall Plan*
  - Truman Doctrine*
  - Eisenhower Doctrine*
  - Peace Corps*
  - United Nations*
  - NATO*
  - Warsaw Pact*
  - nuclear development*
  - Gulf of Tonkin Resolution*
  - War Powers Act*
  - domino theory, containment policy*
- Analyze conflicts that resulted from cold war tensions, for example:
  - Berlin crises (for example, Berlin airlift, Berlin wall)*
  - Korean Conflict*
  - Cuban crises (for example, Bay of Pigs, Cuban Missile Crisis)*
  - Vietnam War*
  - Middle-East conflicts*
  - Panama Canal Treaty*
- Examine the effects of the cold war on American society and domestic policy (for example, Red Scare, McCarthyism).
- Analyze the reasons for the end of the cold war and its impact on the world today from an American perspective.
- Analyze the impact of domestic policies on life in the United States.
- Examine the major issues, leaders, and achievements of the American civil rights movement, for example:
  - Martin Luther King, Jr.*
  - Rosa Parks*
  - Malcolm X*
  - Jesse Jackson*
  - National Association for the Advancement of Colored People (NAACP)*
  - Black Panthers*
  - Southern Christian Leadership Conference (SCLC)*
  - nonviolent protests/civil disobedience*
  - Brown v. Board of Education of Topeka (1954)*
  - Civil Rights Acts of 1964, 1965*
- Evaluate the effects of Watergate on the United States.
- Evaluate the effects of the mass media on American society.

- Describe social and cultural changes in post–World War II America, for example:
  - Great Society*
  - war on poverty*
  - baby boom*
  - education and housing*
  - immigration/migration*
  - war on drugs*
  - minority issues*
  - women’s issues*
- Describe the impact of technology on American society, for example:
  - mass communication*
  - space exploration*
  - nuclear developments*
  - computer technology*
- Analyze an issue in contemporary American society from different perspectives and explore alternative solutions.
- Examine the relationship between the United States and nations of the world in the post–cold war era.
- Identify recent trends in the U.S. economy and analyze shifts in government policy designed to address them.
- Explain recent Supreme Court decisions and how they impact American political and social institutions.
- Explain or assess domestic issues and reforms in American society.
- Identify the following presidents, and describe the major events and accomplishments of their presidencies:
  - Harry S. Truman*
  - Dwight D. Eisenhower*
  - John F. Kennedy*
  - Lyndon Johnson*
  - Richard M. Nixon*
  - Gerald Ford*
  - James (Jimmy) Carter*
  - Ronald Reagan*
  - George H. W. Bush*
  - William (Bill) J. Clinton*
  - George W. Bush*

## C. World History

### Benchmarks Assessed

#### Era 8: A Half-Century of Crisis and Achievement (1900–1945)

H-1C-H13 analyzing the causes and international consequences of World War I, the rise and actions of totalitarian systems, World War II, and other early 20th century conflicts

#### Era 9: The 20th Century since 1945 (1945 to the Present)

H-1C-H14 analyzing the international power shifts and the breakup of colonial empires that occurred in the years following World War II

H-1C-H15 explaining the worldwide significance of major political, economic, social, cultural, and technological developments and trends

### Assessment Limits:

- Test items assessing *knowledge* of World History are limited to Eras 8 and 9 (benchmarks H-1C-H13, H-1C-14, and H-1C-15).
- Benchmarks in Eras 6 and 7 may serve only as *context* for assessing grasp of concepts or application of skills.
- Benchmarks in Eras 1–5 are not eligible for assessment on GEE.
- Test items on World War I, World War II, and the cold war take an international or global perspective, rather than a distinctly American one, so as not to overlap their assessment under U.S. History (see category B).
- Test items may require students to apply historical thinking skills (see category A) to events and issues in Eras 6 and 7.

### Key Concepts:

#### Era 8: A Half-Century of Crisis and Achievement (1900–1945)

- Examine the origins, major events, and peace settlements of World War I from an international or global perspective, for example:
  - creation of Italy and Germany*
  - imperialism*
  - nationalism, self-determination*
  - militarism, arms race (Schlieffen Plan)*
  - balance of power alliances*
  - assassination of Archduke Francis Ferdinand*

- Examine the causes and consequences of the Russian Revolution of 1917.
- Explain the consequences of World War I in terms of its impact on the world, for example:
  - Russian Revolution*
  - Treaty of Brest Litovsk*
  - Vladimir I. Lenin*
  - Treaty of Versailles*
  - war guilt, reparations*
  - Weimar Republic*
  - League of Nations*
- Explain how art, literature, and intellectual thought reflected changes brought about by World War I.
- Analyze the causes and consequences of global depression following World War I.
- Analyze the political, social, and economic conditions leading to the rise of totalitarianism in the Soviet Union, Italy, Germany, Japan, and Spain, for example:
  - communism, fascism, socialism*
  - Joseph Stalin*
  - Benito Mussolini*
  - Adolf Hitler*
  - Francisco Franco*
  - Emperor Hirohito*
  - Hideki Tojo*
- Describe the ideologies of fascism and Nazism and how they affected society (for example, glorification of the state, xenophobia, racism, anti-Semitism, pogroms).
- Explain the significance of various acts of aggression/expansionism by totalitarian powers (for example, Ethiopia, China, Spanish Civil War, Anschluss, Czech crisis).
- Explain underlying social, political, and economic origins of World War II from an international or global perspective, for example:
  - global depression*
  - rise of totalitarianism*
  - international aggression/militarism (arms race)*
  - Munich Conference, failure of appeasement*
  - Non-Aggression Pact*
  - Axis Agreement*
- Explain the significance of major events and concepts of World War II, including decisions made at wartime conferences, for example:
  - invasion of Poland*
  - blitzkrieg, total war*
  - scorched earth policy, kamikaze*
  - atomic warfare*
  - Axis/Allied Powers*
  - Atlantic Charter*

- Allied wartime conferences: Casablanca, Yalta, Potsdam*
- major battles*
- resistance movements (for example, France)*
- Holocaust, concentration camp, genocide*
- D-Day, V-E Day, V-J Day*
- formation of United Nations*
- Explain the results of World War II, for example:
  - occupation of defeated powers*
  - Nuremberg Trials*
  - Japanese war trials*
  - cold war*
  - Yalta Conference*
  - formation of Soviet Bloc, iron curtain*
  - Warsaw Pact*
  - NATO*
  - SEATO*
  - Berlin airlift*
  - Berlin wall*
- Assess the consequences of World War II as a total world war.

Era 9: The 20th Century since 1945 (1945 to Present)

- Explain major differences in the political ideologies and values of the Western democracies vs. the Soviet bloc, and how they led to development of the cold war.
- Describe the causes and international consequences of major cold war crises and military conflicts (for example, the Korean Conflict).
- Analyze the development of communism in the Soviet Union and China, for example:
  - Chinese Revolution (Sun Yat-sen, Mao Zedong, Chiang Kai-shek)*
  - Nikita Khrushchev*
- Describe the rise of nationalism and explain how nationalism brought an end to colonial rule in Asia, Africa, the Americas, and the Middle East, for example:
  - India (Mahatma Gandhi)*
  - Cuba (Fidel Castro)*
  - Belgian Congo*
  - Vietnam, Cambodia*
  - South Africa*
  - Algeria*
- Examine major political trends and developments, for example:
  - glasnost, perestroika*
  - Arab-Israeli conflicts*
  - terrorism*
  - dissidents*
  - nationalism*



- Examine major worldwide economic trends and developments, for example:
  - trade deficit*
  - free trade*
  - economic imperialism*
  - economic sanctions*
  - protectionism*
  - Organization of Petroleum Exporting Countries (OPEC)*
  - common market*
  - European Union (EU)*
- Identify major cultural trends of the late twentieth century (for example, art, literature, intellectual life, mass culture/mass media)
- Analyze the development of economic interdependence in the global economy.
- Assess the economic disparities between industrialized and developing countries.
- Analyze causes and consequences of the world’s accelerating population growth rate.
- Assess the status or progress of human and civil rights around the world, for example:
  - women’s rights*
  - human rights*
  - apartheid*
- Evaluate the impact of World War II and its aftermath in art, literature, and intellectual life (for example, existentialism).
- Examine the role of religion in post–World War II society (for example, religious fundamentalism, religious zealotry/extremism).
- Analyze the worldwide implications of nuclear, electronic, space, medical, and transportation developments, for example:
  - nuclear proliferation*
  - space race*
  - intercontinental ballistic missile (ICBM)*
- Assess the success of democratic movements in Asia, Africa, Europe, and the Americas.
- Analyze the decline of economic, political, and military bipolarization in the post–cold war era.
- Examine terrorist movements in terms of their proliferation and impact on politics and society (for example, World Trade Center attack of September 11, 2001).
- Explain the reasons for the creation of Israel, analyze resulting Arab-Israeli conflicts, and assess efforts to resolving them.
- Assess the success and failure of *détente*.
- Analyze the causes, social and political consequences, and moral implications of genocide and mass killings in the 20th century (for example, Rwanda, Sudan, former Yugoslavia, Holocaust).
- Evaluate the role of the United Nations (UN) in the contemporary world.

## Sample Test Items: Grade 11 Social Studies

### Multiple-Choice Items

Questions 1 through 16 are sample multiple-choice items, arranged by strand and benchmark. The items test students' ability to correctly answer questions in Geography, Civics, Economics, and History. Some items may assess Social Studies content knowledge, while others may assess the application of Social Studies skills or concepts.

### Geography

**Benchmark G-1B-H1:** determining how location and social, cultural, and economic processes affect the features and significance of places

### Use the information below to answer question 1.

Think about the major conflicts of the 20th century in which the United States has been involved

- World War I
  - World War II
  - Korean Conflict
  - Vietnam War
1. In spite of fighting four major wars, there has been very little physical damage done to the continental United States. Which of the following would **best** explain why there was so little physical damage?
- A. the United States' diplomatic actions
  - B. the United States' geographic location
  - C. the United States' diverse population
  - D. the United States' military power

**Correct response: B**

## Geography

**Benchmark G-1C-H4:** analyzing the characteristics, distribution, and interrelationships of the world's cultures

2. Jazz music was first played by African American musicians in the early 20th century. Jazz music today is played by musicians around the world. This spread of jazz music is an example of cultural
- A. alienation.
  - B. diversification.
  - C. assimilation.
  - D. diffusion.

