LEAP CONNECT

Directions for Practice Test Administration

Science

High School

DEPARTMENT of EDUCATION

Louisiana Believes

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Purpose

The *Directions for Practice Test Administration* (DPTA) provides the Test Administrator (TA) of the LEAP Connect practice test with specific instructions for administration of this particular practice test. Each DPTA provides the exact wording of the items to be used by the TA, the materials needed in preparation of the practice test, and guidelines for how to present the items to the student.

Materials

Materials needed for the LEAP Connect Test Administration:

1. *Directions for Practice Test Administration* (DPTA)
2. *Procedures for Assessing Students Who Are Visually Impaired, Deaf, or Deaf-Blind*
3. *High School Science Practice Test Reference Materials*

Directions

1. **Know and follow all directions for test administration** provided in the *Science High School DPTA* and *Procedures for Assessing Students Who Are Visually Impaired, Deaf, or Deaf-Blind*.
2. Be familiar with and utilize the Text to Speech (TTS) as appropriate. The DRC INSIGHT Assessment System includes TTS that will read aloud the text of directions, items, and answer options and will also read aloud standardized descriptive statements for tables, charts, graphs, and timelines.
    a. This text is read to all students using a consistent rate of reading and tone of voice. If a student wishes to have any or all of the text repeated, click on the Starting Points button (the circle between the Stop and Play/Pause buttons). Then use the mouse to select the starting point (blue circle) just before the text that needs to be repeated.
    b. To change the volume or speed of the TTS or turn off the follow-along, select the Options button at the bottom of the screen, then select Audio Settings and adjust as desired.
    c. If the TTS will not be used, the TA can turn off the volume and the follow-along using the Audio Settings. The TA must read the directions, items, answer option text, and graphic descriptions **exactly as written** using a consistent rate of reading and tone of voice.
3. Be familiar with and utilize the Alternative Text as appropriate. Alternative Text is bracketed and written in italics. Alternative Text is included for students who are blind or have a visual impairment and require graphics to be described. This Alternative Text includes descriptive statements for tables, charts, graphs, and any graphics necessary for appropriate interaction with the items to be described.

Guidance on Printed Materials

Science Practice Test Reference Materials include required graphics and the answer options for each practice test item. The DPTA will prompt the TA when the required graphics are to be presented to the student. The answer options are included so they can be copied and used as needed (e.g., eye gaze boards).

Selected-Response Items

Selected-response items are presented to students in the following order:

- Item stimulus (which may include an example, picture, graphic, equation, formula, or other illustration)
- Item question
- Answer options (which are indicated by radio buttons and presented vertically)

Students independently select a response from the options. Being mindful that students will respond in a variety of ways (e.g., with words, gestures, eye gaze, communication devices, assistive technology, etc.), TAs can enter responses on behalf of the student. Ensure that Augmentative and Alternative Communication (AAC) and Assistive Technology (AT) used routinely for instruction are available to support the student in communicating responses.

Science Selected-Response Item Example

The LEAP Connect practice test items reflect grade-level content presented at varying degrees of complexity. The following item example illustrates a selected-response item and components which support the ways that students with a wide range of learner characteristics are presented with assessment tasks. The following item example does not reflect ALL content that is assessed in each grade-level content area and does not represent every degree of complexity.

Science Item Example

TTS or TA reads item directions.

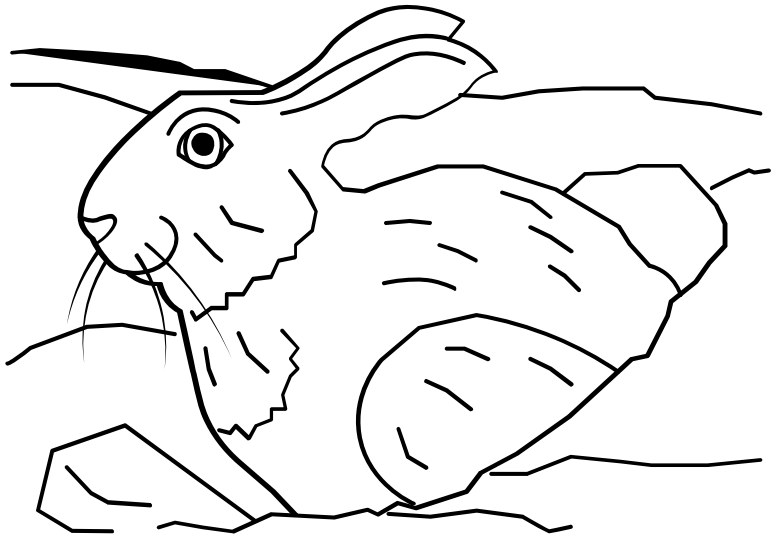
This item is about how animals survive in their environment.

For example, if brown rabbits and white rabbits are living in a snowy environment, the white rabbit is more likely to survive. The white rabbit is less noticeable against the white snow.

TTS or TA reads item text.

Point to the picture.

Directions for TA to point to the picture.



What characteristic helps the white rabbit survive? ← TTS or TA reads question text.

Point to each option as the TTS or TA reads each option.

Directions for TA to point to aspects of item on the computer screen or in the RM.

A. being very quiet

B. having a fluffy tail

TTS or TA reads answer choices.

C. blending in with its environment

Procedures for Constructed-Response (CR) Items

The CR items require students to construct an answer rather than select an answer from multiple-choice options. The TA must enter the student CR score into DRC INSIGHT. The CR item is presented to the student in a standardized, scripted sequence of steps; culminating in a TAs scoring of the student performance according to the Science Scoring Rubrics. The Science Scoring Rubrics are included with the appropriate CR items in the DPTA and provide scoring standards that must be used to evaluate student responses.

Administering the CR Item

- Become familiar with the CR items and setup requirements.
- Rehearse administering each item before administering it to a student by reading the script for each item.
- Become familiar with the scoring rubric and directions for scoring the student response.
- Prepare the test setting:
    - Assemble any needed materials (pencils, markers, etc.).
    - Provide materials required for student accommodations.

- Position the student so they will have the optimal vantage to view and manipulate materials in order to facilitate sustained attention.
- Eliminate noise and visual distractions that may divert the student's attention.
- Collect all printed materials that the student will need.
- Enlarge any stimulus materials, using the enlarge feature on a printer or copier, if needed.
- Locate the appropriate stimulus material, which is identified by name on the front of each for ease of handling before, during, and after test administration. Cut the stimulus materials apart (if applicable).

