

## World Geography: Year-Long Overview

To be productive members of society, students must be critical consumers of information they read, hear, and observe and communicate effectively about their ideas. They need to gain knowledge from a wide array of sources and examine and evaluate that information to develop and express an informed opinion, using information gained from the sources and their background knowledge. Students must also make connections between what they learn about the past and the present to understand how and why events happen and people act in certain ways.

To accomplish this, students must:

1. Use sources regularly to learn content.
2. Make connections among people, events, and ideas across time and place.
3. Express informed opinions using evidence from sources and outside knowledge.

Teachers must create instructional opportunities that delve deeply into **content** and guide students in developing and supporting **claims** about social studies concepts. More information on [how to use this document](#) can be found at the end of this document.

In World Geography, students explore geographic technologies, cultural geography, political geography, economic geography, and human-environment interaction in order to gain a deep understanding of the interconnectedness of people and place. The unit questions highlight the connections among the [GLEs](#) that students should make as they develop and express informed claims.

World Geography Content	
Unit 1: Geography and Culture	What is the relationship between geography and culture?
Unit 2: Population and Migration	How do changes in population and migration affect a place's economy, culture, and politics?
Unit 3: Political and Economic Geography	How does geography influence political and economic systems?
Unit 4: Human-Environment Interaction	How do people affect and how are people affected by the natural environment?

## World Geography: How to Navigate This Document

The World Geography scope and sequence document is divided into four units. Each unit has an overview, instruction which includes topics and tasks, and a unit assessment. Click on a link below to access the content.

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- [Unit One Assessment](#)

### Unit Two: Population and Migration

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### Unit Three: Political and Economic Geography

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### Unit Four: Human-Environment Interaction

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## Unit One Overview

### Unit One: Geography and Culture

**Description:** Students learn about purposes and accuracy of maps, how maps are influenced by innovations in technologies, characteristics of culture, and the spread of culture across geographic regions. Students will analyze a variety of geographic representations, geospatial technologies, and primary and secondary sources in order to develop a claim about the relationship between geography and culture.

**Suggested Time:** 6 weeks

Content	Unit Question
Unit 1: Geography and Culture	What is the relationship between geography and culture?

#### Topics (GLEs):

1. [Maps](#) (WG.1.1, WG.1.2, WG.1.3, WG.1.4, WG.3.1, WG.5.5)
2. [Cultural Geography](#) (WG.3.1, WG.3.2, WG.3.3, WG.4.3, WG.4.4, WG.4.5)

#### Use these sample instructional tasks:

- [Exploring Map Projections and Categories](#)
- [The Influence of Technology on Geography](#)
- [Geography of Language and Religion](#)
- [Cultural Diffusion](#)

**Culminating Unit Assessment:** Students participate in a Socratic Seminar around the unit question: “What is the relationship between geography and culture?”

## Unit One Instruction

**Topic One:** Maps (WG.1.1, WG.1.2, WG.1.3, WG.1.4, WG.3.1, WG.5.5)

**Connections to the unit question:** Students will examine different types of maps, map projections, and geographic technologies. Students will use their knowledge of maps and geographic technology to analyze how culture affects the study of geography.

**Suggested Time:** 13 class periods

**Use these sample instructional tasks:**

- [Exploring Map Projections and Categories](#)
- [The Influence of Technology on Geography](#)

**To explore these compelling and supporting questions:**

- Why do geographers use different types of maps to organize space and place?
- Why do geographers use maps to depict relationships of time, space, and scale?
- Why are all maps wrong?
- Why are some maps better suited to display information than other maps?
- How has technology changed the study of geography?
- How do people locate and describe places?
- How do geographers use technology to solve real world problems?
- How have advances in technology affected the geography of my community and the world?

**That students answer through these activities and assessments:**

- Students engage in a class discussion addressing the supporting question: “Why do geographers use maps to depict relationships of time, space, and scale?”
- Students engage in a class discussion addressing the supporting question: “Why are all maps wrong?”
- Students will complete a graphic organizer to explain the advantages and disadvantages of map projections and engage in a class discussion addressing the question: “Why are some maps better suited to display information than other maps?”
- Students engage in a seminar based on the compelling question: “Why do geographers organize space and place through different types of maps?”
- Students research their own community using Google Maps and describe absolute location, relative location, site, and situation.
- Students engage in a class discussion addressing the supporting question: “How do geographers use technology to solve real world problems?”
- Students engage in a class discussion addressing the supporting question: “How have advances in technology affected the geography of my community and the world?”

- Students participate in a seminar based on the compelling question: “How has technology changed the study of geography?”

## World Geography Instructional Task: Exploring Map Projections and Categories

### Unit One: Geography and Culture; Topic One: Maps

**Description:** Students will learn about different types of maps, the geographic information they communicate, and the relationships of time, space, and scale. This instructional task supports students in understanding how maps are influenced by their creators and how different types of maps affect the way people view the world. At the end of the instructional task, students will answer the compelling question: “Why do people organize space and place through different types of maps?”

**Suggested Time:** 5 class periods

**Materials:** [World Map by the United Nations](#); [Why all world maps are wrong](#); [How Maps Can Be Deceiving](#); [Boston Students Get A Glimpse Of A Whole New World, With Different Maps](#); [Why are Maps Changing?](#); [The Different Types of Maps](#); [What is a map?](#); [Socratic seminar](#); [conversation stems](#); [discussion tracker](#)

#### Instructional Process:

1. Explain to students that through this course they will explore characteristics of place throughout the world. Explain that they will start this investigation by learning about how people organize place and space through maps and how technology has influenced this process. Students will continue to investigate aspects of the study of geography, including cultural geography, population, migration, political geography, economic geography, and human-environment interaction.
2. Explain to students that after they learn about maps, geographic technologies, and cultural geography in this instructional task, they will be asked to make a claim on the relationship between geography and culture.
3. Post the following question: “What is the meaning of culture?” Direct students to do a one minute quick write answering this question. After students have finished writing, have a few students share their responses.
4. Write the term *cultural geography* on the board and read or project the following definition<sup>1</sup>:
  - a. study of the relationship between culture and place
5. Post and read aloud the compelling question for this instructional task: “Why do geographers use different types of maps to organize space and place?”
6. Say, “In this task, we are going to explore map projections and map categories in order to understand how geographers use maps to show relationships of time, space, and scale. This is important because the ability to read and analyze maps is essential to the foundations of geography.”
7. Explore these questions with students to check background knowledge and lead a brief discussion based on their input:
  - a. What are maps?
  - b. Why and how do we use maps?

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<sup>1</sup> [https://researchguides.dartmouth.edu/human\\_geography/cultural](https://researchguides.dartmouth.edu/human_geography/cultural)  
Return to [World Geography: How to Navigate This Document](#)

8. Say, “Today we are going to learn about different types of maps and how they communicate geographic information.”
9. Post and read aloud the first supporting question for the instructional task: “Why do geographers use maps to depict relationships of time, space, and scale?”
10. Introduce students to these terms and definitions. This introduction may take place through a presentation that involves engaged note taking, a vocabulary strategy, or another instructional approach.
  - a. Map
  - b. Cartography
  - c. Distortion
  - d. Scale
  - e. Projection
11. Divide the class into pairs using an established classroom routine.
12. Say, “Maps display the organization of space during a specific time and through the perspective of the creator of the map. Maps are constantly changing as the organization of space changes and as people’s perceptions change. Today you will create maps that capture the spatial organization of your community and world through your perspective.”
13. Direct students to create a map of their neighborhood or community from memory, without using outside sources. Next, have students draw a map of their school from memory, without using outside sources. After, highlight some map examples for the class or have students share their maps with the entire class or other groups. These maps should include:
  - a. As much detail as possible
  - b. Landmarks and major highways
  - c. Scale
14. Next, direct each pair of students to draw a map of the world to the best of their ability from memory, without using any outside sources. Direct students to include as much detail as possible, including political boundaries and the names of countries, cities, and bodies of water. Explain to students that lines separating countries are called political boundaries. Also, point out that the maps the students have created are representative of a moment in time. After, have students compare their maps to a world map and note the differences in a class chart. Suggested resource: [World Map by the United Nations](#).
15. Lead a brief discussion on the supporting question: “Why do geographers use maps to depict relationships of time, space, and scale.”
16. Post and read aloud the second supporting question for the instructional task: “Why are all maps wrong?”
17. Many students will likely have drawn an inaccurate map of the world. Review the class chart to identify common misconceptions. Then, show the 6 minute video [Why all world maps are wrong](#) from Vox. After the video, lead a brief whole-class discussion on map issues and purposes. Possible questions include:
  - a. Why do mapmakers use a process called projection?
  - b. Why do map projections inevitably distort spatial relationships in shape, distance, direction, and area?
  - c. What is the relationship between map projection and the purpose for which a map gets used?