**Correct response: D**

## Geography

**Benchmark G-1C-H5:** describing and evaluating spatial distribution of economic systems and how economic systems affect regions

**Refer to the table below to answer question 3.**

### Per Capita GDP for Selected Nations

| Nation      | Per capita GDP<br>(in U.S. dollars) |
|-------------|-------------------------------------|
| Argentina   | \$8,380                             |
| Cameroon    | \$610                               |
| Hungary     | \$4,340                             |
| New Zealand | \$15,720                            |

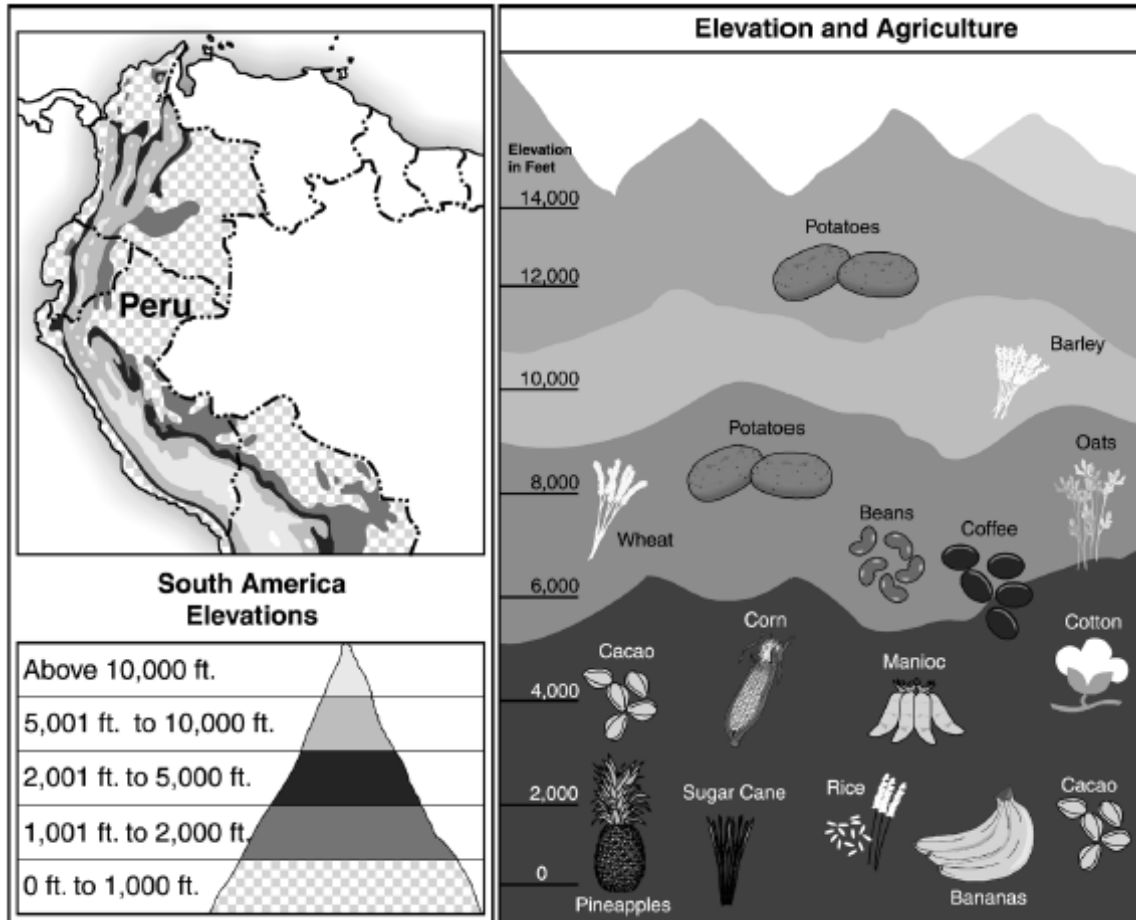
3. Per capita Gross Domestic Product (GDP) is an economic measure that can be used to compare nations. There tends to be a correlation between life expectancy and per capita GDP. Based upon the correlation between per capita GDP and life expectancy, a resident of which nation is most likely to live the **shortest** length of time?
- A. Argentina
  - B. Cameroon
  - C. Hungary
  - D. New Zealand

**Correct response: B**

## Geography

**Benchmark G-1D-H2:** examining the challenges placed on human systems by the physical environment and formulating strategies to deal with these challenges

Use the map and chart below to answer question 4.



4. The physical environment can have a major impact on the human activities in a region. If the United States government decides to provide agricultural aid to farmers who live in the **mountains** of Peru, what crops would the government **most likely** recommend that the farmers grow?
- A. beans and bananas
  - B. barley and potatoes
  - C. wheat and rice
  - D. sugarcane and pineapples

**Correct response: B**

**Civics**

**Benchmark C-1A-H3:** explaining and evaluating issues related to the distribution of powers and responsibilities within the federal system

5. Which is an example of a “concurrent power” under the U.S. federal system of government?
- A. printing money
  - B. regulating interstate commerce
  - C. creating treaties
  - D. taxing personal income

**Correct response: D**

**Civics**

**Benchmark C-1A-H3:** explaining and evaluating issues related to the distribution of powers and responsibilities within the federal system

**Use the newspaper headline below to answer question 6.**

|  |
|--|
| United States Supreme Court rules Colorado search-and-seizure law unconstitutional |
|--|

6. This newspaper headline relates to the principle of
- A. voting rights.
  - B. direct democracy.
  - C. judicial review.
  - D. delegated powers.

**Correct response: C**

## Civics

**Benchmark C-1B-H6:** analyzing the historical and contemporary roles of associations and groups in local, state, and national politics

**Use the statements below to answer question 7.**

- These individuals work in Washington, D.C., and in all state capitals.
- These individuals work for either businesses or private interest groups that support specific causes that interest some citizens, or for public interest groups that strive for improvements that benefit all citizens.
- These individuals attempt to persuade lawmakers to consider the opinions and views of the groups they represent.

7. The statements above **best** describe which occupation?
- A. elector
  - B. lobbyist
  - C. entrepreneur
  - D. lawyer

**Correct response: B**

## Civics

**Benchmark C-1D-H4:** analyzing and evaluating the importance of political leadership, public service, and a knowledgeable citizenry to American constitutional democracy

8. Which of the following is **not** required by law of American citizens?
- A. obeying laws
  - B. serving on a jury
  - C. voting in elections
  - D. paying taxes

**Correct response: C**

## Economics

**Benchmark E-1A-H1:** analyzing the impact of the scarcity of productive resources and examining the choices and opportunity cost that result

9. The basic economic problem that all individuals, businesses, and governments must solve is
- A. satisfying unlimited wants with limited resources.
  - B. guaranteeing that everyone has a bank account.
  - C. making sure all resources are used.
  - D. updating jobs to take advantage of the newest technology.

**Correct response: A**

## Economics

**Benchmark E-1A-H1:** analyzing the impact of the scarcity of productive resources and examining the choices and opportunity cost that result

10. All of the following situations provide examples of the economic principle of “scarcity” **except** a
- A. sold-out concert for which more people want to buy tickets.
  - B. farmer who cannot get enough water because of a drought.
  - C. company that is unable to find enough qualified computer programmers.
  - D. consumer without enough money to pay his credit card bill.

**Correct response: D**

## Economics

**Benchmark E-1B-H5:** evaluating the effects of domestic policies on international trade

11. Suppose American manufacturers successfully lobbied Congress to pass a tariff on foreign bicycles that are imported. Which of the following would **most likely** happen as a result?
- A. The number of American-made bicycles sold in the United States would decrease.
  - B. Employment in the American bicycle industry would decrease.
  - C. The price of foreign-made bicycles sold in the United States would increase.
  - D. Employment in the foreign bicycle industry would increase.

**Correct response: C**

## Economics

**Benchmark E-1C-H2:** explaining how interest rates, investments, and inflation/deflation impact the economy

12. If the members of the Federal Reserve Board believed that the United States economy was entering a period of recession, which of the following actions would they **most likely** consider?
- A. raising government spending
  - B. lowering interest rates
  - C. raising interest rates
  - D. lowering government spending

**Correct response: B**



## History

**Benchmark H-1B-H8:** evaluating the significance of the Progressive Movement

**Use the passage below to answer question 13.**

“Reformers sought to contain the power of the trusts, protect the rights of workers and consumers, and make life more secure for everyone. This group wanted to tame and regulate capitalism but did not want to eliminate it. The ultimate goal was to improve the working conditions of the masses but not give them political control.”

- 13.** This passage about a reform movement describes which political ideology?
- A. nationalism
  - B. socialism
  - C. progressivism
  - D. communism

**Correct response: C**

## History

**Benchmark H-1B-H11:** analyzing the significant changes that evolved in the United States between World War I and the Great Depression

**Use the statements below to answer question 14.**

- The 18th Amendment to the Constitution became the law of the land in January 1920.
- This “Noble Experiment,” as it was called, is considered by most to have been a dismal failure.
- Many believe the 18th Amendment gave birth to organized crime and created more problems than it solved.

- 14.** The statements above describe which event?
- A. civil rights
  - B. Prohibition
  - C. immigration
  - D. suffrage

**Correct response: B**

## History

**Benchmark H-1B-H13:** analyzing the origins, course, and results of World War II

**Use the statements below to answer the question 15.**

- People had ration books that were used to buy necessary products like shoes, gasoline, and certain foods.
- People grew “victory gardens” in their backyards to feed their families and observed meatless days to reduce meat consumption.
- People recycled glass, all kinds of metals, and newspapers.
- Women filled many jobs traditionally held by men and joined the military as WACs and WAVEs.

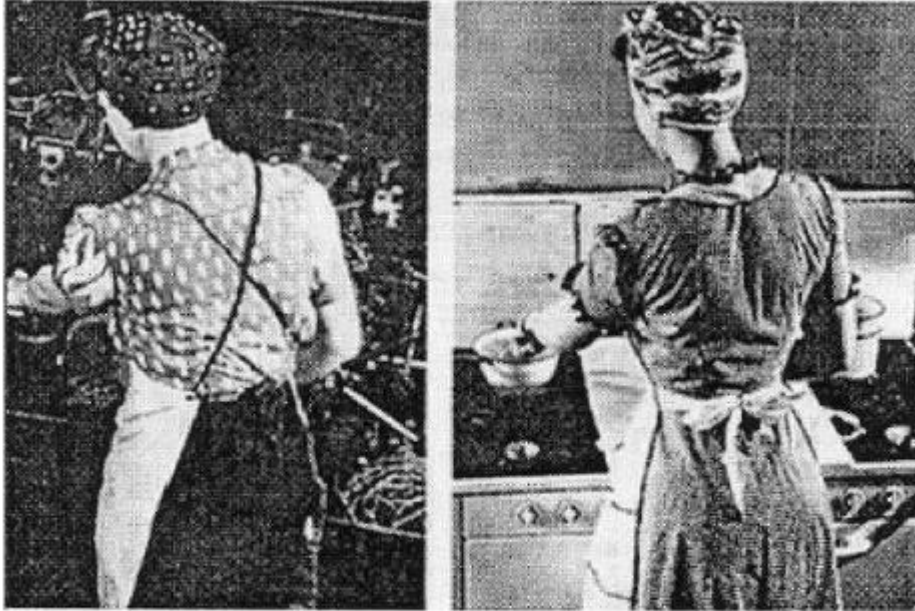
15. Which of the following is **most closely** associated with the descriptions above?
- A. supporting the war effort during World War II
  - B. dealing with shortages during the Depression
  - C. supporting environmental programs through conservation
  - D. dealing with shortages of critical products during the cold war

**Correct response: A**

**History**

**Benchmark H-1B-H13:** analyzing the origins, course, and results of World War II

**Use the photographs and the caption below to answer question 16.**



**What's Become of Rosie the Riveter?**

16. These photographs illustrate the change in status of women in the United States due to the
- A. effects of the Great Depression in the early 1930s.
  - B. changes in laws regarding workplace safety in the 1940s.
  - C. effects of a peacetime economy in the 1950s.
  - D. beginnings of the civil rights movement in the 1960s.

**Correct response: C**

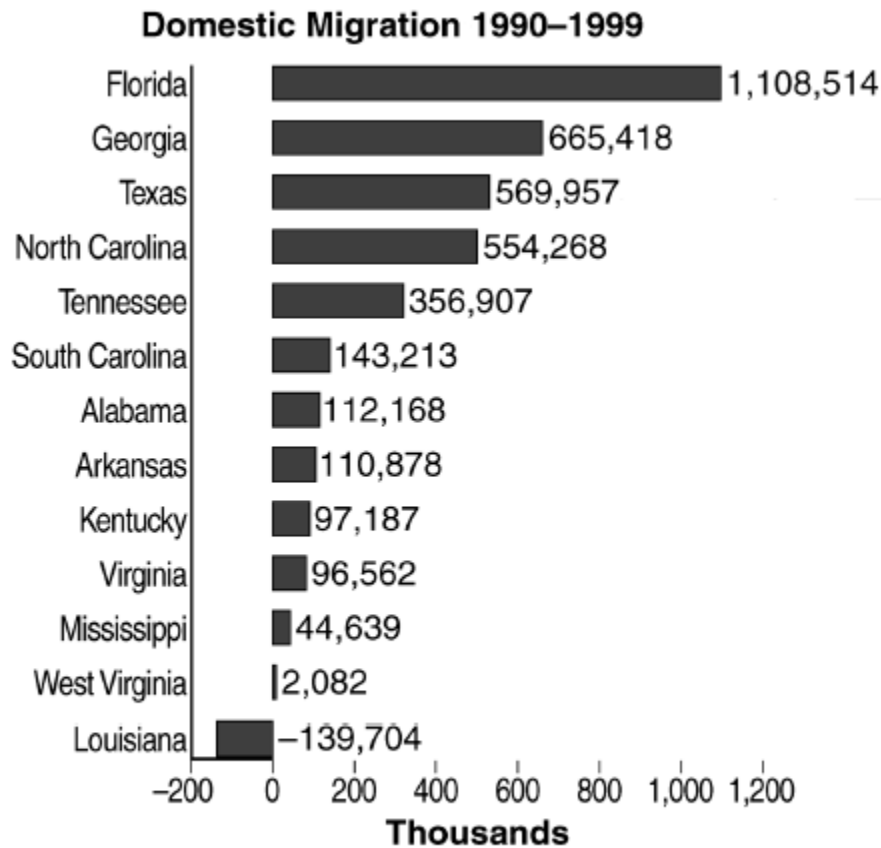
## Constructed-Response Items

Questions 17 through 20 are sample constructed-response items. Each item contains multiple parts and involves the application of Social Studies knowledge, skills, and/or concepts. The constructed-response items are scored using an item-specific rubric on a scale of 0 to 4.