Scoring the Science CR Items

In order to have consistent and reliable CR scoring, TAs must understand and apply the Science Scoring Rubrics in the same way to every student's response.

Independently score a student's performance on the CR items. Being mindful that students will respond in a variety of ways (e.g., with words, gestures, eye gaze, communication devices, assistive technology, etc.), careful and meticulous observation will enable the TA to accurately assign the appropriate score point based on the Science Scoring Rubrics in the DTA.

Procedures for Entering the Student Score for CR Items

Record the student score in the DRC INSIGHT Assessment System. Answer options will be: "The student provided the correct answer." or "The student did not provide the correct answer." After recording the student score, continue to the next item.

Session 1

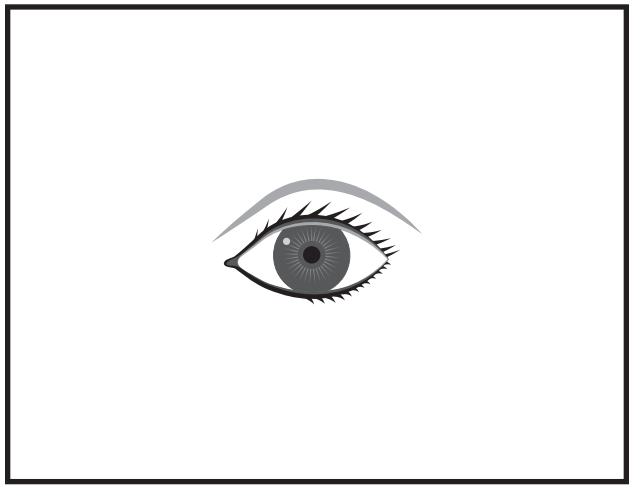
Item 1

This item is about parts of the human body.

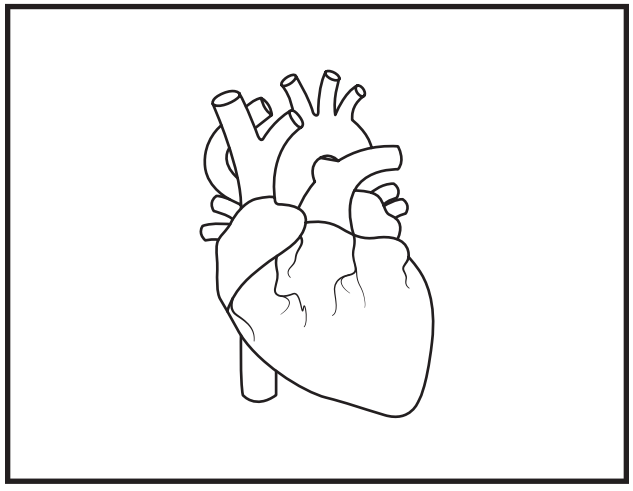
A pump is a device that moves fluids. A part of the body also acts like a pump.

Which body part pumps blood?

Point to each option as the TTS or TA reads each option.

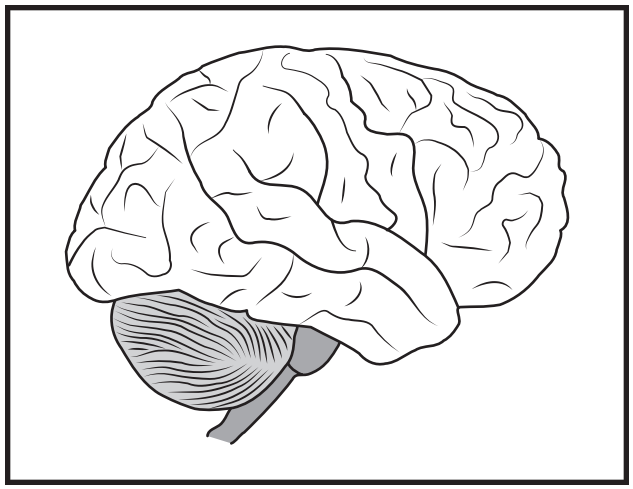


A. eye



B. heart

Item 1, continued



C. brain

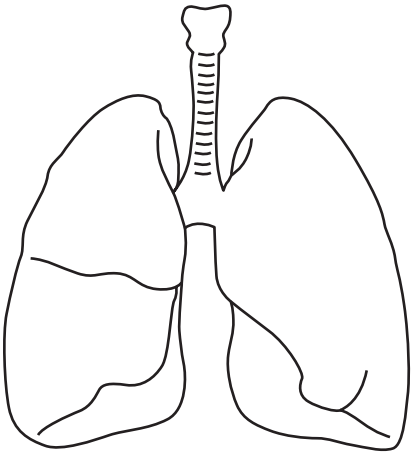
Item 2

This item is about the human body.

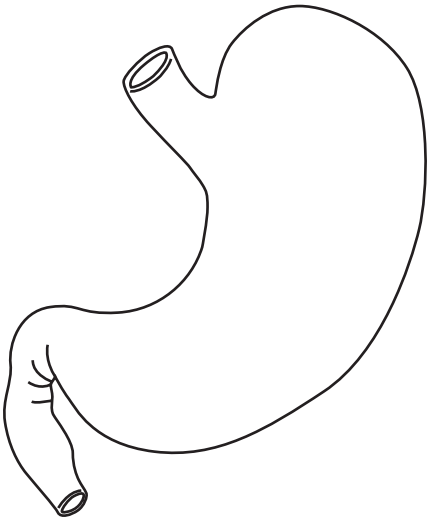
Humans are made up of many different organs. Organs have different functions.

Which organ is used for breathing?

Point to each option as the TTS or TA reads each option.



A. lungs



B. stomach

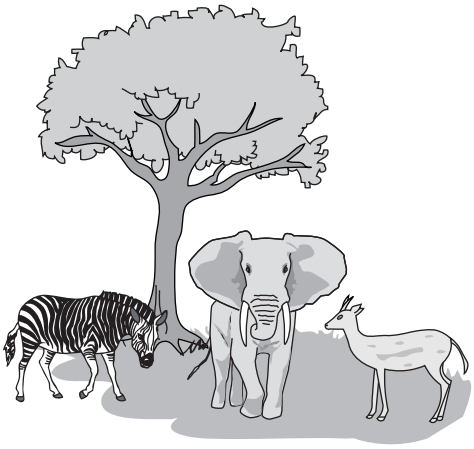
Item 3

This item is about animal behavior.