18. Ask students the supporting question, “Why are all maps wrong?” Have students write down their answers first. Then, call on individual students to share their responses with the class.
19. Post and read aloud the third supporting question for the instructional task: “Why are some maps better suited to display information than other maps?”
20. Introduce students to these map projections and include samples. Present the map examples and instruct students to take notes, provide students with the sources and have them analyze in small groups, or use another instructional approach to deliver content.
  - a. Gall-Peters (suggested source: [Oxford Cartographers](#))
  - b. Mercator Projection (suggested source: [Wikimedia](#))
  - c. Robinson (suggested source: [Wikimedia](#))
  - d. Azimuthal (suggested source: [Wikimedia](#))
  - e. Goode homolosine (suggested source: [Wikimedia](#))
21. Divide students into small groups using an established classroom routine. Provide students access to [How Maps Can Be Deceiving](#) from ThoughtCo and instruct them to read independently and then answer the following questions in small groups:
  - a. How does scale affect the information presented on a map?
  - b. How does the perspective and preferences of the mapmaker influence the information presented on a map?
  - c. How does the intended purpose of a map affect the information presented?
22. Provide access to [Boston Students Get A Glimpse Of A Whole New World, With Different Maps](#) from NPR. Have students read independently or as a class. After, show the 4 minute video [Why are Maps Changing?](#) (Note: this video includes the word “hell” at minute 2:28. Please use individual judgement when viewing with students.)
23. Then, as a class, conduct a discussion based on the following question: “Which projection should schools use in their classrooms?” In this discussion, address how and why certain map projections are biased.
23. Introduce students to the map categories of reference maps and thematic maps. Project [What is a map?](#) by Axis Maps and read aloud as a class. After making sure students understand reference maps (e.g., physical maps, political maps, road maps, time zone maps), have them examine thematic maps more closely. Suggested thematic maps and examples are listed below.
  - a. Isoline (suggested resource: [Royal Geographic Society](#))
  - b. Choropleth (suggested resource: [Our World in Data](#))
  - c. Flow-line Maps (suggested resource: [Flow Maps](#))
  - d. Dot density maps (suggested resource: [Axis Maps](#))
  - e. Cartogram (suggested resource: [Our World in Data](#))
24. Divide students into groups, preferably five, using an established classroom routine and provide each group with a thematic map to analyze from the following list: isoline, choropleth, flow-line, dot-density, and cartogram. Provide students access to [The Different Types of Maps](#) by Fiveable to help them describe the purpose of their assigned thematic map. If possible, have students find additional examples of their assigned thematic maps online. Then, as a class, have one or more students from each group present on their map, detailing its purpose and showing at least one real-life example.

25. Conduct a classroom discussion on the supporting question: “Why are some maps better suited to display information than other maps?”
26. After these activities, conduct a [Socratic seminar](#) with students based on the compelling question: “Why do people organize space and place through different types of maps?” Encourage students to use these [conversation stems](#) and assess student participation with a [discussion tracker](#).

## What is a map?<sup>2</sup>

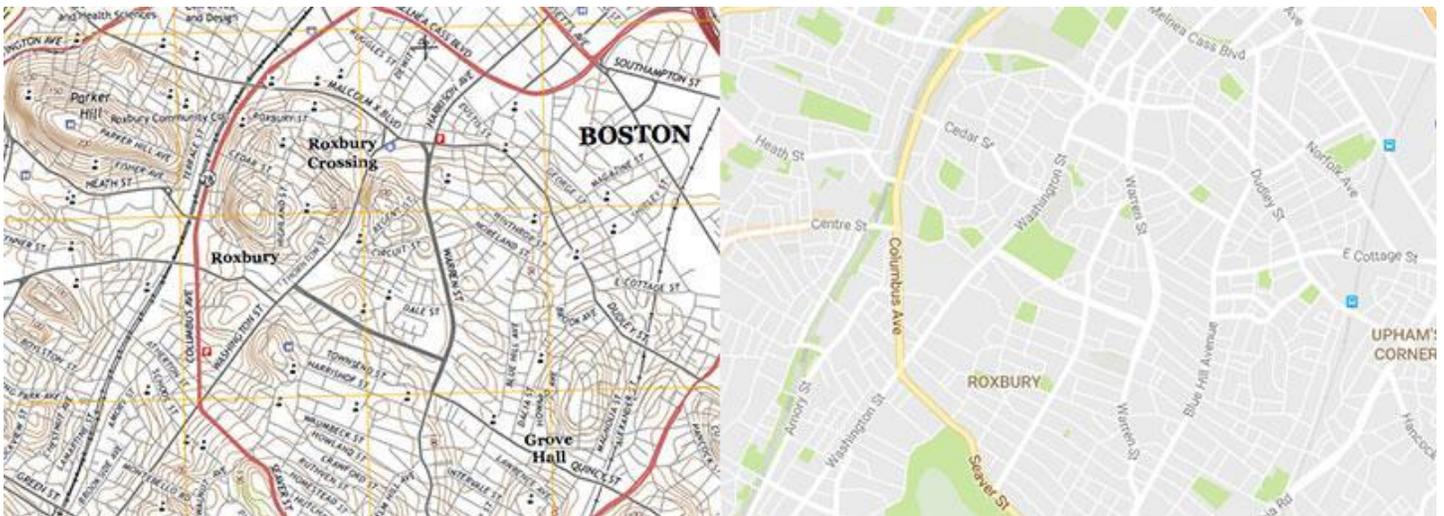
It may sound silly to ask what a map is, but it's important to understand the what and why of maps.

A simple definition is that a map is a representation of a place. This carries two important implications that are sometimes neglected:

1. *A map is not an objective depiction of reality.* It is a symbolic interpretation of place and highlights the relationships between elements in space, either perceived or actual. It reflects choices, biases, and agendas of the mapmaker. When you see or make a map, think critically about it. What does the map show, what does it omit, and why? How were the data collected and manipulated to produce the end result? Those are only a couple of things that affect how a map ultimately is interpreted by its readers.
2. *The practice of cartography is as much about removing things as depicting them.* A map does not and cannot represent everything in the place. Things must be omitted, simplified, etc. for the map to make sense. This is how a map achieves clarity and usefulness: it strips away details of the world so that the map's purpose shines through.

### Types of maps

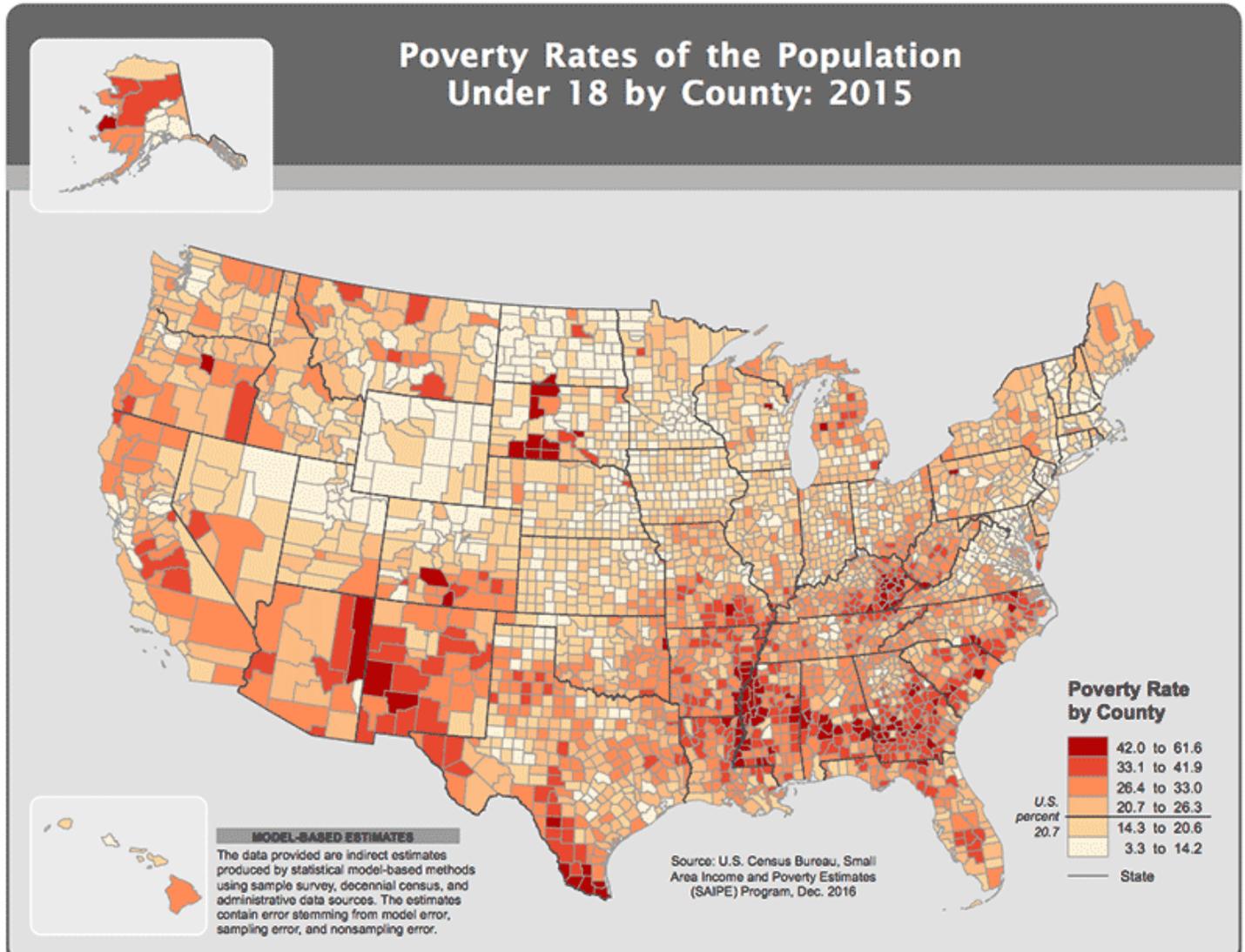
Broadly, maps fall into two categories: Reference maps emphasize the location of spatial phenomena, such as countries, cities, rivers, etc. Chances are the maps you use most in your daily life are reference maps—street maps (e.g., Google Maps) that help you see *where things are*. Other common reference maps emphasize physical landscapes—think topographic maps or maps of a national park.