### Geography

**Benchmark G-1C-H2:** determining the economic, political, and social factors that contribute to human migration and settlement patterns and evaluating their impact on physical and human systems

Use the bar graph and the information below to answer question 17.



*Source: U.S. Census Bureau*

In a 2001 voter survey, 31 percent of the citizens surveyed said that they would leave Louisiana today, if they had the means and opportunity.

*—The People’s Agenda Report Card 2001 from the Council for a Better Louisiana*

17. **A.** Describe what trend is shown in the graph above.
- B.** Describe **two** logical reasons why people are leaving or want to leave Louisiana.
- C.** Fully explain **two** effects (either economic, political, or social) that the departure of people could have on Louisiana.

**Scoring Rubric:**

| Score | Description  |
|-------|--|
| 4     | <p>The student’s response gives an accurate and complete answer for all five parts of the question, describing what trend is shown in the graph in part A (1 pt.), describing <b>two</b> logical reasons why people are leaving or want to leave Louisiana in part B (2 pts.), <i>and</i> describing <b>two</b> social, political, <u>or</u> economic effects that people's leaving could have on Louisiana in part C (2 pts.).</p> <p>The response reflects an in-depth understanding and communicates ideas effectively.</p> |
| 3     | <p>The student’s response gives an accurate and complete answer for only four parts of the question.</p> <p><b>OR</b></p> <p>The student’s response gives an accurate and complete answer for at least three parts of the question and a limited answer for the other parts. The response reflects a general understanding and may contain minor inaccuracies.</p>   |
| 2     | <p>The student’s response gives limited answers for two to four parts of the question. The response reflects a limited understanding and may contain inaccuracies or gaps in conceptual understanding.</p>   |
| 1     | <p>The student’s response correctly answers at least one part of the question. The response reflects a minimal understanding and may contain major inaccuracies.</p>   |
| 0     | <p>The student’s response is incorrect, irrelevant to the skill/concept being measured, too brief to evaluate, or blank.</p>   |

**Scoring notes:**

*Part A:*

The graph shows that over the last ten years, while the population in most of the South has been increasing, the population in Louisiana has been decreasing.

*The student’s response must be based on people leaving Louisiana or on people going to the other southern states.*

*Part B (not inclusive):*

- low-quality jobs—low pay and little opportunity for advancement
- voter distrust of politicians to solve problems
- high pollution levels
- high crime rates
- high poverty rates

*Part C (not inclusive):*

- brain drain—people leaving state to get better jobs
- labor shortage for specific jobs
- less business because of a declining population
- declining housing market
- less political representation in Congress due to declining population
- loss of government revenue, making it harder to solve problems

## Civics

**Benchmark C-1C-H2:** analyzing the major foreign policy positions of the United States and evaluating their consequences

**Use the information below to answer question 18.**

- 18.** Foreign policy is the way a country can influence other countries. There are a number of different methods or actions the United States can use to implement foreign and defense policies.
- A.** Describe **two** different methods or actions that the United States can use to implement foreign and defense policies.
- B.** Explain when or in what circumstances **each** method or action identified in part A would **most likely** be used by the United States.

### Scoring Rubric:

| Score | Description   |
|-------|---|
| 4     | The student's response reflects a thorough understanding and gives a complete and accurate answer for all four parts of the question, identifying <b>two</b> methods the United States employs in implementing foreign/defense policy in part A (2 pts.), <i>and</i> explaining when <b>each</b> method should be used in part B (2 pts.).          |
| 3     | The student's response gives a general answer for all four parts of the question,<br><b>OR</b><br>The student's response answers only three parts of the question with thorough/accurate answers,<br><b>OR</b><br>The student's response gives an accurate answer for at least two parts of the question, but a limited answer for the other parts. |
| 2     | The student's response answers only three parts of the question with limited answers,<br><b>OR</b><br>The student's response gives complete answers to only two parts of the question. The response reflects a limited understanding and may contain inaccuracies or gaps in conceptual understanding.  |
| 1     | The student's response correctly answers only one part of the question. The response reflects only a minimal understanding and may contain major inaccuracies.  |
| 0     | The student's response is incorrect, irrelevant to the skill/concept being measured, too brief to evaluate, or blank.   |

**Scoring notes:**

*By itself the answer for part B may seem incomplete, but it needs to be read as an extension of what was said in part A. Answers will vary for part B.*

*Possible answers for Part A (not inclusive):*

- conventional diplomacy
- foreign aid
- economic sanctions
- political coercion
- covert operations
- military intervention
- building coalitions
- seeking international action
- dollar diplomacy



## Economics

**Benchmark E-1B-H3:** analyzing the impact of governmental taxation, spending, and regulation on different groups in a market economy

**Use the information below to answer question 19.**

**19.** A **local government** is considering these items in its proposed budget:

- building a new community hospital
- maintaining welfare payments at current levels
- providing financial incentives to businesses to hire more teenage workers
- replacing an unsafe, worn-out bridge
- supporting parks and recreational services year-round

Because money is limited, not all of the above items can be included in the local government's budget.

- A.** Select **one** item above that you feel should be included in the community budget. Explain **two** ways that the item you selected may have a **positive economic** impact on the community. Use specific details in your discussion.
- B.** Select **another** item above that you feel should be included in the community budget. Discuss **two** ways that the item you selected might have a **negative economic** impact on the community if it were **not** included in the budget.

**Scoring Rubric:**

Maximum points to be awarded per section: part A—2 points, part B—2 points.

| Score | Description   |
|-------|---|
| 4     | The student’s response reflects an in-depth understanding and gives a complete and accurate answer to all four parts of the question, explaining <b>two</b> positive economic impacts of funding one community budget item in part A (2 pts.), <i>and</i> explaining <b>two</b> negative economic impacts of rejecting a different community budget item in part B (2 pts.) |
| 3     | The student’s response gives a general answer for all four parts of the question,<br><b>OR</b><br>The student’s response gives a thorough and accurate answer for at least two parts of the question, but a limited answer for the other part(s).   |
| 2     | The student’s response answers only three parts of the questions with general answers,<br><b>OR</b><br>The student’s response answers only two parts of the question with thorough and accurate answers.  |
| 1     | The student’s response reflects a minimal understanding, answering only one part of the question correctly.   |
| 0     | The student’s response is incorrect, irrelevant to the skill/concept being measured, too brief to evaluate, or blank.   |

**Scoring notes (not inclusive):**

| Budget item  | Positive impact  | Negative impact   |
|--|--|---|
| <b>Build hospital</b>                                  | <ul style="list-style-type: none"> <li>• Construction jobs</li> <li>• Hospital jobs</li> <li>• Local health care would make community more attractive to new residents and businesses</li> <li>• Less time lost by citizens traveling to a more distant hospital</li> </ul>                                | <ul style="list-style-type: none"> <li>• People not as healthy; cost to businesses</li> <li>• People and business less likely to move to community</li> </ul>   |
| <b>Maintain welfare payments at current levels</b>     | <ul style="list-style-type: none"> <li>• Will have money and continue to be consumers</li> <li>• People being better able to provide for themselves will have a positive economic effect on the community</li> <li>• People less likely to resort to crime to support themselves</li> </ul>                | <ul style="list-style-type: none"> <li>• Fewer consumers for businesses</li> <li>• Decrease in funding for social programs</li> <li>• Increase in crime</li> </ul>  |
| <b>Provide incentives for businesses to hire teens</b> | <ul style="list-style-type: none"> <li>• Keep teens busy so less likely to vandalize</li> <li>• Less likely to keep customers away because they are hanging out downtown</li> <li>• Teens provide relatively low-cost labor for businesses</li> <li>• Teens will earn money to become consumers</li> </ul> | <ul style="list-style-type: none"> <li>• Increase in vandalism</li> <li>• Smaller labor force may drive up business costs</li> </ul>  |
| <b>Replace bridge</b>                                  | <ul style="list-style-type: none"> <li>• Construction jobs</li> </ul>  | <ul style="list-style-type: none"> <li>• Will cost more to replace later after more worn</li> <li>• Without the bridge, people would have to travel a greater distance</li> <li>• Unsafe bridge could cause accidents and lead to lawsuits</li> </ul> |
| <b>Continue recreational services year round</b>       | <ul style="list-style-type: none"> <li>• Keep children busy so less likely to get into trouble</li> <li>• Year-round programs would make community more attractive to new residents</li> </ul>   | <ul style="list-style-type: none"> <li>• Children won't be kept busy and will be more likely to commit crimes and/or keep consumers away because they are hanging out downtown</li> </ul>   |

## History

**Benchmark H-1B-H7:** describing the immigration and internal migration patterns that have occurred in the history of the United States and examining the cultural and social changes that have resulted

**The political cartoon below was originally published in the early 1920s. Study the cartoon to answer question 20.**



20. A. Describe the historical concept with which the political cartoon is most closely associated.
- B. Fully explain how the practice illustrated in the political cartoon contradicts the ideals upon which the United States was founded.

### Scoring Rubric:

Maximum points to be awarded per section: part A—1 pt., part B—3 pts.

| Score | Description   |
|-------|---|
| 4     | The student's response correctly identifies the historical concept in part A (1 pt.), <i>and</i> provides a well-developed accurate explanation that demonstrates a thorough understanding of how the practice in the cartoon contradicts the ideals upon which the United States was founded in part B (3 pts.). |
| 3     | The student's response correctly identifies the concept in part A and provides a general explanation in part B. The response may contain minor inaccuracies.<br><b>OR</b><br>The student's response fails to answer part A, but provides a well-developed accurate explanation in part B.                         |
| 2     | The student's response correctly identifies the historical concept in part A and provides a limited explanation in part B. The response may contain inaccuracies.<br><b>OR</b><br>The student's response fails to answer part A, but provides a general explanation in part B.                                    |
| 1     | The student's response correctly identifies the historical concept in part A <b>OR</b> provides a minimal explanation in part B. The response may contain major inaccuracies.   |
| 0     | The student's response is incorrect, irrelevant to the skill/concept being measured, too brief to evaluate, or blank.   |

### Scoring notes:

#### *Part A (not inclusive):*

Establishment of immigration quotas by the United States is the historical concept with which the cartoon is associated. (The cartoon was published in 1923, but a date is **not** required as part of the response for any score point.)

#### *Part B (not inclusive):*

The cartoon was published after WWI, a time of intense isolationist sentiment in the United States. The United States feared the Russian Revolution and what might happen within its own borders if European immigrants were admitted in vast numbers. The United States was also recovering from battles fought on European soil in World War I and was questioning what its role should be in world affairs. Immigration quotas were a direct way to isolate the United States from such dilemmas, despite its historical commitment to the ideals of democracy, all men being created equal, political freedom, etc. The cartoon's point of view about immigration quotas is highly critical of such policies because they contradict the ideals upon which the United States was founded. The cartoon, however, offers no solutions about how to resolve the contradiction.