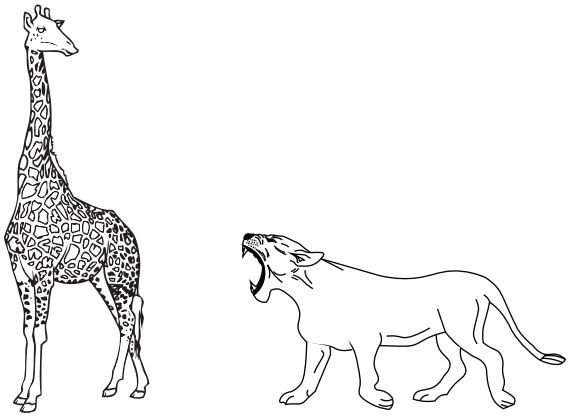
Most behaviors help an animal survive. A desert ecosystem can be very hot. Animals that live there find ways to keep from getting too hot in the daytime.

Which behavior helps an animal keep from getting too hot?

Point to each option as the TTS or TA reads each option.



A. finding shade



B. hunting prey

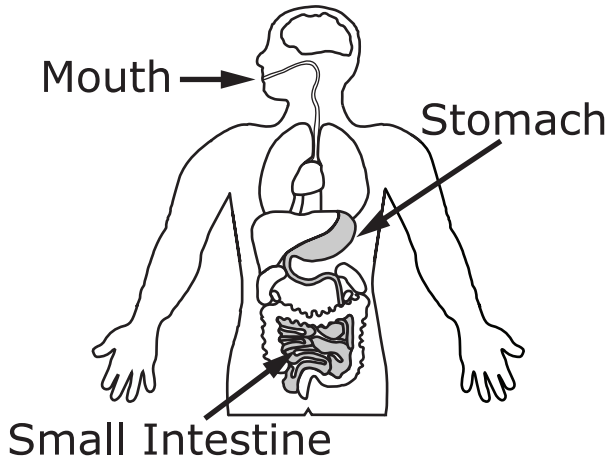
Item 4

This item is about the digestive system.

The digestive system is made up of interacting parts and organs. The three phases of food digestion occur in the mouth, the stomach, and the small intestine.

Point to the graphic as the TTS or TA reads the graphic description.

[Graphic description: "This is a picture of the human digestive system. The mouth, stomach, and small intestine are labeled."]



The second phase occurs when food enters the stomach.

How does the mouth help with food digestion?

Point to each option as the TTS or TA reads each option.

A. The smell of food is part of the process.

B. The taste of the food increases.

C. Food is broken down into pieces by chewing.

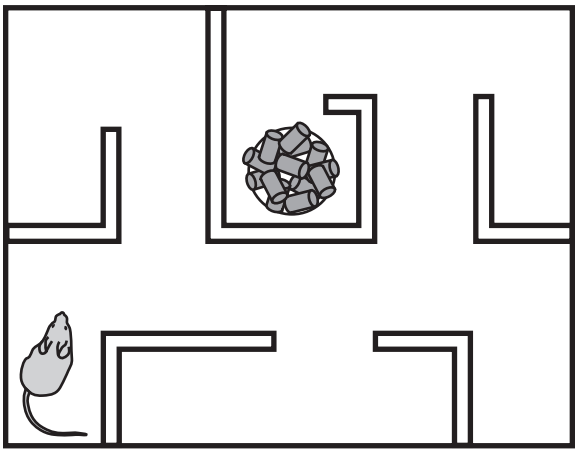
Item 5

This item is about designing an experiment.

Mark is designing an experiment to investigate how mice learn. Mark has created a maze for a mouse to solve.

Point to the graphic as the TTS or TA reads the graphic description.

[Graphic description: "This is a picture of a mouse inside a maze. The mouse is at the beginning of the maze. A dish of food is in the center of the maze."]



What should Mark do to determine if the mouse is learning the maze?

Point to each option as the TTS or TA reads each option.

A. Place the mouse in the maze in the dark.

B. Measure the time it takes several different mice to solve the same maze.

C. Measure the time it takes the same mouse to solve the maze on several attempts.

Item 6

This item is about exercise and heart rate.

A student wanted to learn how heart rate changes with exercise. The student measured his heart rate before exercising and after exercising. Here are the results.

Point to the data table as the TTS or TA reads the graphic description.

[Graphic description: "This is a data table showing the results recorded by the student. Before exercising, the student had a heart rate of seventy beats per minute. After exercising, the student had a heart rate of a hundred beats per minute."]

Heart Rate (beats per minute)	
Before Exercise	After Exercise
70	100

How does the student's heart rate change after exercising?

Point to each option as the TTS or TA reads each option.

A. The heart rate **decreases**.

B. The heart rate **increases**.

Item 7

This item is about changes that occur in ecosystems.

Ecosystems are always changing. Some moderate changes are regular events.

Because seasonal floods are regular events, the living organisms of floodplains have adapted to them.

Some changes are extreme and unexpected.

A volcano erupted in the island country of Montserrat in 1995. Its population shrank from 12,000 to 1,200 people because the living conditions became too harsh to stay on the island. Over half the population who left the island have not returned.

Which is evidence of how extreme physical changes can affect the stability of an ecosystem much more than modest physical changes?

Point to each option as the TTS or TA reads each option.

A. Ecosystems are always changing.

B. Living organisms have adapted to seasonal floods.

C. Much of Montserrat's population has never returned.

Provide student with Graph 1, "Lynx and Hare Population Change", from the High School Science Practice Test Reference Materials.

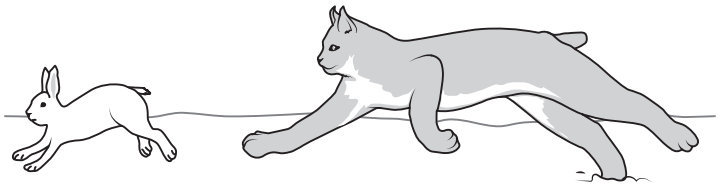
Item 8

This item is about animal populations.

The snowshoe hare is the primary food of the lynx.

Point to the picture as the TTS or TA reads the graphic description.