USGS topographic maps and Google Maps are classic and modern examples of reference maps, mostly intended to show where things are.

<sup>2</sup> Cartography Guide by [Axis Maps](https://www.axismaps.com/guide/what-is-a-map) is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/). The original work is available at <https://www.axismaps.com/guide/what-is-a-map>.

Thematic maps emphasize the spatial pattern of geographic *attributes* or *statistics* about places and relationships between places. For example, while a reference map might show the locations of cities, a thematic map might also represent the population of those cities. A reference map might show bank locations, while a thematic maps shows average income in an area. It's the difference between mapping *places* and mapping *data*.



This map of poverty from the US Census is a thematic map, concerned with the geography of a demographic phenomenon.

## World Geography Instructional Task: The Influence of Technology on Geography

### Unit One: Geography and Culture; Topic One: Maps

**Description:** Students investigate different methods of geographic data collection to better understand how geographers use data to depict information. This task will support students in understanding how technology shapes geographic information and how it impacts their lives. At the end of the instructional task, students will answer the compelling question: “How has technology changed the study of geography?”

**Suggested Time:** 8 class periods

**Materials:** [What's the Difference Between Relative Location and Absolute Location?](#); [North American Latitude and Longitude Map](#); [Google Maps](#); [Community Exploration Chart](#); [New York Subway Map over Google Maps](#); [How does GPS work?](#); [What is GIS?](#); [Predicting and Managing Chaos: How GIS Has Transformed Natural Disaster Relief](#); [Episode 4 of the series Geospatial Revolution](#); [Google Maps is Different in Other Countries](#); [seminar](#); [conversation stems](#); [discussion tracker](#).

#### Instructional Process:

1. Say, “In the previous instructional task, we explored map projections and types of maps to better understand how geographers use maps to show relationships of time, space, and scale. In this instructional task, we will explore how geographers use technology to collect, organize, and display geographic data. We will use the compelling question ‘How has technology changed the study of geography?’ to guide our inquiry. Technology is constantly changing and it is important in the study of geography because it can be used to organize geographic information and solve geographic problems.”
2. Post and read aloud the first supporting question for this instructional task: “How do we locate and describe places?” Provide students with access to [What's the Difference Between Relative Location and Absolute Location?](#) by ThoughtCo. Conduct a brief whole-class discussion on the following questions: “When is it better to use absolute location instead of relative location? When is it better to use relative location instead of absolute location?” Use the responses to create a class chart.
3. Review longitude and latitude. Provide students access to a map with lines of latitude and longitude such as [North American Latitude and Longitude Map](#). Explain to students that latitude lines, lines that are parallel to the equator, run east to west, while longitude lines run north to south. Explain to students that these lines are imaginary, not physical barriers or lines drawn on the ground. Ask, “Why do you think these imaginary lines were drawn on the map?” Elicit a few responses to ensure that students understand that longitude and latitude lines were added to maps to help people navigate to places. Note: Some students may already have extensive knowledge of latitude and longitude coordinates and will not need an extensive amount of time to review the concept.
4. Ask students to explain how they use technology to travel to places and how that technology is organized for people. Encourage them to think about smartphones and GPS as they answer the question.
5. Say, “Now we will use geographic technology to explore our community and our world.”

6. Provide students access to [Google Maps](#). Direct students to find the absolute location of one or two places they frequent (their school, home, grocery store, etc.) by searching for the place in Google Maps and right clicking the pin point on the map. Next, direct students to choose any place in the world that they would like to visit on vacation and record its absolute location using longitude and latitude.
7. Divide students into pairs using an established classroom routine. Then, have students share the coordinates of their vacation place with their partner. Direct students to use [Google Maps](#) (search bar) to identify the location chosen by their partner.
8. While students are still in their designated pairs, say, “Coordinates also help locate the site and situation of places. Site is the exact location of a settlement on the globe. Situation is where a settlement is in relation to its surrounding features, which could be natural surroundings, the location of nearby settlements, or transportation routes. Situation is the greater regional framework around the settlement.”
9. Direct one student in each pair to identify the site and situation of a well-known city (e.g., New Orleans, New York, London, Paris, Beijing). Instruct the students to share the information of the site and situation with their partner without revealing the city. Then, direct the partner to use [Google Maps](#) to try to identify the city.
10. Instruct students to research their own community via Google Maps and describe absolute location, relative location, site, and situation in the [Community Exploration Chart](#). Collect and grade for content accuracy.
11. Post and read aloud the second supporting question for the instructional task: “How do geographers use technology to solve real world problems?”
12. Say, “Google Maps is just one example of how technology is used to display geographic data. Geographic Information Systems (GIS) and Global Positioning Systems (GPS) are two ways technology is used in the study of geography. GPS uses satellites to find the site or absolute location of places. GIS is used to record and communicate geographic information on maps. GIS maps use layers to overlay data from one source on top of another source.” Project the [New York Subway Map over Google Maps](#) as an example.
13. Show the 2 minute video [How does GPS work?](#) by Testtube 101 and the 3 minute video [What is GIS?](#) by Esri Ireland to help students understand GPS and GIS.
14. Instruct students to read [Predicting and Managing Chaos: How GIS Has Transformed Natural Disaster Relief](#) by the USC Spatial Sciences Institute, stopping before the section titled “Learn Disaster Management from a Global Leader.” Then, lead a brief class discussion. Possible questions include:
  - a. How are geographers using GIS to transform natural disaster relief?
  - b. How can GIS information assist with natural disasters in our region?
15. Show the class the 18 minute video [Episode 4 of the series Geospatial Revolution](#) from Penn State. (Note: The link defaults to the most recent episode. Choose episode four below the video before playing.) Direct students to jot down examples of how geographers use technology to solve real world problems as they watch.
16. Then, as a class, conduct a discussion surrounding the question, “How do geographers use technology to solve real world problems?” Encourage students to use the [conversation stems](#) and provide evidence from the articles and videos. Assess student participation with a [discussion tracker](#).
17. Say, “Today, technology is changing how countries interact with one another. GPS and GIS technology now have the power to shape international relations.”