## Standards and Benchmark Statements, across Grades

### GEOGRAPHY: Physical and Cultural Systems

#### A. THE WORLD IN SPATIAL TERMS

| K–4  | 5–8  | 9–12   |
|--|--|--|
| <p><b>G-1A-E1</b><br/>identifying and describing the characteristics and uses of geographic representations, such as various types of maps, globes, graphs, diagrams, photographs, and satellite-produced images</p>                       | <p><b>G-1A-M1</b><br/>identifying and describing the characteristics, functions, and applications of various types of maps and other geographic representations, tools, and technologies</p> <p><b>G-1A-M2</b><br/>interpreting and developing maps, globes, graphs, charts, models, and databases to analyze spatial distributions and patterns</p> | <p><b>G-1A-H1</b><br/>using geographic representations, tools, and technologies to explain, analyze, and solve geographic problems</p>       |
| <p><b>G-1A-E2</b><br/>locating and interpreting geographic features and places on maps and globes</p> <p><b>G-1A-E3</b><br/>constructing maps, graphs, charts, and diagrams to describe geographical information and to solve problems</p> | <p><b>G-1A-M3</b><br/>organizing and displaying information about the location of geographic features and places by using mental mapping skills</p>  | <p><b>G-1A-H2</b><br/>organizing geographic information and answering complex questions by formulating mental maps of places and regions</p> |

# GEOGRAPHY: Physical and Cultural Systems

## B. PLACES AND REGIONS

| K–4   | 5–8  | 9–12  |
|---|--|---|
| <p><b>G-1B-E1</b><br/>describing and comparing the physical characteristics of places, including land forms, bodies of water, soils, vegetation, and climate</p> <p><b>G-1B-E2</b><br/>identifying and describing the human characteristics of places, including population distributions and culture</p> | <p><b>G-1B-M1</b><br/>explaining and analyzing both the physical and human phenomena associated with specific places, including precipitation and settlement patterns</p>  | <p><b>G-1B-H1</b><br/>determining how location and social, cultural, and economic processes affect the features and significance of places</p>  |
| <p><b>G-1B-E3</b><br/>describing how the physical and human characteristics of places change over time</p>  | <p><b>G-1B-M2</b><br/>identifying and describing significant physical features that have influenced historical events</p>  | <p><b>G-1B-H2</b><br/>analyzing the ways in which physical and human characteristics of places and regions have affected historic events</p>  |
| <p><b>G-1B-E4</b><br/>defining and differentiating regions by using physical characteristics, such as climate and landforms, and by using human characteristics, such as economic activity and language</p>   | <p><b>G-1B-M3</b><br/>identifying criteria used to define regions and explaining how and why regions change</p> <p><b>G-1B-M4</b><br/>describing and explaining how personal interests, culture, and technology affect people’s perceptions and uses of places and regions</p> | <p><b>G-1B-H3</b><br/>analyzing the various ways in which physical and human regions are structured and interconnected</p> <p><b>G-1B-H4</b><br/>explaining and evaluating the regions to cultural identity</p> |

## GEOGRAPHY: Physical and Cultural Systems

### C. PHYSICAL AND HUMAN SYSTEMS

| K–4  | 5–8   | 9–12   |
|--|---|--|
| <p><b>G-1C-E1</b><br/>describing how physical processes help to shape features and patterns on Earth’s surface</p>   | <p><b>G-1C-M1</b><br/>predicting and explaining how physical features help to shape patterns and arrangements in the physical environment</p>   | <p><b>G-1C-H1</b><br/>analyzing the ways in which Earth’s dynamic and interactive physical processes affect different regions of the world</p>   |
| <p><b>G-1C-E2</b><br/>describing and comparing the types of settlement and patterns of land use in local communities, the United States, and world regions</p> | <p><b>G-1C-M2</b> identifying key demographic concepts and using these concepts to analyze the population characteristics of a country or region</p> <p><b>G-1C-M3</b> describing the characteristics and patterns of human settlement in different regions of the world and analyzing the impact of urbanization</p> | <p><b>G-1C-H2</b><br/>determining the economic, political, and social factors that contribute to human migration and settlement patterns and evaluating their impact on physical and human systems</p> |
| <p><b>G-1C-E3</b><br/>describing and explaining the characteristics, distribution, and migration of human population</p>                                       | <p><b>G-1C-M4</b><br/>analyzing types, patterns, and effects of human migration over time</p>   | <p><b>G-1C-H3</b><br/>analyzing trends in world population numbers and patterns and predicting their consequences</p>  |
| <p><b>G-1C-E4</b><br/>identifying and comparing the cultural characteristics of different regions and people</p>   | <p><b>G-1C-M5</b><br/>tracing local and worldwide patterns of cultural diffusion and analyzing their causes and effects</p>   | <p><b>G-1C-H4</b><br/>analyzing the characteristics, distribution, and interrelationships of the world’s cultures</p>  |
| <p><b>G-1C-E5</b><br/>locating and explaining the spatial distribution of economic activities</p>  | <p><b>G-1C-M6</b><br/>comparing historical and contemporary patterns of economic interdependence</p>  | <p><b>G-1C-H5</b><br/>describing and evaluating spatial distribution of economic systems and how economic systems affect regions</p>   |
| <p><b>G-1C-E6</b><br/>identifying and describing types of territorial units, such as parishes or counties, states, and countries</p>                           | <p><b>G-1C-M7</b><br/>explaining how cooperation and conflict among people contribute to the political divisions on Earth’s surface</p>   | <p><b>G-1C-H6</b><br/>analyzing how cooperation, conflict, and self-interests impact social, political, and economic entities on Earth</p>   |



# GEOGRAPHY: Physical and Cultural Systems

## D. ENVIRONMENT AND SOCIETY

| K-4   | 5-8  | 9-12  |
|---|--|---|
| <p><b>G-1D-E1</b><br/>identifying and explaining ways in which people depend upon and modify the physical environment</p>   | <p><b>G-1D-M1</b><br/>analyzing and evaluating the effects of human actions upon the physical environment</p>                              | <p><b>G-1D-H1</b><br/>describing and evaluating the ways in which technology has expanded the human capability to modify the physical environment</p>   |
| <p><b>G-1D-E2</b><br/>describing how humans adapt to variations in the physical environment</p> <p><b>G-1D-E3</b><br/>describing the locations, causes, and effects of natural disasters on the environment and society</p> | <p><b>G-1D-M2</b><br/>explaining and giving examples of how characteristics of different physical environments affect human activities</p> | <p><b>G-1D-H2</b><br/>examining the challenges placed on human systems by the physical environment and formulating strategies to deal with these challenges</p>   |
| <p><b>G-1D-E4</b><br/>describing the use, distribution, and importance of natural resources</p>   | <p><b>G-1D-M3</b><br/>analyzing the worldwide distribution and utilization of natural resources</p>  | <p><b>G-1D-H3</b><br/>analyzing the relationship between natural resources and the exploration, colonization, settlement, and uses of land of different regions of the world</p> <p><b>G-1D-H4</b><br/>evaluating policies and programs related to the use of natural resources</p> |
|   | <p><b>G-1D-M4</b><br/>identifying problems that relate to contemporary geographic issues and researching possible solutions</p>            | <p><b>G-1D-H5</b><br/>developing plans to solve local and regional geographic problems related to contemporary issues</p>   |

## CIVICS: Citizenship and Government

### A. STRUCTURE AND PURPOSES OF GOVERNMENT

| K–4  | 5–8   | 9–12   |
|--|---|--|
| <p><b>C-1A-E1</b><br/>describing government in terms of the people and groups who make, apply, and enforce rules and laws in the home, school, community, and nation</p> <p><b>C-1A-E2</b><br/>explaining the necessity and basic purposes of government</p>                       | <p><b>C-1A-M1</b><br/>explaining major ideas about why governments are necessary and evaluating competing positions on the purposes government should serve</p>   | <p><b>C-1A-H1</b><br/>analyzing the necessity and purposes of politics and government and identifying examples of programs that fit within those purposes</p>                  |
| <p><b>C-1A-E3</b><br/>comparing limited governments to unlimited governments</p>   | <p><b>C-1A-M2</b><br/>describing the essential characteristics of various systems of government</p>   | <p><b>C-1A-H2</b><br/>comparing and evaluating the essential characteristics of various systems of government and identifying historical and contemporary examples of each</p> |
|  | <p><b>C-1A-M3</b><br/>explaining how the powers of the government are distributed, shared, and limited by the United States and Louisiana constitutions</p> <p><b>C-1A-M4</b> explaining the purposes of state constitutions and describing the relationship of state constitutions to the federal constitution</p> | <p><b>C-1A-H3</b><br/>explaining and evaluating issues related to the distribution of powers and responsibilities within the federal system</p>                                |
| <p><b>C-1A-E4</b><br/>identifying and describing some of the major responsibilities of local, state, and national governments</p>  | <p><b>C-1A-M5</b><br/>describing the organization and major responsibilities of local, state, and national governments</p>  | <p><b>C-1A-H4</b><br/>explaining the organization and functions of local, state, and national governments and evaluating their relationships</p>                               |
| <p><b>C-1A-E5</b><br/>identifying key members of government at the local, state, and national levels and describing their powers and the limits on their powers</p> <p><b>C-1A-E6</b> explaining how officials in government acquire the authority to exercise political power</p> | <p><b>C-1A-M6</b><br/>identifying government leaders and representatives at the local, state, and national levels and explaining their powers and the limits on their powers</p>  |  |

|  |  |  |
|--|--|--|
| <p><b>C-1A-E7</b><br/>explaining the purposes and importance of rules and laws</p> | <p><b>C-1A-M7</b><br/>explaining the importance of law in the American constitutional system and applying criteria to evaluate rules and laws</p>  | <p><b>C-1A-H5</b><br/>evaluating the role and importance of law in the American political system and applying criteria to evaluate laws</p>  |
|  | <p><b>C-1A-M8</b><br/>explaining how public policy is formed, debated, and carried out at local, state, and national levels</p> <p><b>C-1A-M9</b><br/>explaining the necessity of taxes and describing the purposes for which tax revenues are used</p> <p><b>C-1A-M10</b><br/>identifying and evaluating different types of taxes</p> | <p><b>C-1A-H6</b><br/>examining the major responsibilities of the national government for domestic and foreign policy</p> <p><b>C-1A-H7</b><br/>explaining how government is financed through taxation</p> |

## CIVICS: Citizenship and Government

### B. FOUNDATIONS OF THE AMERICAN POLITICAL SYSTEM

| K–4   | 5–8   | 9–12   |
|---|---|--|
|   | <p><b>C-1B-M1</b> explaining the essential ideas and historical origins of American constitutional government</p> <p><b>C-1B-M2</b> identifying and describing the historical experiences and the geographic, social, and economic factors that have helped to shape American political culture</p> | <p><b>C-1B-H1</b> analyzing the central ideas and historical origins of American constitutional government and evaluating how this form of government has helped to shape American society</p>             |
| <p><b>C-1B-E1</b> identifying basic principles of American constitutional democracy and explaining how the constitutions of the United States and Louisiana reflect these principles</p> <p><b>C-1B-E2</b> discussing the importance of citizens sharing and supporting the principles of American constitutional democracy</p> | <p><b>C-1B-M3</b> explaining the meaning and importance of basic principles of American constitutional democracy as reflected in core documents</p>   | <p><b>C-1B-H2</b> explaining basic democratic beliefs and principles of constitutional democracy in American society and applying them to the analysis of issues of conflicting beliefs and principles</p> |
|   | <p><b>C-1B-M4</b> analyzing the ways in which political and social conflict can be peacefully resolved</p>  | <p><b>C-1B-H3</b> analyzing the nature of American political and social conflict</p>   |
|   | <p><b>C-1B-M5</b> analyzing democratic processes used to institute change</p>   | <p><b>C-1B-H4</b> evaluating issues related to the differences between American ideals and the realities of American social and political life</p>   |
|   | <p><b>C-1B-M6</b> analyzing the importance of political parties, campaigns, and elections in the American political system</p>  | <p><b>C-1B-H5</b> evaluating the roles of political parties, campaigns, and elections in American politics</p>   |
|   |   | <p><b>C-1B-H6</b> analyzing the historical and contemporary roles of associations and groups in local, state, and national politics</p>  |