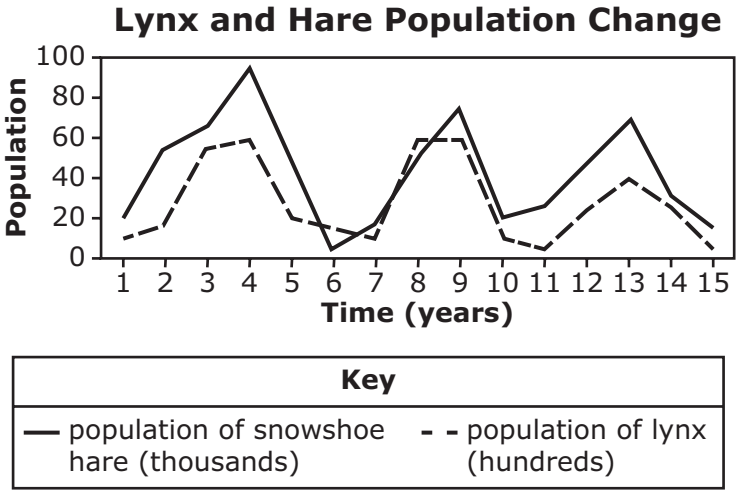
[Graphic description: "This is a picture of a snowshoe hare being chased by a lynx."]



The snowshoe hare population can rapidly rise and fall on a regular cycle. Researchers studied a local population of hare and lynx.

Point to the graph as the TTS or TA reads the graphic description.

[Graphic description: "This is a line graph titled, 'Lynx and Hare Population Change.' The x-axis starts at zero and has fifteen equally spaced marks increasing by ones moving to the right. It is labeled Time in years. The y-axis starts at zero and has five equally spaced marks increasing by twenties moving upward. It is labeled Population. The key shows the population of snowshoe hare in thousands as a solid line and the population of lynx in hundreds as a dotted line."]



Item 8, continued

According to the graph, when the snowshoe hares' population grows too large for its habitat to provide enough food, the population starts to decrease. As the hare population decreases, the lynx population also decreases. When the hares' food source recovers, the hare and lynx populations start to increase again. The lynx and hare cycle repeats.

What does this pattern show about the population cycles of snowshoe hares and lynx?

Point to each option as the TTS or TA reads each option.

A. The populations cycle at different times.

B. The population cycles are closely linked.

C. The population cycles are not related.

Item 9

This item is about protecting natural resources.

Humans use many of Earth's natural resources every day. Water is a vital natural resource for all life on Earth. Humans use water to produce food, raise animals and fish, and wash clothes and dishes.

Which of these is a way for humans to protect and conserve water?

Point to each option as the TTS or TA reads each option.

A. plant native flowers that require less watering

B. use energy-efficient cars

C. take long showers

Provide student with Chart 1 of a parent generation and their offspring from the High School Science Practice Test Reference Materials.

Item 10

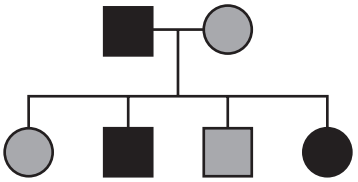
This is the first item a four-part item. Student may not return to this item after responding to this item.

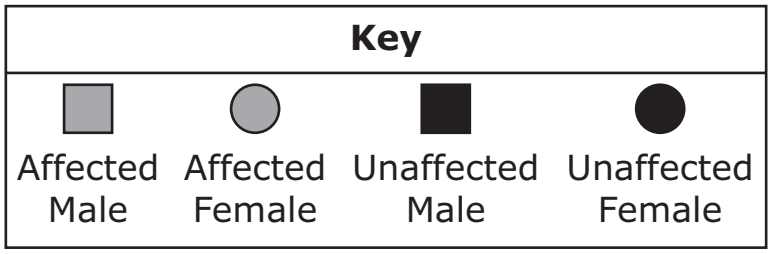
This item is about traits.

Genetic information can be used to develop a chart that shows phenotypes. A phenotype describes the traits passed from generation to generation.

Point to the chart as the TTS or TA reads the graphic description.

[Graphic description: "This chart shows a parent generation and their offspring. The key shows males as squares and females as circles. The key shows affected individuals as gray. The key shows unaffected individuals as black. The chart shows one parent is affected. Two of four of the offspring have the same affected characteristic."]





Which is an affected male?

Point to each option as the TTS or TA reads each option.

[For students with visual impairment, read "A. This picture shows a gray circle."]

A. 

Item 10, continued

[For students with visual impairment, read "B. This picture shows a gray square."]

B. 

[For students with visual impairment, read "C. This picture shows a black square."]

C. 

This is the first item of a four-part item. Student may not return to this item after responding to this item.

Provide student with Punnett Square 1 from the High School Science Practice Test Reference Materials.

Item 11

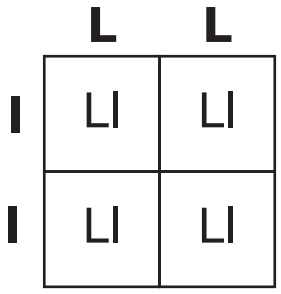
This is the second item of a four-part item. Student may not return to this item after responding to this item.

This item is about reading a Punnett square.

A Punnett square shows the likelihood of creating offspring with certain alleles.

Point to the Punnett square as the TTS or TA reads the graphic description.

[Graphic description: "This is a Punnett square. Each box shows the alleles the offspring may inherit. A dominant gene for a curly leaf is represented by the capital 'L'. The recessive gene for a flat leaf is represented by a small letter 'l'."



Point to the capital 'L' and capital 'L'.

One parent plant is homozygous dominant for the curly leaf shape ('LL'). Homozygous dominant means it has two copies of the dominant alleles.

Point to the small letter 'l' and small letter 'l'.

The other parent plant is homozygous recessive for the flat leaf shape ('ll'). Homozygous recessive means it has two copies of the recessive allele.

What is true about the offspring plants having the curly leaf shape?

Point to each option as the TTS or TA reads each option.

A. Each offspring has a 0 in 4 chance of having the curly leaf shape.

B. Each offspring has a 2 in 4 chance of having the curly leaf shape.

Item 11, continued

C. Each offspring has a 4 in 4 chance of having the curly leaf shape.

This is the second item of a four-part item. Student may not return to this item after responding to this item.

Provide student with Incomplete Punnett Square 1 and Allele Cards from the High School Science Practice Test Reference Materials.

Item 12

This is the third item of a four-part item. Student may not return to this item after responding to this item.