18. Post and read aloud the third supporting question for the instructional task: “How have advances in technology affected the geography of my community and the world?”
19. Show the 6 minute video [Google Maps is Different in Other Countries](#) by Human Interests.
20. Then conduct a whole-class discussion about how technology impacts international relations. Possible guiding questions:
  - a. How does Google Maps address international differences?
  - b. How has technology changed the way people understand borders?
21. Say, “Technology is not only shaping borders and international relations, it's also impacting culture and communities.”
22. Write the term “distance decay” on the board and read or project the following definition:
  - a. the decrease or decay in interaction between two phenomena, places, or people as the distance between them increases
23. Write the term “time space compression” on the board and read or project the following definition:
  - a. the reduction in the time it takes to spread something to a distant place as a result of improved communications and transportation systems.
24. Ask: “How are these terms different from each other?” and elicit a few student responses.
25. Direct students to write down the meaning of each term in their own words. Call on a few students to share their definitions.
26. Divide the class into small groups using an established classroom routine and direct the groups to identify one real-life example of how time space compression is solving distance decay. Then, have one student from each group share out their specific real-life example of how time space compression is solving distance decay.
27. Conduct a class discussion on the supporting question: “How have advances in technology affected the geography of my community and the world?” Use student responses to create a class list. Then, ask students “How would the geography of our community and world be different without the technological advances we’ve discussed?” Instruct students to briefly turn and talk to answer this question with a shoulder partner, and then elicit a few responses to be shared whole-class.
28. After these activities, conduct a [Socratic seminar](#) with students based on the compelling question, “How has technology changed the study of geography?” Encourage students to use these [conversation stems](#) and assess student participation with a [discussion tracker](#).

Community Exploration Chart	
Community Name:	
What is your community's absolute location?	
What is your community's relative location?	
Describe your community's site:	
Describe your community's situation:	

## Unit One Instruction

**Topic Two:** Cultural Geography (WG.3.1, WG.3.2, WG.3.3, WG 4.1, WG.4.3, WG.4.4, WG.4.5)

**Connections to the unit question:** Students will explore characteristics of culture and patterns of change and diffusion. Students will apply their knowledge to analyze how geographical processes influence culture.

**Suggested Time:** 24 class periods

**Use these sample instructional tasks:**

- [Geography of Language and Religion](#)
- [Cultural Diffusion](#)

**To explore these compelling and supporting questions:**

- How does culture affect people and places?
- How does culture influence people’s identity?
- What are the major religions in the world?
- What are the major languages spoken in the world and where did they come from?
- How does culture affect the landscape of a place?
- How does culture spread and change?
- How does culture diffuse from its hearth?
- How can cultural diffusion change culture and create new forms of cultural expression?
- How has culture diffused in the past?

**That students answer through this assessment:**

- Students engage in a class discussion on cultural relativism, ethnocentrism, and the importance of recognizing other cultures.
- Students write an extended paragraph in response to the supporting question: “How does culture influence our identity or our perceptions of people?”
- Students engage in a discussion regarding the difference between ethnic and universalizing religions.
- Students research a religion and complete the [Major Religions Info Chart](#) from their own research and the presentations of their peers.
- Students engage in a discussion on how languages evolve and how linguists categorize language.
- Students create a language family tree and participate in a gallery work in order to complete the [Language Family Gallery Walk Graphic Organizer](#).
- Students engage in class discussion on evidence of culture found on the landscape of the student’s community.
- Students write an essay in response to the instructional task’s compelling question: “How does culture affect people and places?”
- Students write a paragraph in response to the supporting question: “How does culture diffuse from its hearth?”

- Students write an extended paragraph in response to the supporting question: “How can cultural diffusion change culture and create new forms of cultural expression?”
- Students research the diffusion of a major religion participate in a gallery work in order to complete the [Diffusion of World Religion](#) chart.
- Students engage in class discussion based on the supporting question: “How has culture diffused in the past?”
- Students write an essay in response to the compelling question: “How does culture spread and change?”

## World Geography Instructional Task: Geography of Language and Religion

### Unit 1: Geography and Culture; Topic 2: Cultural Geography

**Description:** Students investigate characteristics of culture, including language and religion, and how culture affects people and places. This task will support students' knowledge of cultures in various regions of the world. At the end of the instructional task, students will answer the compelling question: "How does culture affect people and places?"

**Suggested Time:** 14 class periods

**Materials:** [Cultural Richness](#); [Cultural Relativism](#); [The Danger of a Single Story](#); [How Culture Drives Behaviours](#); [The Dialogue](#); [Sense of Place and Community](#); [Cultural Differences](#); [Folk Culture Presentation Handout](#); [Folk Culture Speed Dating Chart](#); [Ethnic vs. Universalizing Religions](#); [Major Religions Info Chart](#); [The five major world religions](#); [Unit: Introduction to cultures and religions for the study of AP Art History](#); [Major Religions Info Chart](#); [What's the most common language in the world?](#); [Where did English come from?](#); [Family of Language](#); [How languages evolve](#); [A Language Family Tree](#); [Gallery Walk](#); [Language Family Gallery Walk Graphic Organizer](#); [Observing Physical and Cultural Landscapes](#); [Seminar](#); [conversation stems](#); [Social Studies Extended Response Rubric](#).

#### Instructional Process:

1. Say, "In the previous instructional task, we explored how technology helps geographers better understand how to use data to depict information. In this instructional task, we are going to explore the relationship between culture and geography. Culture is defined as the knowledge, attitudes and habitual behavior patterns shared and transmitted by the members of a society. We will use the question, 'How does culture affect people and places?' to guide our inquiry."
2. In order to activate prior knowledge, ask, "what do you think of when you think of culture? What are some aspects of your culture?"
3. Project the slideshow [Cultural Richness](#) from National Geographic Education. Read aloud the "Background Information", then click through the slideshow, pausing to ask students to identify aspects of culture found in the images.
4. Post and read aloud the first supporting question for the instructional task: "How does culture influence people's identity?"
5. Provide access to [Cultural Relativism](#) from Khan Academy and direct students to read the sections "How is culture defined?" and "What is cultural relativism?" independently. Then, lead a brief discussion. Possible guiding questions include:
  - a. What is cultural relativism?
  - b. What is ethnocentrism?
  - c. What are the dangers of ethnocentrism?
  - d. Why is it important to recognize that cultures are different instead of wrong?
6. Show the 18 minute video [The Danger of a Single Story](#) from TED by Chimamanda Ngozi Adichie. After watching the video, lead students in a brief discussion about cultural perception. \*Note: If students have already viewed

“The Danger of a Single Story,” [How Culture Drives Behaviours](#), by Julien S. Bourrelle can be used as an alternative. Possible guiding questions include:

- a. What are the dangers of viewing different cultures through one lens?
  - b. How can we avoid viewing cultures through that one lens?
  - c. How does culture drive behavior?
7. Say, “Cultural differences sometimes cause conflicts.” Read aloud the first paragraph under “Background Information” of [The Dialogue](#) video from National Geographic Education. Then, show the video [The Dialogue](#) stopping at the 5 minute mark.
8. Read aloud the first paragraph under “Background Information” of [Sense of Place and Community](#) from National Geographic Education. Then, show the two videos [Sense of Place and Community](#) and [Cultural Differences](#) from National Geographic Education.
9. After showing the three videos, lead a brief class discussion on cultural differences and conflict. Possible guiding questions include:
- a. What challenges did the Chinese students experience in adjusting to culture in the United States?
  - b. What challenges did the Lost Boys from Sudan experience in adjusting to culture in the United States?
  - c. How were the experiences of the Chinese students and the Lost boys from Sudan similar and different?
  - d. How does culture relate to a person’s identity?
10. Explain to students the difference between folk culture and popular, or pop, culture. Say “‘Folk culture’ describes cultural traditions that are done at a local level. Folk culture is separated from pop culture by its traditional and localized nature.” Ask students for examples of folk culture and pop culture or provide examples.
11. Say, “Next you will research an example of a folk culture and participate in a ‘folk culture speed dating’ activity in order to learn more about how unique cultures are important to people’s identity.” Direct students to choose a folk culture or assign one.
- a. Possible folk cultures to research: Adivasi, African-American culture in New Orleans, Amish, Australian Aborigines, Cajun, Celtic, Cherokee, Isleños, Houma Nation, Kurds, Native Hawaiians, Navajo, Māori, Maasai, Omaha Native American, Hmong, Inuit, Nukak Amazon Tribe, Taiwanese Aborigines.
12. Remind students how to identify accurate and credible sources, and review the importance of reviewing multiple sources to corroborate information. Direct students to make a presentation about their assigned folk culture that includes all the information from the [Folk Culture Presentation Handout](#).
13. After students are finished creating their presentation, say, “You are now going to share your culture with the rest of the class. Sell your culture as best as possible to get people interested in your culture. At the end, be prepared to discuss which folk cultures stuck out to you and why.” Arrange desks in pairs and divide students into two groups. Students in group A remain seated while students in group B change desks every 3 minutes. While they are listening to another folk culture on their “date,” instruct students to fill out the [Folk Culture Speed Dating Chart](#).
14. To culminate the activity, direct students to write an extended paragraph (half to full page, but not an essay) in response to the instructional task’s supporting question: “How does culture influence our identity or perceptions of people?” Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.