## CIVICS: Citizenship and Government

### C. INTERNATIONAL RELATIONSHIPS

| K-4   | 5-8  | 9-12  |
|---|--|---|
| <p><b>C-1C-E1</b><br/>explaining that the world is divided into different nations and describing the major ways that these nations interact</p> | <p><b>C-1C-M1</b><br/>describing how the world is organized politically and explaining the means by which nation-states interact</p>   | <p><b>C-1C-H1</b><br/>analyzing how the world is organized politically and evaluating how the interaction of political entities, such as nation-states and international organizations, affects the United States</p> |
|   | <p><b>C-1C-M2</b><br/>explaining the formation, implementation, and impact of United States foreign policy</p> <p><b>C-1C-M3</b><br/>identifying types of foreign policy issues, using current and historical examples</p> | <p><b>C-1C-H2</b><br/>analyzing the major foreign policy positions of the United States and evaluating their consequences</p>   |
|   |  | <p><b>C-1C-H3</b><br/>evaluating the impact of American ideas and actions on the world and analyzing the effects of significant international developments on the United States</p>                                   |

## CIVICS: Citizenship and Government

### D. ROLES OF THE CITIZEN

| K–4   | 5–8   | 9–12  |
|---|---|---|
| <p><b>C-1D-E1</b><br/>explaining the meaning of citizenship and the means by which individuals become citizens of the United States</p>                       | <p><b>C-1D-M1</b><br/>explaining the meaning of citizenship and the requirements for citizenship and naturalization in the United States</p>  |   |
| <p><b>C-1D-E2</b><br/>describing the rights and responsibilities of citizenship in a democratic society</p>   | <p><b>C-1D-M2</b><br/>identifying the rights and responsibilities of citizens and explaining their importance to the individual and to society</p> <p><b>C-1D-M3</b><br/>discussing issues involving the rights and responsibilities of individuals in American society</p> | <p><b>C-1D-H1</b><br/>evaluating and defending positions on issues regarding the personal, political, and economic rights of citizens</p> <p><b>C-1D-H2</b> evaluating and defending positions regarding the personal and civic responsibilities of citizens in American constitutional democracy</p> |
| <p><b>C-1D-E3</b><br/>identifying and discussing civic traits that are important to the preservation and improvement of American constitutional democracy</p> |   |   |
| <p><b>C-1D-E4</b><br/>describing the many ways that citizens can participate in and contribute to their communities and to American society</p>               | <p><b>C-1D-M4</b><br/>describing the many ways by which citizens can organize, monitor, and help to shape politics and government at local, state, and national levels</p>  | <p><b>C-1D-H3</b><br/>explaining and evaluating the various forms of political participation that citizens can use to monitor and shape the formation and implementation of public policy</p>   |
| <p><b>C-1D-E5</b><br/>discussing issues related to citizenship and public service</p>   | <p><b>C-1D-M5</b><br/>communicating the importance of knowledge to competent and responsible political participation and leadership</p>   | <p><b>C-1D-H4</b><br/>analyzing and evaluating the importance of political leadership, public service, and a knowledgeable citizenry to American constitutional democracy</p>   |

## ECONOMICS: Interdependence and Decision Making

### A. FUNDAMENTAL ECONOMIC CONCEPTS

| K–4  | 5–8  | 9–12  |
|--|--|---|
| <p><b>E-1A-E1</b><br/>recognizing that limited resources require people to make decisions</p> <p><b>E-1A-E2</b><br/>identifying what is gained and lost when individuals or groups make decisions</p> <p><b>E-1A-E3</b><br/>demonstrating how economic wants affect decisions about using goods and services</p> <p><b>E-1A-E4</b><br/>discussing and determining the process for making economic decisions</p>        | <p><b>E-1A-M1</b><br/>describing how the scarcity of resources necessitates decision making at both personal and societal levels</p> <p><b>E-1A-M2</b><br/>analyzing consequences of economic decisions in terms of additional benefits and additional costs</p> <p><b>E-1A-M3</b><br/>analyzing the consequences and opportunity cost of economic decisions</p> | <p><b>E-1A-H1</b><br/>analyzing the impact of the scarcity of productive resources and examining the choices and opportunity cost that result</p> |
| <p><b>E-1A-E5</b> explaining the relationships among producers and consumers</p> <p><b>E-1A-E6</b><br/>describing how natural resources, human resources, and capital resources have been used and are combined in the production of goods and services</p> <p><b>E-1A-E7</b><br/>describing how specialization affects productivity and contributes to the need for interdependence among producers and consumers</p> | <p><b>E-1A-M4</b><br/>analyzing the role of specialization in the economic process</p>   | <p><b>E-1A-H2</b><br/>analyzing the roles that production, distribution, and consumption play in economic decisions</p>                           |
| <p><b>E-1A-E8</b><br/>determining how the development of skills and knowledge relates to career opportunity and economic well-being</p>  | <p><b>E-1A-M5</b><br/>giving examples of how skills and knowledge increase productivity and career opportunities</p>   | <p><b>E-1A-H3</b><br/>applying the skills and knowledge necessary in making decisions about career options</p>                                    |

|  |   |  |
|--|---|--|
| <p><b>E-1A-E9</b><br/>identifying different methods for the distribution of goods and services, including the concept of markets</p>     | <p><b>E-1A-M6</b><br/>describing the essential differences in the production and allocation of goods and services in traditional, command, and market systems</p> | <p><b>E-1A-H4</b><br/>comparing and evaluating economic systems</p> <p><b>E-1A-H5</b><br/>explaining the basic features of market structures and exchanges</p> |
| <p><b>E-1A-E10</b><br/>identifying some of the economic institutions, such as households and banks, that make up the economy</p>         | <p><b>E-1A-M7</b><br/>describing the various institutions, such as business firms and government agencies, that make up economic systems</p>                      | <p><b>E-1A-H6</b><br/>analyzing the roles of economic institutions, such as corporations and labor unions, that compose economic systems</p>                   |
| <p><b>E-1A-E11</b><br/>explaining and demonstrating why people participate in voluntary exchanges and how money helps in the process</p> | <p><b>E-1A-M8</b><br/>differentiating among various forms of exchange and money</p>   | <p><b>E-1A-H7</b><br/>analyzing the roles of money and banking in an economic system</p>   |
|  | <p><b>E-1A-M9</b><br/>using economic concepts to help explain historic and contemporary events and developments</p>   | <p><b>E-1A-H8</b><br/>applying economic concepts to understand and evaluate historical and contemporary issues</p>   |



## ECONOMICS: Interdependence and Decision Making

### B. INDIVIDUALS, HOUSEHOLDS, BUSINESSES, AND GOVERNMENTS

| K-4  | 5-8  | 9-12   |
|--|--|--|
| <p><b>E-1B-E1</b><br/>describing how prices are determined by the interactions of buyers and sellers</p> <p><b>E-1B-E2</b><br/>explaining how the changes in prices affect incentives to produce, consume, and save</p> <p><b>E-1B-E3</b> identifying and explaining economic concepts, such as profit, as an incentive for people to take economic risk</p> | <p><b>E-1B-M1</b><br/>explaining the role of supply and demand in a competitive market system</p> <p><b>E-1B-M2</b><br/>explaining the factors that affect the production and distribution of goods and services</p> | <p><b>E-1B-H1</b><br/>identifying factors that cause changes in supply and demand</p> <p><b>E-1B-H2</b><br/>analyzing how changes in supply and demand, price, incentives, and profit influence production and distribution in a competitive market system</p> |
| <p><b>E-1B-E4</b><br/>explaining why some goods and services are provided by the government through taxing, charging user fees, and borrowing</p>  | <p><b>E-1B-M3</b><br/>explaining the difference between private and public goods and services</p>  |  |
|  | <p><b>E-1B-M4</b> identifying the costs and benefits of government policies on competitive markets</p> <p><b>E-1B-M5</b> identifying different types of taxes and user fees and predicting their consequences</p>    | <p><b>E-1B-H3</b><br/>analyzing the impact of governmental taxation, spending, and regulation on different groups in a market economy</p>  |
|  | <p><b>E-1B-M6</b><br/>determining the reasons for trade between nations, identifying costs and benefits, and recognizing the worldwide interdependence that results</p>  | <p><b>E-1B-H4</b><br/>analyzing the causes and consequences of worldwide economic interdependence</p> <p><b>E-1B-H5</b> evaluating the effects of domestic policies on international trade</p>   |
| <p><b>E-1B-E5</b><br/>identifying the major goods and services produced in the local community and state</p>   | <p><b>E-1B-M7</b><br/>describing historical and economic factors that have contributed to the development and growth of the national, state, and local economies</p>   | <p><b>E-1B-H6</b><br/>analyzing Louisiana’s role in the national and world economies</p>   |

## ECONOMICS: Interdependence and Decision Making

### C. THE ECONOMY AS A WHOLE

| K–4 | 5–8   | 9–12   |
|-----|---|--|
|     | <p><b>E-1C-M1</b><br/>explaining the meaning of economic indicators that help to describe economies</p>                           | <p><b>E-1C-H1</b><br/>explaining the meanings of such economic indicators as GDP, per capita GDP, real GDP, CPI, and unemployment rate</p> <p><b>E-1C-H2</b><br/>explaining how interest rates, investments, and inflation/deflation, impact the economy</p> |
|     | <p><b>E-1C-M2</b><br/>describing the influences of inflation, unemployment, and underemployment on different groups of people</p> | <p><b>E-1C-H3</b><br/>analyzing the causes and consequences of unemployment, underemployment, and income distribution in a market economy</p>  |
|     |   | <p><b>E-1C-H4</b><br/>explaining the basic concepts of United States fiscal policy, monetary policy, and regulations and describing their effects on the economy</p>   |

# HISTORY: Time, Continuity, and Change

## A. HISTORICAL THINKING SKILLS

| K-4  | 5-8   | 9-12   |
|--|---|--|
| <p><b>H-1A-E1</b><br/>demonstrating an understanding of the concepts of time and chronology</p>                  | <p><b>H-1A-M1</b><br/>describing chronological relationships and patterns</p>   | <p><b>H-1A-H1</b><br/>applying key concepts, such as chronology and conflict, to explain and analyze patterns of historical change and continuity</p>                  |
| <p><b>H-1A-E2</b><br/>recognizing that people in different times and places view the world differently</p>       | <p><b>H-1A-M2</b><br/>demonstrating historical perspective through the political, social, and economic context in which an event or idea occurred</p> <p><b>H-1A-M3</b><br/>analyzing the impact that specific individuals, ideas, events, and decisions had on the course of history</p> | <p><b>H-1A-H2</b><br/>explaining and analyzing events, ideas, and issues within a historical context</p>   |
| <p><b>H-1A-E3</b><br/>identifying and using primary and secondary historical sources to learn about the past</p> | <p><b>H-1A-M4</b><br/>analyzing historical data using primary and secondary sources</p>   | <p><b>H-1A-H3</b><br/>interpreting and evaluating the historical evidence presented in primary and secondary sources</p>   |
|  | <p><b>H-1A-M5</b><br/>identifying issues and problems from the past and evaluating alternative courses of action</p>  | <p><b>H-1A-H4</b><br/>utilizing knowledge of facts and concepts drawn from history and methods of historical inquiry to analyze historical and contemporary issues</p> |
|  | <p><b>H-1A-M6</b><br/>conducting research in efforts to answer historical questions</p>   | <p><b>H-1A-H5</b><br/>conducting research in efforts to analyze historical questions and issues</p> <p><b>H-1A-H6</b><br/>analyzing cause-effect relationships</p>     |

## **HISTORY: Time, Continuity, and Change**

### **BENCHMARKS K–4**

#### **B. FAMILIES AND COMMUNITIES**

| <b>K–4</b>   |
|--|
| <b>H-1B-E1</b> describing and comparing family life in the present and the past                              |
| <b>H-1B-E2</b> relating the history of the local community and comparing it to other communities of long ago |