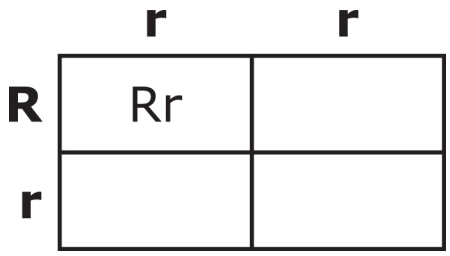
This item is about making a Punnett square.

A Punnett square represents how alleles could be inherited when two organisms reproduce.

Place the incomplete Punnett square onto the work surface in front of the student.

Point to the incomplete Punnett square as the TTS or TA reads the graphic description.

[Graphic description: "For this Punnett square, a dominant gene for purple flowers is shown by the capital letter 'R'. The recessive gene for white flowers is shown by the small letter 'r'."]



Point to the capital letter 'R' to the left of the first row and the small letter 'r' to the left of the second row.

The purple flower is heterozygous for color. Heterozygous means it has two different alleles. The dominant purple color is shown by the capital letter 'R' and the recessive white color by the small letter 'r'.

Point to the small letter 'r' at the top of the first column and the small letter 'r' at the top of the second column.

The white flower is homozygous recessive. Homozygous recessive means it has two copies of the recessive allele. This is shown by two copies of the small letter 'r'.

Item 12, continued

Each offspring represented by a box in the Punnett square inherits letters from its row and column.

Point to the capital letter ‘R’ to the left of the first row, the small letter ‘r’ to the left of the second row and the ‘Rr’ in the top left cell of the Punnett square.

The offspring inherits the dominant purple color allele shown by the capital letter ‘R’ from the purple flower and recessive white color allele shown by the small letter ‘r’ from the white flower.

Place the response cards on the work surface in front of the student in the following order ‘RR,’ ‘Rr,’ ‘Rr,’ ‘rr,’ and ‘rr.’

Point to the cards showing the combinations of alleles.

Use these cards to complete the Punnett square. You will not need all the cards.

Allow time for student to place the response cards in the Punnett square.

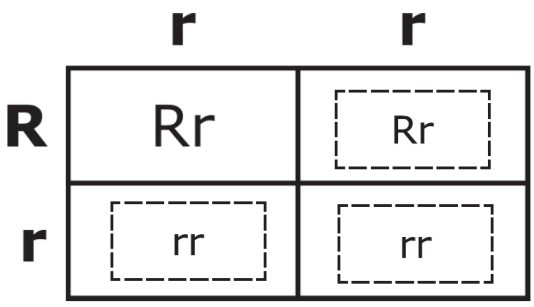
Rubric

Test Administrator: *After student completes work, record on the computer if the student provided the correct answer or the student did not provide the correct answer.*

Score	Description
1	Student correctly shows the top right box inherits 'R' from the purple flower and 'r' from the white flower, to make 'Rr'; the bottom left box inherits an 'r' from both parents, to make 'rr'; and the bottom right box inherits an 'r' from both parents, to make 'rr'.
0	Student does not correctly show the top right box inherits 'R' from the purple flower and 'r' from the white flower, to make 'Rr'; the bottom left box inherits an 'r' from both parents, to make 'rr'; and the bottom right box inherits an 'r' from both parents, to make 'rr'.

Item 12, continued

Sample Response



This is the third item of a four-part item. Student may not return to this item after responding to this item.

Provide student with Punnett Square 3 from the High School Science Practice Test Reference Materials.

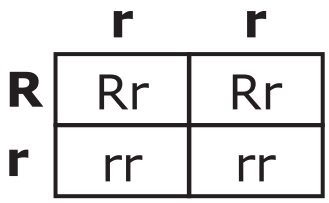
Item 13

This is the fourth item of a four-part item. Student may not return to the previous item.

This item is about reading a Punnett square.

A Punnett square shows the likelihood of creating offspring with certain alleles.

Point to the Punnett square.



Point to the boxes.

Each box shows the alleles the offspring may inherit. The alleles for a purple and a white flower are shown by a capital letter ‘R’ and a small letter ‘r.’

Point to the capital letter ‘R’ and small letter ‘r’ on the left side of the Punnett square.

The purple flower is heterozygous for color. Heterozygous means it has two different alleles.The dominant purple color allele is shown by the capital letter ‘R’ and the recessive white color by small letter ‘r’.

Point to the small letter ‘r’ and small letter ‘r’ at the top of the Punnett square.

The white flower is homozygous recessive for color. Homozygous recessive means it has two copies of the recessive allele. This is shown by two copies of the small letter ‘r’.

What is the likelihood that an offspring will be homozygous dominant shown by two copies of the capital letter ‘R’?

Point to each option as the TTS or TA reads each option.

A. 0 out of 4

Item 13, continued

B. 1 out of 4

C. 2 out of 4

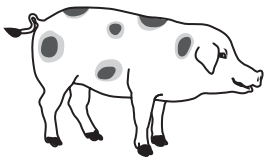
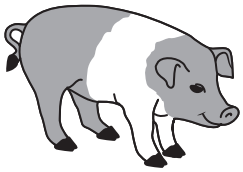
Item 14

This item is about pigs.

Pigs are a type of animal. There are different breeds of pigs.

Point to the chart.

Pig Breeds

Spotted Pig	Hampshire Pig
	

Point to the spotted pig.

This shows a spotted pig breed. The spotted pig breed has white fur with black spots.

Point to the Hampshire pig.

This shows a Hampshire pig breed. The Hampshire pig breed has mostly black fur with a band of white fur around the middle that covers the front legs.

What is true about the pig breeds shown in the chart?

Point to each option as the TTS or TA reads each option.

A. Different breeds have the **same** traits.

B. Different breeds have **different** traits.

Item 15

This item is about plants.

Flowering plants use floral traits of color and odor to attract pollinators. Flowering plants depend on pollinators to reproduce.

Scientists studied the effects of plant-eating caterpillars on traits of a plant's flowers.

Scientists observed the following:

- The flower petals of affected plants were 18% larger than the unaffected plants.
- The flowers of affected plants smelled different from the unaffected plants.
- Butterflies, which are pollinators, landed less frequently on affected plants.

Which is the **best** conclusion of the study?

Point to each option as the TTS or TA reads each option.