15. Post and read aloud the second supporting question for the instructional task: “What are the major religions in the world?”
16. Say, “There are many aspects of a person that go into their culture. Religion is a crucial aspect of culture. Religion is a common set of beliefs and practices, and it may also be a communal way to relate a belief that centers on a system of thought, being, person, or object that is believed to be supernatural, sacred, or divine.”
17. Explain to students that some religions are monotheistic while others are polytheistic and define and give examples of each. Then, explain to students that some religions are ‘ethnic’ religions while others are ‘universalizing’ religions and provide access to the source [Ethnic vs. Universalizing Religions](#) from Albert. Then, as a class, conduct a discussion about ethnic and universalizing religions. Possible guiding questions include:
  - a. What is the main difference between ethnic and universalizing religions?
  - b. What factors lead to the diffusion of ethnic and universalizing religions?
18. Provide students with the handout [Major Religions Info Chart](#). Show [The five major world religions](#) from Ted-Ed and direct students to take notes on the world’s major religions.
19. Say, “Next, you will research a religion and present your information in a slideshow presentation.” Divide the class into groups and assign each group a religion. Direct students to divide the tasks for the presentation equally. Remind students how to identify accurate and credible sources, and review the importance of reviewing multiple sources to corroborate information. Possible resource: [Unit: Introduction to cultures and religions for the study of AP Art History](#) from Khan Academy.
  - a. Potential options for students to choose: Judaism, Hinduism, Buddhism, Christianity, and Islam.
  - b. Say, “This research assignment will require collaboration of group members as well as a well thought out division of labor approach. All members are expected to participate and share fully in the workload. All students are expected to participate in the project: research, production, and presentation.”
  - c. The final product for this assignment should consist of the following elements.
    - Slides that specifically address the content and questions below. These slides should break down information in a readable, understandable manner for other students. These slides should include facts and statistics/numerous visuals and clear summative answers to all of the questions below:
      - Is the religion an ethnic or universalizing religion? Why is it classified this way?
      - How many people practice the religion world-wide? Where does it rank in the number of followers compared to other religions?
      - What are the major beliefs and key people of the religion?
      - What are the major divisions and differences within this religion? Are there any conflicts within the religion or with other religions?
20. After the groups have finished with the presentation, restate the supporting question “What are the major religions in the world?” Say, “In order to answer this question, we are going to present our presentation to the class.” Distribute the [Major Religions Info Chart](#) to students. Say, “While other students are listening to the presentation, complete the major religions chart.” Collect and grade for content accuracy.
21. Post and read aloud the third supporting question for the instructional task: “What are the major languages spoken in the world and where did they come from?”

22. Say, “There are many aspects of a person that go into their culture. Language, like religion, is a crucial aspect of culture. Language is a system of communication through speech, a collection of sounds that a group of people understands to have the same meaning. The world has over 6,900 languages, but only 11 are spoken by more than 100 million people.” To activate prior knowledge, say, “What are some languages that you are aware of or can speak?” and allow time for students to answer.
23. To introduce students to the most commonly spoken languages in the world, show the 2 minute video [What's the most common language in the world?](#) by Now This World.
24. Show the 5 minute video [Where did English come from?](#) from Ted-Ed. Conduct a brief discussion about the origins of the English language. Possible questions:
  - a. What are the origins of English?
  - b. How do linguists categorize English?
25. Provide access to [Family of Language](#) from National Geographic and direct students to read independently. Then, show [How languages evolve](#) from Ted-Ed. Conduct a brief discussion about how languages evolve and how linguists (scientists who study languages) categorize them. Possible guiding questions:
  - a. How did languages evolve into so many?
  - b. How do linguists keep track of them all?
  - c. What are the two main problems linguists face when conducting language trees?
26. Say, “There are over 140 language families in the world. We are going to focus on the most popular language families.”
27. Say, “The relationship among these language families is often shown as a language tree. Today we are going to create language trees and conduct a gallery walk after to gather information.”
28. Provide students with access to [A Language Family Tree](#), from The Guardian and explain how the tree displays information. Students should use this example as they complete their language tree.
29. Divide the class into small groups using an established classroom routine and assign each group one of the following language families: Indo-European, Sino-Tibetan, Niger-Congo, Austronesian, Afro-Asiatic, Dravidian, Turkic, Japonic.
30. Provide students with supplies to create a poster presentation. Direct students to create a tree or branch representation that displays the major branches and groups of their language family. The poster presentation should also include the locations and number of speakers for their language family. After, have students conduct a [Gallery Walk](#). Have students complete the [Language Family Gallery Walk Graphic Organizer](#) during the gallery walk. After the gallery walk, ask students, “What is one thing you learned about language families from the gallery work?”
31. Post and read aloud the fourth supporting question for the instructional task: “How does culture affect the landscape of a place?”
32. Say, “Evidence of the culture, like religion and language, present in a place can sometimes be found on the landscape.”
33. Write the term *cultural landscape* on the board, and project the following definition<sup>3</sup>:
  - a. landscapes that have been affected, influenced, or shaped by human involvement

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<sup>3</sup> For more teacher background knowledge on “cultural landscape” see <https://tclf.org/places/about-cultural-landscapes>.

34. Conduct steps 1-2 of the lesson [Observing Physical and Cultural Landscapes](#) from National Geographic Education with the following adjustments:
- Step 1 requires the teacher to create index cards before the lesson. Click on “Preparation” to access this list. Add “place of worship” and “traffic sign (such as stop sign)” to the list of cultural landscape examples to represent the effect of religion and language on the cultural landscape.
  - Step 2: The instructor may choose to add or substitute images from this slideshow with other examples of cultural landscapes, including those that show the effect of religion and language on the cultural landscape. Possible examples: [Buddhist Temple Tianjin China](#), [this image](#) from the [Dia de Los Muertos](#) from *National Geographic Education*, [Alto sign](#)
  - The first “Extending the Learning” activity may be used as an optional homework assignment
35. To check for understanding, lead a class discussion on evidence of culture found on the landscape of the student’s community.
36. To conclude the instructional task, direct students to write an essay in response to the instructional task’s compelling question: “How does culture affect people and places?” Use the [Social Studies Extended Response Rubric](#) to grade the essay.

## Cultural Relativism<sup>4</sup>

### How is culture defined?

What if someone told you their culture was the internet? Would that make sense to you? Culture is the beliefs, behaviors, objects, and other characteristics shared by groups of people. Given this, someone could very well say that they are influenced by internet culture, rather than an ethnicity or a society! Culture could be based on shared ethnicity, gender, customs, values, or even objects. Can you think of any cultural objects? Some cultures place significant value in things such as ceremonial artifacts, jewelry, or even clothing. For example, Christmas trees can be considered ceremonial or cultural objects. They are representative in both Western religious and commercial holiday culture. In addition, culture can also demonstrate the way a group thinks, their practices, or behavioral patterns, or their views of the world. For example, in some countries like China, it is acceptable to stare at others in public, or to stand very close to others in public spaces. In South Africa, if you board a nearly empty bus or enter a nearly empty movie theater, it is regarded as polite to sit next to the only person there. On the other hand, in a recent study of Greyhound bus trips in the US, a researcher found that the greatest unspoken rule of bus-taking is that if other seats are available, one should never sit next to another person. Numerous passengers expressed that “it makes you look weird”. These are all examples of cultural norms that people in one society may be used to. Norms that you are used to are neither right nor wrong, just different. Picture walking into a nearly empty movie theater when visiting another country, and not sitting next to the only person in the theater. Another person walks up and tells you off for being rude. You, not used to these norms, feel confused, and anxious. This disorientation you feel is an example of culture shock.

### What is cultural relativism?

Have you ever seen or eaten food from another country, such as dried squid or fried crickets and think of it as weird and gross? This is an example of ethnocentrism! That means you use your own culture as the center and evaluate other cultures based on it. You are judging, or making assumptions about the food of other countries based on your own norms, values, or beliefs. Thinking “dried squid is smelly” or “people shouldn’t eat insects” are examples of ethnocentrism in societies where people may not eat dried squid or insects.

Is ethnocentrism bad or good? On the one hand, ethnocentrism can lead to negative judgments of the behaviors of groups or societies. It can also lead to discrimination against people who are different. For example, in many countries, religious minorities (religions that are not the dominant religion) often face discrimination. But on the other hand, ethnocentrism can create loyalty among the same social group or people in the same society. For example, during the World Cup or Olympics, you may tend to root for your own country and believe that the players or teams representing your country are much better. National pride is also part of ethnocentrism.