#### **C. LOUISIANA AND UNITED STATES HISTORY**

| <b>K–4</b>   |
|--|
| <b>H-1C-E1</b> describing the people, events, and ideas that were significant to the growth and development of our state and nation                                    |
| <b>H-1C-E2</b> identifying the development of democratic principles and discussing how these principles have been exemplified by historic figures, events, and symbols |
| <b>H-1C-E3</b> describing the causes and nature of various movements of large groups of people into and within Louisiana and the United States throughout history      |
| <b>H-1C-E4</b> recognizing how folklore and other cultural elements have contributed to our local, state, and national heritage  |

#### **D. WORLD HISTORY**

| <b>K–4</b>   |
|--|
| <b>H-1D-E1</b> identifying the characteristics and historical development of selected societies throughout the world           |
| <b>H-1D-E2</b> describing the social and economic impact of major scientific and technological advancements                    |
| <b>H-1D-E3</b> discussing the impact of significant contributions made by historic figures from different regions of the world |

# HISTORY: Time, Continuity, and Change

## BENCHMARKS 5–8 AND 9–12

### B. UNITED STATES HISTORY

| Eras   | 5–8  | 9–12  |
|--|--|---|
| <b>ERA 1:<br/>Three Worlds Meet<br/>(Beginnings to 1620)</b>     | <b>H-1B-M1</b><br>identifying and describing characteristics of societies in the Americas, Western Europe and Western Africa that increasingly interacted after 1450<br><br><b>H-1B-M2</b><br>explaining the cultural, ecological, and economic results of early European exploration and colonization   | <b>H-1B-H1</b><br>analyzing the significant changes that resulted from interactions among the peoples of Europe, Africa, and the Americas |
| <b>ERA 2:<br/>Colonization and Settlement<br/>(1565–1763)</b>    | <b>H-1B-M3</b><br>describing the interactions among Native Americans, early Europeans, and Africans in the Americas<br><br><b>H-1B-M4</b><br>tracing the emergence of religious freedom and changing political institutions in the English colonies<br><br><b>H-1B-M5</b><br>analyzing the impact of European cultural, political, and economic ideas and institutions on life in the Americas | <b>H-1B-H2</b><br>summarizing the process by which the United States was colonized and later became an independent nation                 |
| <b>ERA 3:<br/>Revolution and the New Nation<br/>(1754–1820s)</b> | <b>H-1B-M6</b><br>explaining the causes and course of the American Revolution and the reasons for the American victory<br><br><b>H-1B-M7</b><br>explaining the impact of the American Revolution on the politics, society, and economy of the new nation   | <b>H-1B-H3</b><br>analyzing the development of the American constitutional system   |

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|  | <p><b>H-1B-M8</b><br/>relating the institutions and practices of government established during and after the American Revolution to the foundation of the American political system</p>  |   |
| <p><b>ERA 4:<br/>Expansion and Reform<br/>(1801–1861)</b></p>                                | <p><b>H-1B-M9</b><br/>describing the territorial expansion of the United States and analyzing the effects on relations with Native Americans and external powers</p> <p><b>H-1B-M10</b><br/>analyzing the changes and regional tensions created by Jacksonian democracy, the industrial revolution, increasing immigration, the rapid expansion of slavery, and the westward movement</p> <p><b>H-1B-M11</b><br/>explaining and giving examples of the reform movements that occurred during the antebellum period and evaluating their impact on American society</p> | <p><b>H-1B-H4</b><br/>tracing territorial expansion and reform movements in the United States</p>                     |
| <p><b>ERA 5:<br/>Civil War and<br/>Reconstruction<br/>(1850–1877)</b></p>                    | <p><b>H-1B-M12</b><br/>describing the causes and course of the Civil War and examining the impact of the war on the American people</p> <p><b>H-1B-M13</b><br/>comparing and evaluating various reconstruction plans of the post-Civil War era</p>   | <p><b>H-1B-H5</b><br/>analyzing the origins, major events, and effects of the Civil War and Reconstruction</p>        |
| <p><b>ERA 6:<br/>The Development of the<br/>Industrial United States<br/>(1870–1900)</b></p> | <p><b>H-1B-M14</b><br/>describing the impact of industrialization in the United States</p>   | <p><b>H-1B-H6</b><br/>analyzing the development of industrialization and examining its impact on American society</p> |

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|   |   | <p><b>H-1B-H7</b><br/>describing the immigration and internal migration patterns that have occurred in the history of the United States and examining the cultural and social changes that have resulted</p>   |
| <p><b>ERA 7:<br/>The Emergence of Modern America<br/>(1890–1930)</b></p>      | <p><b>H-1B-M15</b><br/>describing the significant economic, political, social, and cultural changes that have occurred in the United States during the 20th century</p> <p><b>H-1B-M16</b> identifying the causes and consequences of major world conflicts involving the United States</p> | <p><b>H-1B-H8</b><br/>evaluating the significance of the Progressive Movement</p> <p><b>H-1B-H9</b><br/>analyzing the rise of the labor and agrarian movements</p> <p><b>H-1B-H10</b><br/>explaining the changing role of the United States in world affairs through World War I</p> <p><b>H-1B-H11</b><br/>analyzing the significant changes that evolved in the United States between World War I and the Great Depression</p> |
| <p><b>ERA 8:<br/>The Great Depression and World War II (1929–1945)</b></p>    | <p><b>H-1B-M17</b><br/>describing the impact of the Great Depression and World War II on American society</p>   | <p><b>H-1B-H12</b><br/>analyzing the causes, developments, and effects of the Great Depression and the New Deal</p> <p><b>H-1B-H13</b><br/>analyzing the origins, course, and results of World War II</p>  |
| <p><b>ERA 9:<br/>Contemporary United States<br/>(1945 to the present)</b></p> | <p><b>H-1B-M18</b><br/>discussing significant developments and issues in contemporary United States history</p>   | <p><b>H-1B-H14</b><br/>examining and summarizing key developments and issues in foreign and domestic policies during the Cold War era</p> <p><b>H-1B-H15</b><br/>analyzing the economic, political, social, and cultural transformation of the United States since World War II</p>  |

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|  |  | <p><b>H-1B-H16</b><br/>explaining the major changes that have resulted as the United States has moved from an industrial to an information society</p> <p><b>H-1B-H17</b><br/>analyzing developments and issues in contemporary American society</p> <p><b>H-1B-H18</b><br/>discussing and demonstrating an understanding of recent developments in foreign and domestic policies</p> |
|--|--|---|



# HISTORY: Time, Continuity, and Change

## BENCHMARKS 5–8 AND 9–12

### C. WORLD HISTORY

| Eras  | 5–8  | 9–12   |
|---|--|--|
| <b>ERA 1:<br/>The Beginnings of Society</b>   | <b>H-1C-M1</b> describing the earliest human communities<br><br><b>H-1C-M2</b> explaining the emergence of agricultural societies around the world   | <b>H-1C-H1</b> analyzing the development of early human communities and civilizations  |
| <b>ERA 2:<br/>The Rise of Early Civilizations<br/>(4000–1000 B.C.)</b>                              | <b>H-1C-M3</b> identifying the major characteristics of early civilizations in Mesopotamia, Egypt, and the Indus valley<br><br><b>H-1C-M4</b> tracing the development and expansion of agricultural societies and the emergence of new states<br><br><b>H-1C-M5</b> analyzing the political, social, and cultural consequences of population movements and militarization in Europe and Asia | <b>H-1C-H2</b> making generalizations about the cultural legacies of both the ancient river and the classical civilizations              |
| <b>ERA 3:<br/>Classical Traditions, Major Religions, and Giant Empires<br/>(1000 B.C.–A.D. 300)</b> | <b>H-1C-M6</b> discussing and giving examples of technological and cultural innovation and change<br><br><b>H-1C-M7</b> describing the classical civilizations and examining their interactions and influences<br><br><b>H-1C-M8</b> describing and comparing the emergence of major religions and large-scale empires in the Mediterranean basin, China, and India                          | <b>H-1C-H3</b> analyzing the origins, central ideas, and worldwide impact of major religious and philosophical traditions                |
| <b>ERA 4:<br/>Expanding Zones of Exchange and Encounter<br/>(A.D. 300–1000)</b>                     | <b>H-1C-M9</b> tracing the expansion of major religions and cultural traditions and examining the impact on civilizations in Europe, Asia, and Africa  | <b>H-1C-H4</b> summarizing the developments and contributions of civilizations that flourished in Europe, Asia, Africa, and the Americas |

|  |   |   |
|--|---|---|
|  | <p><b>H-1C-M10</b><br/>analyzing the political, social, and cultural developments and changes that resulted from the rise and fall of empires and kingdoms in Europe, Asia, Africa, and the Americas</p>  |   |
| <p><b>ERA 5:<br/>Intensified Hemispheric Interactions<br/>(A.D. 1000–1500)</b></p> | <p><b>H-1C-M11</b><br/>analyzing the cultural and economic impact of the interregional system of communication and trade that developed among the peoples of Europe, Asia, and Africa</p> <p><b>H-1C-M12</b><br/>explaining the developments and events that led to the political, social, cultural, and economic transformation of Europe</p> <p><b>H-1C-M13</b><br/>describing the development and expansion of complex societies and empires in the Americas</p> | <p><b>H-1C-H5</b><br/>analyzing the consequences of the economic and cultural interchange that increasingly developed among the peoples of Europe, Asia, and Africa</p>   |
| <p><b>ERA 6:<br/>Emergence of the First Global Age (1450–1770)</b></p>             | <p><b>H-1C-M14</b><br/>explaining the political, cultural, and economic developments and trends of major world regions that resulted in the transformation of societies in the fifteenth through the mid-eighteenth centuries</p>   | <p><b>H-1C-H6</b><br/>analyzing the impact of transoceanic linking of all major regions of the world</p> <p><b>H-1C-H7</b><br/>analyzing the political, cultural, and economic developments and trends that resulted in the transformation of major world regions</p> <p><b>H-1C-H8</b><br/>explaining how the emergence of territorial empires in Europe, Asia, and Africa unified large areas politically, economically, and culturally</p> |

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|---|--|--|
|   |  | <p><b>H-1C-H9</b><br/>tracing the expansion of European power and economic influence in the world and examining the impact of this expansion on societies in Asia and the Americas</p>   |
| <p><b>ERA 7:<br/>An Age of Revolutions<br/>(1750–1914)</b></p>                    | <p><b>H-1C-M15</b><br/>determining and discussing the impact of the political, agricultural, and industrial revolutions on societies around the world</p> <p><b>H-1C-M16</b><br/>describing the transformation of world societies that occurred during an era of global trade and Western domination</p> | <p><b>H-1C-H10</b><br/>analyzing the impact that political revolutions and new ideologies had on societies around the world</p> <p><b>H-1C-H11</b><br/>evaluating the economic, political, and social consequences of the agricultural and industrial revolutions on world societies</p> <p><b>H-1C-H12</b><br/>analyzing the patterns of worldwide change that emerged during the era of Western military and economic domination</p> |
| <p><b>ERA 8:<br/>A Half-Century of Crisis and Achievement<br/>(1900–1945)</b></p> | <p><b>H-1C-M17</b><br/>identifying the causes and worldwide consequences of major 20th century conflicts</p>   | <p><b>H-1C-H13</b><br/>analyzing the causes and international consequences of World War I, the rise and actions of totalitarian systems, World War II, and other early 20th century conflicts</p>  |
| <p><b>ERA 9:<br/>The 20th Century Since 1945<br/>(1945 to the present)</b></p>    | <p><b>H-1C-M18</b> identifying and discussing significant political, economic, social, cultural, and technological trends that have had an impact on the modern world</p>  | <p><b>H-1C-H14</b><br/>analyzing the international power shifts and the breakup of colonial empires that occurred in the years following WWII</p> <p><b>H-1C-H15</b><br/>explaining the worldwide significance of major political, economic, social, cultural, and technological developments and trends</p>   |