A. Caterpillars had no effect on flower traits and pollinator behavior.

B. Caterpillars affected flower traits and pollinator behavior.

C. Caterpillars affected flower traits, but had no effect on pollinator behavior.

You have reached the end of this Session.

You may choose from the following options:

- Review items in this session
- **Pause** this test and **Resume** later
- Complete this session (**End Test**, then **Submit**) and begin Session 2.

Session 2

Item 16

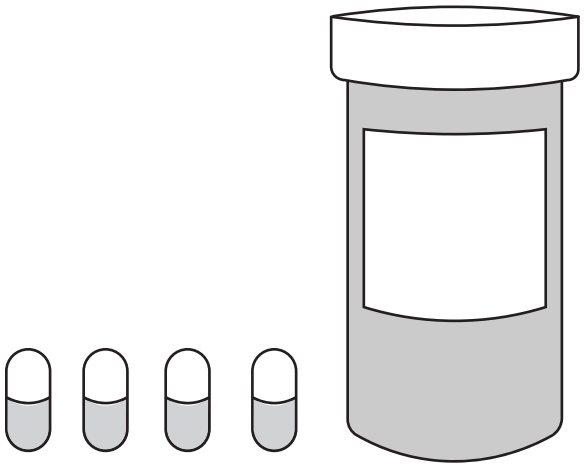
This is the first item of a four-part item. Student may not return to this item after responding to this item.

This item is about human diseases.

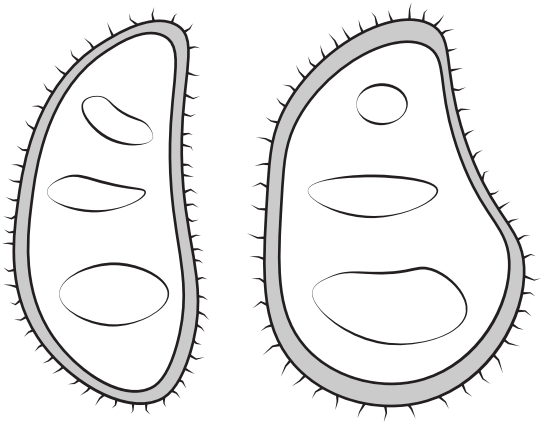
Infectious diseases can be spread from one person to another.

Which is a cause of an infectious disease?

Point to each option as the TTS or TA reads each option.



A. vitamins



B. bacteria

This is the first item of a four-part item. Student may not return to this item after responding to this item.

Item 17

This is the second item of a four-part item. Student may not return to this item after responding to this item.

This item is about human diseases.

Infectious diseases can be spread from one person to another, for example, through touching.

Which is a way to prevent spreading an infectious disease?

Point to each option as the TTS or TA reads each option.

A. washing hands

B. wearing glasses

Item 17, continued

C. cooking food

This is the second item of a four-part item. Student may not return to this item after responding to this item.

Item 18

This is the third item of a four-part item. Student may not return to this item after responding to this item.

This item is about germs.

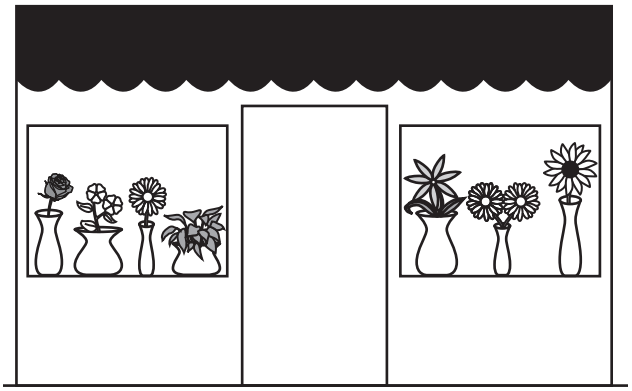
When a sick person sneezes, germs can travel several feet in the air.

People can prevent the spread of germs.

What should people do when they are sick to limit the spread of germs?

Point to each option as the TTS or TA reads each option.

A. stay home



B. go to the store

Item 18, continued

C. visit many friends

This is the third item of a four-part item. Student may not return to this item after responding to this item.

Item 19

This is the fourth item of a four-part item. Student may not return to the previous item.

This item is about infections.

An infection may occur if harmful bacteria invade parts of the body.

What can a person do to prevent an open wound from getting infected?

Point to each option as the TTS or TA reads each option.

A. ignore the open wound while it heals

B. touch the open wound with dirty hands

C. clean the open wound with warm water and soap

Provide student with Incomplete Chart 1 of things people do and cards from the High School Science Practice Test Reference Materials.

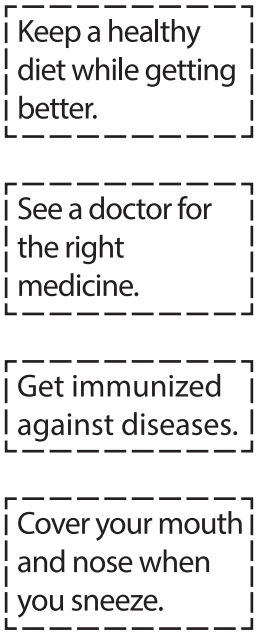
Item 20

This item is about infections.

People interact with the world. This includes possible contact with infectious bacteria and viruses.

These are things people can do to prevent infection, during an infection, and when recovering from an infection.

> *Place the tiles onto the work surface in front of the student in the following order left to right or top to bottom: "Keep a healthy diet while getting better," "See a doctor for the right medicine," "Get immunized against diseases," and "Cover your mouth and nose when you sneeze." Point to each card as the TTS or TA reads the graphic description.*
>
> *[Graphic description: "Here are four cards. These cards are things people can do to prevent infection, during an infection, and when recovering from an infection: keep a healthy diet while getting better, see a doctor for the right medicine, get immunized against diseases, and cover your mouth and nose when you sneeze."]*



Item 20, continued

Place the incomplete chart onto the work surface in front of the student. Point to the chart as the TTS or TA reads the graphic description.

[Graphic description: "This is an incomplete chart. The cards will be used to complete the chart. The left side is labeled 'Things People Do to Prevent Infection.' The center column is labeled 'Things People Do During an Infection.' The right side is labeled 'Things People Do When Recovering from an Infection.'"]

Things People Do to Prevent Infection	Things People Do During an Infection	Things People Do When Recovering from an Infection

Eating healthy meals is especially important to a person who is recovering from an illness.