To avoid judging the cultural practices of groups that are different to yours, we can use the *cultural relativism* approach. Cultural relativism refers to not judging a culture to our own standards of what is right or wrong, strange or normal. Instead, we should try to understand cultural practices of other groups in its own cultural context. For example, instead

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of thinking, “Fried crickets are disgusting!” one should instead ask, “Why do some cultures eat fried insects?”. You may learn that fried crickets or grasshoppers are full of protein and in Mexico, it is famous Oaxaca regional cuisine and have been eaten for thousands of years as a healthy food source!

Some people worry that the concept of culture can also be abused and misinterpreted. If one culture behaves one way, does that mean all cultures can behave that way as well? For example, many countries and international organizations oppose the act of whaling (the fishing of whales) for environmental reasons. These environmental organizations say that there are not many whales left and such fishing practices should be stopped. However, other countries argue that whaling is a cultural practice that has been around for thousands of years. Because it may be part of a country’s oceanic culture, this country may say that such a cultural practice should not be opposed based on cultural differences, say, by an inland country that does not understand. Who gets to define what a moral cultural behavior is? Is whaling immoral? Two different cultures may have very different answers, as we saw in the above example. Another more extreme instance would be female genital cutting in some parts of the world. Locally, it is argued that the practice has cultural roots, but such a practice has raised concerns among many international human rights organizations.

Anthropologists say that when we think about different cultures and societies, we should think about their customs in a way that helps us make sense of how their cultural practices fit within their overall cultural context. For example, having several wives perhaps makes economic sense among herders who move around frequently. Through such an understanding, polygamy makes cultural sense.

**Folk Culture Presentation Handout**

Category	Information to Include
<b>Instructions</b>	<b>Answer as many questions below as possible for the assigned folk culture.</b>
<b>Biography &amp; Background</b>	Tell us about yourself! Where do you live? What language(s) do you speak?
<b>Lifestyle</b>	What's a typical day like for you? What kinds of recreation, music, dance, sports or talents are you into? What are you most attracted to? Clothing styles, body art, etc.
<b>Beliefs</b>	Tell us about your religion/spiritual beliefs. Tell us about your holidays and special ceremonies.
<b>Food &amp; Drink</b>	What are some of your favorite everyday meals/beverages? What are your go-to favorites for special occasions and holidays?
<b>Architecture</b>	What does your house look like? What do some of your cultural landscapes look like?
<b>Restrictions/taboo</b>	What are your cultural/social/food taboos?
<b>Future</b>	Where do you see yourself in the future?

**Folk Culture Speed Dating Chart**

Name of Culture	What did you learn about this culture?	What questions do you have about this culture?
Of all the cultures you learned about, which one would you like to learn more about? Why?		

**Major Religions Info Chart**

Religion	Ethnic or Universalizing	Number of Followers	Major Beliefs and Key Figures	Major Divisions and Conflicts
Hinduism				
Judaism				
Christianity				

Buddhism				
Islam				

**Language Families Gallery Walk**

Language Families	Est. Number of Speakers	Main Branches	Most Commonly Spoken Locations

## Instructional Task: Cultural Diffusion

### Unit 1: Geography and Culture; Topic 2: Cultural Geography

**Description:** Students examine methods of cultural diffusion and the effects of the diffusion of culture. This task will support students' knowledge of how geographical processes affect culture. At the end of the instructional task, students will answer the compelling question: "How does culture spread and change?"

**Suggested Time:** 10 class periods

**Materials:** [Diffusion Chart \(blank and completed\)](#); [Common Geography Terms: Diffusion](#); [Types of Cultural Diffusion](#); [Diffusion of World Religion](#); [Changes in Languages](#); [Introducing the Endangered Languages Project](#); [The Last Man to Speak Taushiro in the Amazon](#); [Geography of World Languages](#); [Language and Religion](#) map; [Language and Religion](#) lesson; [Development of Portable Belief Systems](#); [Diffusion of Major Religions](#); [Blank World Map](#); [Diffusion of World Religion](#) chart; [Language and Religion](#) map; [Language and Religion](#) lesson; [conversation stems](#); [discussion tracker](#); [Social Studies Extended Response Rubric](#)

#### Instructional Process:

1. Say, "In the last instructional task we learned about the relationship between culture and geography by examining culture and identity and the world's religions and languages. In this instructional task, we will explore the processes that cause cultures to diffuse and the effects of these diffusions."
2. Post and read aloud the compelling question for this instructional task: "How does culture spread and change?"
3. Post and read aloud the first supporting question for this instructional task: "How does culture diffuse from its hearth?"
4. Write the terms *hearth* and *diffusion* on the board, and project the following definitions:
  - a. *Hearth*: the point of origin.
  - b. *Diffusion*: the spreading of information, ideas, behaviors, and other aspects of culture from their hearths to wider areas.
5. Say, "Cultural diffusion is the spread of the various aspects of one or more cultures over time. There are many types of cultural diffusion. You will explore one of the following four types of diffusion: relocation, hierarchical, contagious, or stimulus. After researching the type of diffusion, one person from each group will present the definition and example to the class."
6. Divide students into four groups and assign each group a type of diffusion: relocation, hierarchical, contagious, or stimulus. Provide students with the [Diffusion Chart](#). Provide students access to [Common Geography Terms: Diffusion](#) from ThoughtCo and [Types of Cultural Diffusion](#) from Fiveable and instruct students to use the articles to record definitions for their assigned term. Then, direct each group to discuss examples of their assigned term and choose one example to share with the whole class. Direct one member from each group to present the definition of their diffusion and explain their example to the class. Direct students to complete the [Diffusion Chart](#) as other groups present.

7. Direct students to write a paragraph to analyze aspects of their culture by addressing the prompt: “How does culture diffuse from its hearth? Identify one aspect of your culture that has diffused from or into your culture and explain the process by which it diffused.” Collect and grade for content accuracy.
8. Post and read aloud the second supporting question for this instructional task: “How can cultural diffusion change culture and create new forms of cultural expression?”
9. Provide students with the [Changes in Languages](#) handout.
10. Direct students to read the definitions for globalization, acculturation, multiculturalism, and cultural convergence provided on the worksheet.
11. After students have read these definitions, instruct students to answer the first and second questions on the handout. Then, briefly discuss their responses.
12. Say, “Many languages are becoming extinct due to these factors.” Show students the 1 minute video [Introducing the Endangered Languages Project](#) and the 6 minute video [The Last Man to Speak Taushiro in the Amazon](#) from the New York Times. After, direct students to answer the second and third questions on the handout, “Why are languages, like Taushiro, going extinct?” and “How can we preserve these languages?” Then, briefly discuss their responses.
13. Divide the class into small groups using an established classroom routine.
14. Say, “Diffusion also leads to interactions between cultures and can create new forms of cultural expression.” Write the words *lingua franca*, *creolization*, *pidgins*, and *syncretism* to introduce students to these new vocabulary words. Provide students access to [Geography of World Languages](#) and instruct students to read independently. Then say, “In your own words, what does *lingua franca*, *creolization*, and *pidgins* mean?” and chart responses on the board for the class.
15. Show the video Cultural Syncretism in Central Asia from minute 1:38 to 5:29. Ask students to jot down a working definition of syncretism as they watch the video. Call on a few students to share their definitions and add the definition to the list of definitions on the board. Ask, “What are some examples of lingua franca, creolization, pidgins, and syncretism that you know of in your own culture or experience?” and take a few responses. (Note: Identify French-based Louisiana Creole language, or Kouri-Vini, as a local example of creolization if students do not.)
16. Instruct students to write an extended paragraph (half to one page but not a full essay) in response to the supporting question “How can cultural diffusion change culture and create new forms of cultural expression?” Collect and grade for content accuracy. Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.
17. Post and read aloud the third supporting question for this instructional task: “How has culture diffused in the past?”
18. Provide students access to the [Language and Religion](#) map from ESRI Geoinquiries and direct them to complete the [Language and Religion](#) lesson. Note: Teachers may project the map to the whole class as you move through the lesson, or provide access to the map in pairs, groups, or individual students as access to devices allow. The lesson contains an answer key, and students should not be provided with direct access to complete work independently.