## **HISTORY: Time, Continuity, and Change**

### **BENCHMARKS 5–8**

#### **D. LOUISIANA HISTORY**

| <b>5–8</b>   |
|--|
| <b>H-1D-M1</b> describing the contributions of people, events, movements, and ideas that have been significant in the history of Louisiana |
| <b>H-1D-M2</b> tracing the development of the various governments that have been established in Louisiana throughout history               |
| <b>H-1D-M3</b> identifying and discussing the major conflicts in Louisiana’s past  |
| <b>H-1D-M4</b> locating and describing Louisiana’s geographic features and examining their impact on people past and present               |
| <b>H-1D-M5</b> tracing the development and growth of Louisiana’s economy throughout its history  |
| <b>H-1D-M6</b> examining folklore and describing how cultural elements have shaped our state and local heritage                            |

**Louisiana Educational Assessment Program  
Graduation Exit Examination (GEE)  
Social Studies Achievement Level Descriptors: Grade 11**

**NOTE:** These descriptors have been modified slightly from the 2002 publication to match the condensed descriptors on the updated 2006 Individual Student Reports.

| Achievement Level | Descriptors   |
|-------------------|---|
| <b>Advanced</b>   | <p>Students scoring at this level generally exhibit the ability to do the following:</p> <ul style="list-style-type: none"> <li>• <b>Geography:</b> organize geographical data; analyze the physical structure of the planet; and evaluate the spatial relationship between humans and their environment.</li> <li>• <b>Civics:</b> compare and contrast structure and purpose of government; interpret and evaluate foundations of the American political system; analyze international relationships; and evaluate the roles of citizens.</li> <li>• <b>Economics:</b> apply fundamental economic concepts; evaluate decisions made by consumers; and evaluate U.S. fiscal and monetary policies.</li> <li>• <b>History:</b> analyze continuity and change; analyze people, places, events, ideas, and documents; evaluate relevant experiences from the past to critique understanding of contemporary issues; and evaluate the role of evidence in making an historical argument.</li> </ul>  |
| <b>Mastery</b>    | <p>Students scoring at this level generally exhibit the ability to do the following:</p> <ul style="list-style-type: none"> <li>• <b>Geography:</b> classify geographical data; examine the physical structure of the planet; and compare spatial relationships between humans and their environment.</li> <li>• <b>Civics:</b> examine the structure and purpose of government; discuss the foundation of the American political system; interpret international relationships; and examine the roles of citizens.</li> <li>• <b>Economics:</b> analyze fundamental economic concepts; discuss decisions made by consumers, businesses, and government; and analyze U.S. fiscal and monetary policies.</li> <li>• <b>History:</b> examine the role of continuity and of change in history; examine the significance of people, places, events, ideas, and documents in history; analyze relevant experience from the past to understanding of contemporary issues; and analyze the role of evidence in making an historical argument.</li> </ul> |

|   |  |
|---|--|
| <p style="text-align: center;"><b>Basic</b></p>             | <p>Students scoring at this level generally exhibit the ability to do the following:</p> <ul style="list-style-type: none"> <li>• Geography: interpret geographical data; describe the basic physical structure of the planet; and explain the spatial relationships between humans and their environment.</li> <li>• Civics: explain structure and purposes of government; describe the foundations of the American political system; explain international relationships; and discuss the roles of citizens.</li> <li>• Economics: discuss fundamental economic concepts; explain decisions made by consumers, businesses, and government; and explain U.S. fiscal policy.</li> <li>• History: describe continuity and change; describe the significance of people, places, events, ideas, and documents; examine relevant experiences from the past to contemporary issues; and explain the role of evidence in making an historical argument.</li> </ul>   |
| <p style="text-align: center;"><b>Approaching Basic</b></p> | <p>Students scoring at this level generally exhibit the ability to do the following:</p> <ul style="list-style-type: none"> <li>• Geography: identify geographical data; recognize the physical structure of the planet; and state the spatial relationships between humans and their environment.</li> <li>• Civics: identify the structure and purposes of government; recognize the foundations of the American political system; identify international relationships; and identify the roles of citizens.</li> <li>• Economics: identify fundamental economic concepts; identify decisions made by consumers, businesses, and government; and identify U.S. fiscal and monetary policies.</li> <li>• History: recognize continuity and change; recognize the significance of people, places, events, ideas, and documents; identify relevant experiences from the past to describe contemporary issues; and recognize the role of evidence in making an historical argument.</li> </ul>   |
| <p style="text-align: center;"><b>Unsatisfactory</b></p>    | <p>Students scoring at this level have not demonstrated the fundamental knowledge and skills needed for the next level of schooling. Students at this level generally have not exhibited the ability to</p> <ul style="list-style-type: none"> <li>• Geography: identify geographical data; recognize the physical structure of the planet; and state the spatial relationships between humans and their environment.</li> <li>• Civics: identify the structure and purposes of government; recognize the foundations of the American political system; identify international relationships; and identify the roles of citizens.</li> <li>• Economics: identify fundamental economic concepts; identify decisions made by consumers, businesses, and government; and identify U.S. fiscal and monetary policies.</li> <li>• History: recognize continuity and change; recognize the significance of people, places, events, ideas, and documents; identify relevant experiences from the past to describe contemporary issues; or recognize the role of evidence in making an historical argument.</li> </ul> |

## **APPENDICES**





# APPENDIX A

## Glossary

**Accommodations** changes made in the administration of an assessment to meet the needs of students with special needs

**Accountability** the systematic use of assessment data and other information to assure those inside and outside of the educational system that schools are moving in the desired direction

**Achievement levels** expectations for levels of performance. Louisiana's achievement levels are *Advanced, Mastery, Basic, Approaching Basic, and Unsatisfactory*.

**Achievement Level Descriptors** content- and grade-specific descriptions of student performance at each achievement level

**Alignment** the process of linking curriculum, assessment, and instruction to standards, benchmarks, and Grade-Level Expectations (GLEs)

**Analytic scoring** the evaluation of student work using multiple dimensions that are each scored separately and then combined for the overall score

**Assessment** a systematic method of obtaining evidence from tests and other sources, used to draw inferences about characteristics of people or programs for a specific purpose

**Assessment system** a series of assessments, for example, GEE, LEAP and iLEAP, of student performance at different grade levels, which are based on publicly adopted standards of what is to be taught coupled with expectations of student mastery

**Baseline data** the initial measures of performance against which future measures will be compared

**Benchmark** a broad statement of process and/or content that is used as a reference to develop curriculum and to assess student progress

**Bias** a statistically identifiable difference in test responses from specific groups. A test item is biased when it systematically measures differently for gender, ethnicities, or other identified groups.

**Constructed-response item** a test item with directions that requires students to generate an answer that is stated in writing or explained by a diagram, a chart, or some other evidence of their thinking

**Content standards** a description of what a student should know and be able to do through subject matter, knowledge, and proficiencies gained as a result of his or her education

**Criterion-referenced test (CRT)** an assessment that compares a student's performance to a specific learning objective rather than to the performance of other students

**Cut score** the critical point for separating scores into achievement level groups based on an established set of criteria

**Dimensions of writing** the components of the scoring rubric used to evaluate student responses to a writing prompt

**Field test** an assessment administered to judge the quality of test items. Sets of items are administered to a representative sample of the population to be tested. Then student responses are examined statistically to evaluate the items to determine whether they will be used on an actual test.

**Formative assessment** the ongoing evaluation of student performance for the purpose of assessing student learning and planning instruction

**Grade cluster** the grade spans covered in the LEAP and GEE assessments. The grade clusters for Louisiana assessment programs are kindergarten through 4, 5 through 8, and 9 through 12.

**Grade-Level Expectation (GLE)** a statement that defines what a student should know and be able to do at the end of a given grade level. GLEs add further definition to standards and benchmarks.

**Individualized Accommodation Plan (IAP)** a document developed at the school level that describes the accommodations made for a student who qualifies under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, also referred to as a Section 504 plan

**Individualized Education Plan (IEP)** a document developed by the school level committee that prescribes the educational program designed to meet the specific needs of a student who meets federal special education guidelines

**Inter-rater reliability** the degree to which different scorers agree on the score to be assigned to a test response

**Item** an individual question or exercise in an assessment or evaluation instrument

**Key Concepts** descriptions of important content emphasized in the assessment

**LEP** abbreviation for limited English proficiency. The No Child Left Behind Act (NCLB) identifies these students as those whose difficulties with the English language may be sufficient to deny the individual the ability to meet a state’s proficient level of achievement on state assessments.

**Multiple-choice item** a test item that consists of an interrogatory stem with answer choices. Students are required to select the correct answer from several choices. This kind of item is also referred to as a selected-response item.

**NCLB** the federal Elementary and Secondary Education Act of 2001, known as No Child Left Behind

**Raw score** a person’s observed score on a test, that is, the number correct

**Reliability** the extent to which an assessment yields consistent results

**Rubric** a scoring guide for open-ended questions or performance tasks. A scoring rubric contains a description of the requirements for varying levels of success in response to the task.

**Sample test items** examples of the kinds of test items that appear on a test such as LEAP and GEE

**Scaled score** derived scores to which raw scores are converted by numerical transformation, for example, conversion of raw scores to percentile ranks or scaled scores

**Standard** a broad statement of expectations for student learning

**Standard setting** the process for determining the cut point for each achievement level

**Standardized tests** tests that are administered and scored in a uniform manner from student to student and from place to place. Standardization helps make it possible to compare scores across situations.

**Standards-based tests** a criterion-referenced test that consists of items aligned with a pre-established set of content standards, for example, Louisiana’s content standards and benchmarks

**Stimulus material** the part of a test item that provides information needed to complete the item, for example, illustrations, maps, charts, and graphs

**Strand** categories within particular content areas. Because strands are interrelated, they should be integrated, rather than taught in isolation. For this reason, a test item may assess more than one strand.

**Summative assessment** a culminating evaluation of a student’s performance designed to give information on the student’s level of achievement

**Test blueprint** a document, usually in the form of a chart, representing the distribution of items for each standard or strand for a content area assessment

**Test security** procedures followed to safeguard high-stakes tests so that all students have equal exposure to the test materials and equal opportunities for success. If test security is violated, then some students can be placed at an unfair advantage or disadvantage. When this happens, test validity is violated.

**Test specifications** detailed information about an assessment, for example, test blueprint, test design, item types, test description, test content

**Writing prompt** the topic and explanation provided to students on the English Language Arts test that elicits a response in a given mode: descriptive, narrative, expository, or persuasive

**Validity** the extent to which an assessment actually measures the content that it is intended to measure

## APPENDIX B

### Testing Special Populations

#### Special Education Students and Students with One or More Disabilities According to Section 504

All special education students are to be tested on LEAP and GEE, except those whose IEPs indicate otherwise. All students with one or more disabilities according to Section 504 are to be tested.

A summary of test accommodations that may be used for special education students and for students with disabilities according to Section 504 is given below. All accommodations also must be documented on the IEP or IAP and Verification of Section 504 form for the student to receive them. Full details of allowable accommodations and administration procedures are available in the LEAP and GEE *Test Administration Manual* and in *Bulletin 118*.

- **Braille:** Braille test booklets that include all the items in the regular-print edition of the LEAP and GEE are available. The test administrator must transfer all braille answers to a scorable answer document.
- **Large Print:** The large-print edition is essentially an enlarged version of the regular-print edition of the test. All test items in the regular-print edition of the answer document are included in the large-print test booklet. Students who use the large-print edition mark their answers on the large-print test booklet, which must be transferred by the test administrator to a scorable answer document.
- **Answers Recorded:** If a student is unable to write due to his or her disability, the test administrator must record the student's exact answers on the scorable answer document.
- **Assistive Technology:** Assistive technology, for example, a computer, tape recorder, calculator, abacus, grip for a pencil, visual magnification device, communication device, mask or marker to maintain place, speech synthesizer, or electronic reader, may be provided.
- **Extended Time:** Every student must be given sufficient time to respond to every test item. Time may be adjusted for certain students, such as those who have short attention spans or who may be unable to concentrate for long periods of time on a given task.
- **Communication Assistance:** If warranted by the student's reading level as documented on the IEP or Section 504 Individualized Accommodation Plan (IAP) and Verification of Section 504 form, communication assistance in signing or cueing modality should be provided for **portions** of the test—**with the exception of the Reading and Responding session of the English Language Arts test.**

- **Transferred Answers:** If accommodations provide for a student to record answers in the test booklet or use braille, large-print, or technological assistive devices, the student's responses must be transferred onto a scorable answer document exactly as the student wrote them.
- **Individual/Small Group Administration:** Tests may be administered to a small group (maximum, eight students) or to an individual requiring more attention than can be provided in a larger classroom. If accommodations affect the standard administration of the test (for example, *Tests Read Aloud*), individual or small group administration **must** be used.
- **Tests Read Aloud:** Students may have **portions** of the tests read to them, **with the exception of the Reading and Responding session of the English Language Arts test.** Although the passages, questions, or multiple-choice responses on this part of the test cannot be read aloud, the **directions** may be read aloud.
- **Other:** Any necessary accommodations may be used, but they must be determined by the IEP team or Section 504 Committee and documented on the student's IEP or IAP and Verification of Section 504 form and must not breach test security or invalidate the meaning of the test score or the purpose of the test. Examples of other accommodations include highlighting the task or verbs in the test directions or assisting the student in tracking the test items.