Point to 'Things People do When Recovering from an Infection' on the chart.

So, the card 'Keep a healthy diet while getting better' needs to be placed under the label 'Things People Do When Recovering from an Infection.'

Move the card 'Keep a healthy diet while getting better' below the label 'Things People do When Recovering from an Infection.'

Place things people do to prevent infection on the left side of the chart. Place things people do during an infection on the center column of the chart.

Allow time for the student to place the cards on the chart.

Item 20, continued

Rubric

Test Administrator: *After student completes work, record on the computer if the student provided the correct answer or the student did not provide the correct answer.*

Score	Description
1	Student correctly sorts 'Get immunized against diseases' and 'Cover your mouth and nose when you sneeze' below 'Things People Do to Prevent Infection' and 'See a doctor for the right medicine' below 'Things People Do During an Infection.'
0	Student does not correctly sort 'Get immunized against diseases' and 'Cover your mouth and nose when you sneeze' below 'Things People Do to Prevent Infection' and 'See a doctor for the right medicine' below 'Things People Do During an Infection.'

Sample Response

Things People Do to Prevent Infection	Things People Do During an Infection	Things People Do When Recovering from an Infection
Get immunized against diseases. Cover your mouth and nose when you sneeze.	See a doctor for the right medicine.	Keep a healthy diet while getting better.

Provide student with Model 1 of the circulatory system from the High School Science Practice Test Reference Materials.

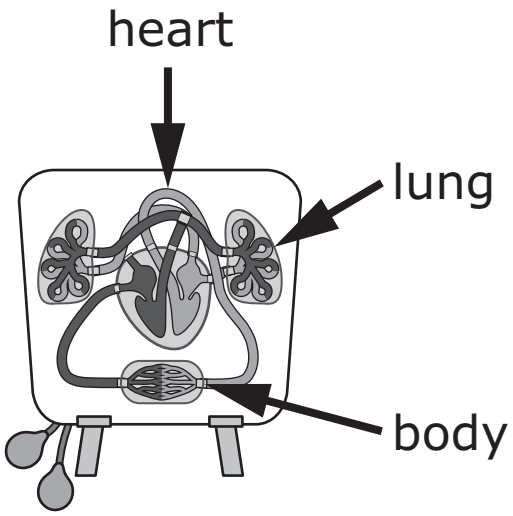
Item 21

This item is about the circulatory system.

The circulatory system carries needed substances to cells and carries waste products away from cells.

Point to the model as the TTS or TA reads the graphic description.

[Graphic description: "This is a model of the circulatory system. It includes the lungs, the heart, and blood vessels. The model shows how blood is pumped by the heart through blood vessels to and from the lungs in the human body."]



What is a **needed** material carried by the circulatory system?

Point to each option as the TTS or TA reads each option.

A. carbon dioxide

B. oxygen

C. egg

Provide student with Incomplete Chart 2, "Ways Humans Affect the Environment" and cards from the High School Science Practice Test Reference Materials.

Item 22

This item is about ways in which humans impact the environment.

Some ways that humans affect the ecosystem are positive and some are negative.

These are things humans can do.

Place the cards onto the work surface in front of the student in the following order left to right or top to bottom: "plant trees," "burn trash," and "protect wildlife." Point to each card as the TTS or TA reads the graphic description.

[Graphic description: "Here are three cards. These are ways humans impact the environment: plant trees, burn trash, and protect wildlife.

Place the incomplete chart onto the work surface in front of the student. Point to the chart as the TTS or TA reads the graphic description.

[Graphic description: "This is an incomplete chart titled, 'Ways Humans Affect the Environment.' The cards will be used to complete the chart. The left side is labeled Humans Positive Effect on the Environment. The right side is labeled Humans Negative Effect on the Environment."]

Ways Humans Affect the Environment

Humans Positive Effect on the Environment	Humans Negative Effect on the Environment

Point to each side of the chart as the TTS or TA reads the following statements.

Place positive ways humans effect the environment on the left side of the chart. Place negative ways humans effect the environment on the right side of the chart.

Allow time for the student to place the words on the chart.

Item 22, continued

Rubric

Test Administrator: *After student completes work, record on the computer if the student provided the correct answer or the student did not provide the correct answer.*

Score	Description
1	Student correctly sorts “plant trees” and “protect wildlife” under the label, “Humans Positive Effect on the Environment” and “burn trash” under the label, “Humans Negative Effect on the Environment.”
0	Student does not correctly sort “plant trees” and “protect wildlife” under the label, “Humans Positive Effect on the Environment” and “burn trash” under the label, “Humans Negative Effect on the Environment.”

Sample Response

Ways Humans Affect the Environment

Humans Positive Effect on the Environment	Humans Negative Effect on the Environment
plant trees protect wildlife	burn trash

Item 23

This is the first item of a two-part item. Student may not return to this item after responding to this item.

This item is about an oil spill.

Louisiana's oyster population along the coast of the Gulf of Mexico is among the largest and most valuable in the United States.

In *[Graphic description: "two thousand ten"]* 2010, an oil rig accident spilled oil into the Gulf of Mexico. Since the spill, the oyster population declined.

What happened to the oyster population after the oil spill?

Point to each option as the TTS or TA reads each option.

A. The oyster beds flooded.

B. The oyster population decreased.

This is the first item of a two-part item. Student may not return to this item after responding to this item.

Item 24

This is the second item of a two-part item. Student may not return to the previous item.

This item is about oysters in Louisiana.

As early as *[Graphic description: "eighteen seventy"]* 1870, oyster beds were being overfished in Louisiana. The state passed laws protecting oysters. Louisiana became the nation's largest producer of oysters by the *[Graphic description: "nineteen hundreds"]* 1900s.

In *[Graphic description: "two thousand ten"]* 2010, an oil spill leaked over *[Graphic description: "one hundred thirty"]* 130 million gallons of oil near Louisiana's coast.

It is believed that effects related to the spill killed over *[Graphic description: "eight"]* 8 million oysters along the coast of Louisiana. Today, Louisiana is still working to repair the oyster habitat.

Which is evidence that the extreme change to the oysters' habitat had long-term impacts on the population?

Point to each option as the TTS or TA reads each option.

A. "Louisiana passed laws protecting oysters."

B. "Louisiana became the nation's largest producer of oysters."

C. "Louisiana is still working to repair the oyster habitat."

Provide student with Punnett Square 3 from the High School Science Practice Test Reference Materials.