19. Divide the class into small groups using an established classroom routine. Assign each group one of the following religions to research: Christianity, Islam, Buddhism, Hinduism, and Judaism. (Note: [Development of Portable Belief Systems](#) from Khan Academy and [Diffusion of Major Religions](#) may be used as sources.) Provide students with a [Blank World Map](#) and direct each group to create an annotated map<sup>5</sup> showing the earth of the religion, directions where the religion migrated, and how and why the religion diffused. Once students have completed their annotated map, direct one person from each group to post their annotated map in the classroom. Then, provide each student with the [Diffusion of World Religion](#) chart and direct students to complete the [Diffusion of World Religion](#) chart using a [gallery walk](#).
20. Say, “Cultural diffusion is still ongoing today. However, it has significantly changed. What is driving cultural diffusion today?” Student answers may reference communication technologies, such as the smart phones and the internet, and the time-space compression. Ask, “How does culture change as a result of diffusion from new technologies?” and take a few responses.
21. After these activities, conduct a whole-class with students based on the question: “How has culture diffused in the past?” Encourage students to use these [conversation stems](#) and assess student participation with a [discussion tracker](#).
22. To conclude the instructional task, direct students to write an essay in response to the instructional task’s compelling question: “How does culture spread and change?” Use the [Social Studies Extended Response Rubric](#) to grade the essay.

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<sup>5</sup> For more information on using annotated maps in the classroom see <https://worldhistoryconnected.press.uillinois.edu/10.1/webb.html>.

**Diffusion Chart**

Type of Diffusion	Definition	Example and Explanation
Relocation		
Hierarchical		
Contagious		
Stimulus		

**Diffusion Chart (completed)**

Type of Diffusion	Definition	Example and Explanation
Relocation	the spread of ideas or culture that occurs when people move to another location	Possible example: Immigrants from one country bring their food traditions to a new country and open a restaurant. The foreign cuisine becomes popular and spreads in the new country.
Hierarchical	the spread of ideas or culture that first occurs within people with the most power or the most connections.	Possible example: Popular music, fads, and trends tend to become popular in large cities with concentrated populations before spreading to other areas.
Contagious	the spread of ideas or culture that occurs through contact, or person to person	Possible example: "Going viral": people spread videos through social media platforms through virtual contact, or person to person.
Stimulus	ideas and culture spread to another area, but are adapted to the local culture and customs	Possible example: Fast food restaurants from the United States are popular in other parts of the world, but have different menus that suit local tastes.

### Changes in Languages

Essential Question: Why is language and culture constantly changing?

Use these definitions to address the essential question.

<a href="#">Globalization</a>	The expansion of economic, political, and cultural processes to the point that they become global in scale and impact. Globalization transcends boundaries and has outcomes that vary across places and scales.
<a href="#">Acculturation</a>	The adoption of certain cultural and social characteristics of one society by another society. It usually occurs when one society is controlled, either politically, economically, socially, or all of these, by another society.
<a href="#">Multiculturalism</a>	Culture found in a large, heterogeneous society that shares certain habits despite differences in other personal characteristics.
<a href="#">Cultural Convergence</a>	The tendency for cultures to become more alike as they increasingly share technology and organizational structures in a modern world united by improved transportation and communication.

After reading the definitions, answer these questions:

1. How are these definitions related and different from each other?
2. All of these definitions cause culture to change. Of these definitions, which do you think is causing languages and cultures to change the most?

Many languages are becoming extinct due to these factors. The mini-documentary [The Last Man to Speak Taushiro in the Amazon](#), from the New York Times, details the story of an endangered language.

3. Answer using the definitions described in the unit: Why are languages, like Taushiro, going extinct? How can we preserve these languages?

## The Geography of World Languages<sup>6</sup>

Pidgins, also called contact languages, which develop out of contact between at least two groups of people who do not share a common language. A pidgin language is usually a mixture of two or more languages, contains simplified grammar and vocabulary in, and is used for linguistic communication between groups, usually for trading purposes, who speak different languages. Pidgins are not first/native languages and are always learned as a second language. Many pidgins developed during the European colonization of Asia, Africa, and other areas of the world during the seventeenth to nineteenth centuries.

Creole languages are stable languages that develop from pidgins. Different from pidgins, creole languages are primary languages that are nativized by children. Additionally, creoles have their formal grammar and vocabulary. The grammar of a creole language often has grammatical features that differ from those of both parent languages. However, the vocabulary of a creole is primarily taken from the language of the dominant contact group.

In a world dominated by communication, globalization, science, and the Internet, English has grown to be the dominant global language. Today English is considered a lingua franca (a language mutually understood and commonly used in trade by people who have different native languages). It is now believed that 500 million people speak English as a second language. There are other lingua franca such as Swahili in Eastern Africa and Russian in nations that were once a part of the Soviet Union.

### Endangered Languages and Preserving Language Diversity

An isolated language is one that is unrelated to any other language. Thus it cannot be connected to any language family. These remote languages, and many others, are experiencing a mass extinction and are quickly disappearing off the planet. It is believed that nearly 500 languages are in danger of being lost forever. Think about the language you speak, the knowledge and understanding acquired and discovered through that language. What would happen to all that knowledge if your language suddenly disappeared? Would all of it be transferred to another language or would major components be lost to time and be rewritten by history? What would happen to your culture if your language was lost to time? Ultimately, is it possible that the Information Age is causing a Dis-information Age as thousands of languages are near extinction?

Consider the impact of language on culture, particularly religion. Most religions have some form of written or literary tradition or history, which allows for information to be transferred to future generations. However, some religions are only transferred verbally, and when that culture disappears (which is happening at a frightening rate), so does all of the knowledge and history of that culture.

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<sup>6</sup> This work [Introduction to Human Geography](#) by R. Adam Dastrup, MA, GISP is licensed under a [Creative Commons Attribution 4.0 International License](#). The original work is available at <https://humangeography.pressbooks.com/chapter/geography-of-languages/>. Return to [World Geography: How to Navigate This Document](#)

**Diffusion of World Religion**

<b>Religion</b>	<b>Hearth</b>	<b>How it Diffused</b>	<b>Current Locations</b>
Christianity			
Islam			
Buddhism			
Hinduism			
Judaism			

**Blank World Map<sup>7</sup>**



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<sup>7</sup> This image is in the public domain and is available online at <https://upload.wikimedia.org/wikipedia/commons/d/d6/Eckert-iv-atlantic.jpg>  
Return to [World Geography: How to Navigate This Document](#)

## Unit One Assessment

**Description:** Students participate in a [Socratic Seminar](#) addressing the unit question: “What is the relationship between geography and culture?”

**Suggested Time:** 2 class periods

### Student Directions:

Participate in a [Socratic Seminar](#) in response to the question: What is the relationship between geography and culture?

As you respond to the prompt, follow the directions below.

- Address all parts of the prompt.
- Include accurate information and examples from your knowledge of World Geography.
- Use relevant evidence from the sources to support your response.

### Resources:

- [Conversation Stems](#)
- [Socratic seminar one-pager](#)
- [Discussion Tracker](#)

**Teacher Notes:** In successfully completing this culminating writing task, students meet the expectations for the following social studies GLEs: WG.1.1, WG.1.3, WG.1.4, WG.3.1, WG.3.2, WG.3.3, WG.4.1, WG.4.2, WG.4.3, WG.4.4, WG.4.5, WG.5.1, WG.5.5, WG.6.1.

Use a discussion tracker to keep track of students’ contributions to the conversation and use this information to assign a grade to students.

## Unit Two Overview

### Unit Two: Population and Migration

**Description:** Students study the causes and effects population distribution, density, growth, and decline and causes and effects of migration. Students will analyze geographic representations, models, and theories using a variety of geographic primary and secondary sources in order to develop a claim about how factors of population and migration affect the economy, culture, and politics of a place.

**Suggested Time:** 8 weeks

Content	Claims
Unit 2: Population and Migration	How do changes in population or migration affect the economy, culture, and politics of a place?

#### Topics (GLEs):

1. [Population](#) (WG.3.3, WG.4.1, WG.4.2, WG.4.5, WG.5.2, WG.5.4, WG.6.3)
2. [Migration](#) (WG.1.4, WG.3.1, WG.3.2, WG.3.3, WG.4.4, WG.4.5, WG.5.1, WG.6.2, WG.6.3)

#### Use these sample instructional tasks:

- [Population Distribution and Density](#)
- [Population Growth and Decline](#)
- [Causes of Migration](#)
- [Effects of Migration](#)

**Culminating Unit Assessment:** Students write a well-developed essay addressing the unit question: Based on your knowledge of World Geography, evaluate how migration or changes in population affect the economy, culture, and politics of a place.

## Unit Two Instruction

**Topic One:** Population (WG.3.3, WG.4.1, WG.4.2, WG.4.5, WG.5.2, WG.5.4, WG.6.3)

**Connections to the unit question:** Students will examine population patterns, trends, and theories through geographic and demographic representations and models. Students will use their knowledge of population to evaluate how changes in population affect the economic, cultural, and political aspects of a place.