## Information for Deaf and Hard of Hearing Students

The intent of the accommodations for students who are deaf or hard of hearing is to present the instructions in a manner that will allow them to demonstrate skills that have been acquired. The signing modality routinely used in the students' regular classrooms should be considered when administering these tests.

### Physical Setting

The physical setting should include verification that students' auditory listening devices are in good repair and are in use during the testing period. Students who depend primarily on lip reading should be seated no more than ten feet from the test administrator.

### Use of Signs and Fingerspelling

- Students may have **portions** of the tests signed to them, **with the exception of the Reading and Responding session of the English Language Arts test**. Although the passages, questions, or multiple-choice responses on this session of the test cannot be signed, the **directions** may be signed. Signed administration of tests that measure reading ability makes little sense, since any score so obtained would offer no information about a student's ability and thus be invalid.
- Test items should be signed exactly as written but **not** when the sign would reveal the answer to the question. For example, signing the words in the Vocabulary portion of the English Language Arts test may indicate the correct answer. These words are to be fingerspelled.
- Fingerspelling must **not** be used to administer items that require students to demonstrate the skill of spelling.

## Information For Limited English Proficient Students

All LEP students are to be tested. LEP students qualify for accommodations **used in their classroom instruction and assessment.**

- **Extended Time:** Every student should be given sufficient time to respond to every test item. Time may be adjusted for students who must process from one language to another.
- **Individual/Small Group Administration:** Tests may be administered to a small group (maximum, eight students) or to an individual requiring more attention than can be provided in a larger classroom. If other selected accommodations affect the standard administration of the test (for example, *Tests Read Aloud*), individual or small group administration **must** be used.
- **Provision of English/Native Language Word-to-Word Dictionary (No Definitions):** LEP students may use either a standard or electronic English/native language word-to-word dictionary (no definitions) on all sessions of the tests. Students may use an English/native language word-to-word dictionary **with definitions** on **only** the English Language Arts **Writing test**.
- **Tests Read Aloud:** Students may have **portions** of the tests read to them, **with the exception of the Reading and Responding session of the English Language Arts test**. Although the passages, questions, or multiple-choice items on this session of the test cannot be read aloud, the **directions** may be read aloud.
- **Test Administered by ESL Teacher or by Individual Providing Language Services:** Familiarity with the speech patterns of the ESL teacher or the individual providing language services may help the student better understand the test directions or the portions of the test that are read aloud if the student receives the accommodation *Tests Read Aloud*.



## **Implementing Testing Accommodations— A Planning Checklist for the General Education Teacher**

1. Do you know which accommodations are documented on the students' IEPs or IAPs?
  2. Does the student use the accommodations in classroom instruction and assessment?
  3. Have special test materials been ordered (large print, braille, transparencies)?
  4. Have students eligible for the accommodation *Tests Read Aloud* been assigned individual or small-group administration to prevent interfering with the testing of other students?
  5. Are any other students eligible for small-group or individual test administration?
  6. Where will small-group or individual testing take place, and who is the person trained to supervise the student(s) there?
  7. If needed, have trained readers, scribes, and sign-language interpreters been assigned to individual students?
  8. Is necessary special equipment available, and has it been checked for correct operation (for example, word processor, computer, tape recorder, calculator)?
  9. During testing, are you providing all eligible students with the accommodations documented on their IEPs or IAPs and used in classroom instruction and assessment? After testing, did you transfer student responses to scorable answer folders for students using braille, large print, and assistive devices?
  10. Did you record the specific accommodations actually used in testing on the answer folder?
  11. Have students who took makeup tests received the needed accommodations?
- (Verify numbers 1, 3, 4, 5, 6, 7, 8, and 11 with the School Test Coordinator.)

## Comments and Cautions

Whenever possible, attend IEP meetings for students you teach. Information from the general education teacher is necessary to help the IEP team determine which instructional and classroom assessment accommodations enable a student to demonstrate best what he or she knows and can do.

Individual or small-group administration **must** be used if the accommodations will interfere with the testing of other students (for example, *Tests Read Aloud*). Immediately following testing, all provided accommodations must be marked on scorable answer documents.

## Ethical Assessment Practices

Ethical assessment practices relate to actions between test administrators and students taking the test. Unethical practices include coaching students during testing, editing student work, giving clues, paraphrasing, offering additional information, or any other practice that would give students unapproved assistance or provide advantage. Accommodations must never compromise the purpose of the test. For example, a test of reading comprehension cannot be read aloud because that destroys the purpose of the test—to measure reading ability. However, part or all of the Science and other content-area tests may be read aloud to students who are to receive the accommodation *Tests Read Aloud*.

Finally, accommodations must not compromise test security or confidentiality. All policies and procedures regarding test security and processing of test materials must be followed. (See your district and the BESE Test Security Policy as well as *Bulletin 118*.)

# APPENDIX C

## Scoring Information

### Scoring Process for LEAP and GEE

#### *Preliminary Activities to Reader Training*

LEAP and GEE include both multiple-choice items and constructed-response items. Constructed-response items appear on the assessments in English language arts (ELA), mathematics, science and social studies. These **constructed-response items** require students to apply their knowledge and to solve problems through written communication. Trained readers score hand-written student responses; multiple-choice items are scanned by a machine. The information that follows describes the hand-scoring process used by the Department and the scoring contractor for LEAP and GEE.

For each constructed-response item, with the exception of Writing, a scoring rubric (a guide for scoring the response) that is specific to the test item is developed in concert with the item. These **item-specific rubrics** are based on Louisiana’s general rubrics that are included in the content-specific Assessment Guides. The LEAP and GEE items and their rubrics are developed by a test contractor and reviewed by committees of Louisiana educators. For the Writing test, the Louisiana writing rubric is used to score students’ compositions.

Once test items have been approved via several rounds of committee review, they are field-tested on students statewide. The students’ written responses from the field test are used in an activity called **rangefinding**, that is, selecting student responses that represent the range of scores for each constructed-response item. The rangefinding process is briefly described below.

Rangefinding is conducted annually, prior to scoring the field tests and the operational tests. The testing contractor and LDE convene grade- and content-specific committees composed of Louisiana teachers. In rangefinding, each item that appears on the assessment is addressed by the rangefinding committee. The committee reviews each item and its rubric and an array of student responses that represent the range of possible score points. Each participant reads and independently scores the student responses. The committee then discusses their scores to reach common agreement on the score that each response should receive based on the scoring rubric. Only the responses with high levels of agreement are selected for reader training. As a result of this activity, the scoring contractor collects student responses that represent the range of score points for each test item and a rationale for each score point. These student responses, referred to as **anchor papers**, are used to develop scoring guides that include annotations explaining the rationale for the score; the scoring guides are used by the testing contractor to train the readers who score the LEAP and GEE assessments.

### ***Reader Training***

The testing contractor who scores LEAP and GEE hires and trains readers for the Louisiana project. Readers who read for Louisiana’s testing program must possess the following: (1) Bachelor’s degree, (2) strong content-specific backgrounds, (3) demonstrated ability to write, and; (4) demonstrated proficiency in content to be scored.

Once the readers have been selected based on the above criteria and personal interviews, conducted by the Scoring Center Director, the training process begins. Team Leaders (TLs) are assigned to each content by grade. The Scoring Director trains the TLs for approximately three days in the same procedures that TLs will use to train the readers, but at a more comprehensive level due to their responsibility to train the readers. Once the Team Leaders are trained, reader training begins with a presentation and discussion of the scoring guide by the Scoring Director. Next, the readers “practice” by scoring responses in two training sets. The Scoring Director and/or the Team Leaders lead a thorough discussion of each set. Once discussion of each training set has been completed, the readers must demonstrate their ability to apply the scoring criteria by qualifying, that is, scoring with acceptable agreement with the scores that were established in rangefinding with Louisiana educators. If a reader does not qualify on the first qualifying set, he or she must score a second qualifying set. A Reader Training Report is produced for each qualifying set indicating each reader’s performance by exact, adjacent, and nonadjacent agreement. Louisiana’s standard for reader eligibility is 70% to 80% exact agreement, depending on the score point range of the item. At the end of the qualifying process, any reader who does not qualify to score based on Louisiana’s specifications, does not score LEAP and GEE.

As the readers are scoring, they are administered “validity papers” on a regular schedule to ensure that they are consistently scoring with accuracy throughout the project. Validity papers are responses that are inserted into their scoring packets, unknown to the reader. Validity reports are generated from these scored responses; if there is an indication that a reader is drifting from the standard, retraining will occur.

### ***Scoring Procedures***

On the LEAP and GEE mathematics test, items are scored on a 0 to 4 point scale. All math items are scored by two readers. On the writing portion of the English language arts test, students’ compositions are scored using a six-dimensional writing rubric. Those dimensions are: 1) Composing, 2) Style and Audience Awareness, 3) Sentence Formation, 4) Usage, 5) Mechanics, and 6) Spelling. Written compositions are also scored by two readers. Social studies items are scored on a 0- to 4-point scale; science items include a 4 point item as well as items scored on a 0- to 2-point scale. Science and social studies items are scored by one reader.

If two readers have nonadjacent scores on a student’s response, the paper is sent to a Team Leader or the Scoring Director for a third (resolution) reading. The scoring contractor sends quality control reports daily to the Department. LDE staff either approves or questions these reports immediately.



## **Appendix D**

### **Foundation Skills**

Five foundation skills are embedded within the *Louisiana Content Standards* across all grades and all content areas. These skills represent global outcomes for students. Each foundation skill and its description follow.

#### **Communication:**

A process by which information is exchanged and a concept of “meaning” is created and shared between individuals through a common system of symbols, signs, or behavior. Students should be able to communicate clearly, fluently, strategically, technologically, critically, and creatively in society and in a variety of workplaces. This process can best be accomplished through use of the following skills: reading, writing, speaking, listening, viewing, and visually representing.

#### **Problem Solving:**

The identification of an obstacle or challenge and the application of knowledge and thinking processes, which include reasoning, decision making, and inquiry, in order to reach a solution using multiple pathways, even when no routine path is apparent.

#### **Resource Access and Utilization:**

The process of identifying, locating, selecting, and using resource tools to help in analyzing, synthesizing, and communicating information. The identification and employment of appropriate tools, techniques, and technologies are essential to all learning processes. These resource tools include pen, pencil, and paper; audio/visual materials, word processors, computers, interactive devices, telecommunication, and other emerging technologies.

#### **Linking and Generating Knowledge:**

The effective use of cognitive processes to generate and link knowledge across the disciplines and in a variety of contexts. In order to engage in the principles of continual improvement, students must be able to transfer and elaborate on these processes. “Transfer” refers to the ability to apply a strategy or content knowledge effectively in a setting or context other than that in which it was originally learned. “Elaboration” refers to monitoring, adjusting, and expanding strategies into other contexts.

#### **Citizenship:**

The application of the understanding of the ideals, rights, and responsibilities of active participation in a democratic republic that includes working respectfully and productively together for the benefit of the individual and the community; being accountable for one’s choices and actions and understanding their impact on oneself and others; knowing one’s civil, constitutional, and statutory right; and mentoring others to be productive citizens and lifelong learners.