Item 25

This is the first item of a two-part item. Student may not return to this item after responding to this item.

This item is about the color of bears' fur.

Traits are characteristics passed from parents to offspring.

A Punnett square shows the likelihood of creating offspring with certain traits.

Point to the Punnett square.

	f	**f**
F	Ff	Ff
f	ff	ff

Point to the boxes.

Each box shows the alleles the offspring may inherit. The alleles for a female and male bear are shown by a capital letter 'F' and a small letter 'f'.

Point to the capital letter 'F' and small letter 'f'.

The female bear is heterozygous for fur color. Heterozygous means it has two different alleles. The dominant black color allele is shown by the capital letter 'F' and the recessive yellow color by the small letter 'f'. The female bear has black fur.

Point to the small letter 'f' and small letter 'f'.

The male bear is homozygous for fur color. Homozygous recessive means it has two copies of the recessive allele. This is shown by two copies of the small letter 'f'. The male bear has yellow fur.

In this Punnett square, 2 out of 4 of the boxes representing the offspring have black fur. They each have at least one copy of the capital letter 'F'.

Item 25, continued

What is true about the offspring?

Point to each option as the TTS or TA reads each option.

A. They all look like their mother.

B. They all look like their father.

C. Half will likely have black fur.

This is the first item of a two-part item. Student may not return to this item after responding to this item.

Provide student with Punnett Square 3 from the High School Science Practice Test Reference Materials.

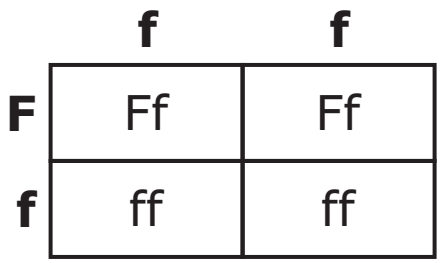
Item 26

This is the second item of a two-part item. Student may not return to the previous item.

This item is about the color of bears' fur.

A Punnett square shows the likelihood of creating offspring with certain traits.

Point to the Punnett square.



Point to the boxes.

Each box shows the alleles the offspring may inherit.

Point to the capital 'F' and small letter 'f'.

The female parent bear is heterozygous for fur color. Heterozygous means it has two different alleles. The dominant black color allele is shown by the capital letter 'F' and the recessive yellow color by a small letter 'f'.

Point to the small letter 'f' and small letter 'f'.

The male parent bear is homozygous for fur color. Homozygous recessive means it has two copies of the recessive allele. This is shown by two copies of the small letter 'f'.

The offspring of the parent bears have different traits than their parents and each other.

What makes the fur color of the bear cubs look black or yellow?

Point to each option as the TTS or TA reads each option.

A. the time they were born

Item 26, continued

B. the alleles they inherit

C. the location they live in

This is the second item of a two-part item. Student may not return to the previous item.

Item 27

This item is about natural selection.

Natural selection depends on several phenomena. For example, fish populations have slight differences among them. These include differences in length, coloring, rate of egg production, or other traits that may affect survival and reproduction.

What is true about individuals with characteristics that are beneficial for reproduction in a specific environment?

Point to each option as the TTS or TA reads each option.

A. They leave **no** offspring in the next generation.

B. They leave **few** offspring in the next generation.

C. They leave **more** offspring in the next generation.

Item 28

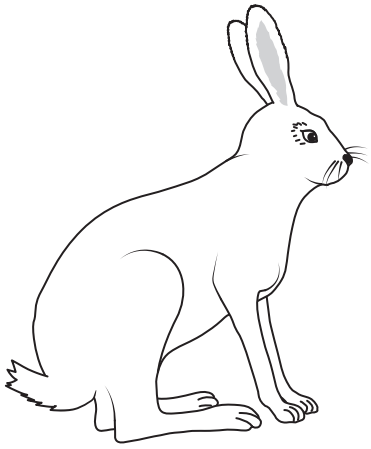
This item is about how animals survive in their environment.

Desert animals have adapted to live in a hot, dry environment.

Jackrabbits live in hot and dry places.

Point to the picture of the jackrabbit as the TTS or TA reads the graphic description.

[Graphic description: "This is a picture of a jackrabbit."]



Like all rabbits, they are covered with fur and live in underground burrows. Jackrabbits have evolved very large ears to release body heat.

What characteristic helps jackrabbits survive in the desert?

Point to each option as the TTS or TA reads each option.

A. large ears

B. layer of fur

C. eye color

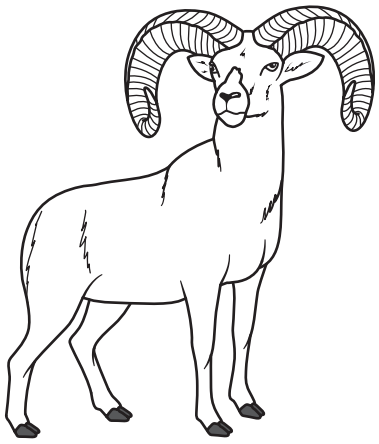
Item 29

This is the first item of a two-part item. Student may not return to this item after responding to this item.

This item is about bighorn sheep.

This is a bighorn sheep.

Point to the picture of the bighorn sheep.



Hunters seek male sheep with the largest horns as trophies.

A study of bighorn sheep in Canada showed a genetic change in the size of horns among a heavily hunted population. There was a trend toward more males having smaller horns.

Bighorn sheep horn size is an inheritable trait.

Which is the **best** explanation for an increase in the number of male sheep with small horns?

Point to each option as the TTS or TA reads each option.

A. Few large-horned males survive to reproduce.

B. The hunting of sheep with small horns increased.

C. Sheep with large horns blend in with the habitat.

This is the first item of a two-part item. Student may not return to this item after responding to this item.

Item 30

This is the second item of a two-part item. Student may not return to the previous item.

This item is about bighorn sheep.

The study found evidence that in some cases, too much hunting of males with large horns can favor the trait for smaller horns in males.

The hunting regulations were changed in the hunting area in Canada.

As a result, the trend toward smaller horns stopped.

What is a **likely** reason that the trend toward smaller horns stopped?

Point to each option as the TTS or TA reads each option.

A. The bighorn sheep population moved to another habitat.

B. The hunt for large-horned sheep was ended.

C. More female sheep were being hunted.

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Practice Test