**Suggested Time:** 22 class periods

**Use this sample instructional task:**

- [Population Distribution and Density](#)
- [Population Growth and Decline](#)

**To explore these compelling and supporting questions:**

- Why are human populations distributed the way they are?
- How do physical factors affect population distribution?
- What human factors affect population distribution?
- How do geographers use population density to understand how human populations are distributed?
- How will the world's population change in the future?
- How did the world's population change in the past?
- Why is Thomas Malthus' theory of overpopulation inaccurate?
- How do geographers use demographic data to analyze populations?
- Why do demographic measurements in countries change over time?

**That students answer through this assessment:**

- Students engage in a class discussion addressing the supporting question: How do physical factors affect population distribution?
- Students make predictions on the effects of physical and human factors that affect population distribution and assess their predictions.
- Students write a paragraph that answers the supporting question: "What human factors that affect population distribution?"
- Students calculate the arithmetic density of countries to draw conclusions about population density.
- Students calculate the physiological population density of countries to draw conclusions about population density.
- Students calculate the agricultural population density of countries to draw conclusions about population density.
- Students engage in a class discussion addressing the supporting question: "How do geographers use population density to understand how human populations are distributed?"

- Students write a paragraph addressing the compelling question for the instructional task: "Why do people live where they do?"
- Students engage in a class discussion addressing the supporting question: "How did the world's population change in the past?"
- Students write a paragraph answering the supporting question: "Why is Thomas Malthus' theory of overpopulation inaccurate?"
- Students analyze a country's population pyramid in small groups and complete the [Population Data Worksheet](#).
- Students write a paragraph answering the supporting question: "How do geographers use demographic data to analyze populations?"
- Students write a paragraph outlining the stages of the demographic transition model and make a prediction on the future population growth of an assigned country.
- Students participate in a class discussion on the supporting question: "Why do demographic measurements in countries change over time?"
- Students write an essay in response to the instructional task's compelling question: "How will the world's population change in the future?"

## World Geography Instructional Task: Population Distribution and Density

### Unit 2: Population and Migration, Topic One: Population

**Description:** Students investigate the factors that influence population distribution and population density at different scales. This instructional task will support students’ understanding of the factors that affect population distribution and density and how geographers use these measures to understand populations. At the end of the instructional task, students will answer the compelling question: “Why are human populations distributed the way they are?”

**Suggested Time:** 7 class periods

**Materials:** [Population distribution map](#); [Population Distribution, The World Factbook: China](#); China’s [physical geography](#) and [climate](#); [population density map of China](#); [Human Factors that Influence Population Distribution](#); [Urbanization](#); [conversation stems](#); [discussion tracker](#); [Most Densely Populated Countries](#); [Population density, 2017](#); [Population Profiles](#); [Population Density worksheet](#); [CIA World Factbook](#); [conversation stems](#); [discussion tracker](#); [Social Studies Extended Response Rubric](#)

#### Instructional Process:

1. Say, “In the previous unit we analyzed the relationship between culture and geography. In this instructional task, we will examine why people live where they do. This is important because understanding the distribution and density of human populations is essential to understanding cultural, political, and economic patterns.”
2. Explore these questions with students to check background knowledge and lead a brief discussion based on their input:
  - a. What do you think of when you hear the word ‘population?’
  - b. What can you infer about a place based on its population?
3. Post and read aloud the compelling question for the instructional task: “Why are human populations distributed the way they are?”
4. Say, “Today we are going to learn about population distribution.” Write the term *population distribution* on the board, and project the following definition:
  - a. the pattern of human settlement, or where people live on the earth.
5. Post and read aloud the first supporting question for the instructional task: “How do physical factors affect population distribution?”
6. “Say, there are many physical factors influencing population distribution.” To further build understanding of population distribution, provide access to this [population distribution map](#) from BBC. Say, “The ecumene is the part of the world where people permanently live.” Ask students, “According to this map, what are some physical characteristics that make places habitable for people?” Students should point out that large populations live near coastlines. Point out the locations of major rivers, including the Mississippi and Nile Rivers. Ask, “How does

- the proximity to rivers affect human settlements? Why is that?" Ask, "Are there any other physical features that will affect whether humans choose to settle in a location?"
7. Provide students access to [Population Distribution](#) and direct them to read the sections "What is Population Distribution?" and "Physical Factors that Influence Population Distribution" independently. After reading the article, lead students in a brief discussion to check for understanding. Possible guiding questions:
    - a. How does population distribution differ from population density?
    - b. How do specific landforms and physical features identified in the article affect population density?
  8. Divide the class into small groups using an established classroom routine.
  9. Say, "Let's look at an example of how physical factors affect population distribution. According to [The World Factbook: China](#), China's terrain is 'mostly mountains, high plateaus, deserts in west; plains, deltas, and hills in east' and its climate is 'extremely diverse; tropical in south to subarctic in north.'" Project maps of China's [physical geography](#) and [climate](#). Ask, "Based on China's physical features, where do you predict most of China's population lives?" and take a few responses. Then, provide students with a [population density map of China](#) and assess their predictions using information from the section "Population distribution" from [China's entry in the World Factbook](#).
  10. Conduct a brief discussion on the supporting question: "How do physical factors affect population distribution?"
  11. Post and read aloud the second supporting question for the instructional task: "What human factors affect population distribution?"
  12. Say, "There are also many human factors influencing population distribution." Provide access to [Human Factors that Influence Population Distribution](#) from Albert and [Urbanization](#) by National Geographic. Instruct students to read the articles independently. Possible guiding questions:
    - a. What are the human factors that can influence population distribution?
    - b. How did industrialization lead to urbanization (the growth of cities)?
  13. Say, "According to [The World Factbook: China](#), the urban population of China is 62.5 percent of the total population." Project a [population density map of China](#). Ask, "Based on China's population density, where do you predict major cities are located in China?" then take a few responses. Project a [political map of China](#) and assess students' predictions. Note: China's major urban centers in 2021 and their populations are as follows: 27.796 million Shanghai, 20.897 million Beijing (capital), 16.382 million Chongqing, 13.794 million Tianjin, 13.635 million Guangzhou, 12.592 million Shenzhen.<sup>8</sup>
  14. Direct students to write a paragraph answering the first supporting question for the instructional task: "What human factors affect population distribution?" Collect and grade for content accuracy.
  15. Post and read aloud the third supporting question for the instructional task: "How do geographers use population density to understand how human populations are distributed?"
  16. Say, "Today we are going to learn about population density." Write the term *population density* on the board, and project the following definition:
  17. measure of the average population per square mile or kilometer of an area; measures how crowded a place is. Provide access to [Most Densely Populated Countries](#) from Our World in Data and direct students to read the text

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<sup>8</sup> <https://www.cia.gov/the-world-factbook/countries/china/> (Major urban areas - population)

and study the map independently. (Note: The population density measured in this article and map is arithmetic density.)

18. Project the map [Population density, 2017](#).
19. Say, "There are three different types of population density: arithmetic population density, physiological population density, and agricultural density." Provide access to [Population Profiles](#). Direct students to read independently and complete the definition column on the [Population Density worksheet](#).
20. Divide the class into pairs using an established classroom routine and assign each pair one of the following pairs of countries: (Germany and Bangladesh; United States and Egypt; China and Zimbabwe; Brazil and the Netherlands; Nigeria and Italy; Kazakhstan and France; Russia and South Africa). Provide students access to the [CIA World Factbook](#) and instruct students to calculate the physiological density of the assigned countries using the total population and total land area. Direct students to record their findings on the [Population Density worksheet](#).
21. Ask, "Based on your country's arithmetic density, how would you describe the population density of your two countries in relation to each other?" and take a few responses. Have students record their descriptions on the [Population Density worksheet](#).
22. Say, "The physiological population density of a country gives geographers information on the pressure placed on arable land by the human population. A higher physiological population density suggests that the food produced may not be enough to support the human population. Next, instruct students to calculate the physiological density of their assigned countries using the total population and total arable land information from the [CIA World Factbook](#). (Note: Students will need to calculate the total arable land using the percentage of total arable land and total land provided in the source.)
23. Ask, "Based on each country's physiological density, what conclusion can you make about the arable land in these countries?" Students should draw conclusions that demonstrate that they understand the definition and importance of arable land for human populations. Have students record their conclusions on the [Population Density worksheet](#).
24. Say, "Agricultural population density is another measure of population density. It is calculated by dividing the area of farmland by the number of farmers. This gives geographers information on how efficient and technologically advanced the agricultural methods are for a given area. A low agricultural density indicates more advanced technology and methods. Instruct students to calculate the agricultural densities of their pair of countries. Ask, "Which of the countries has the lower agricultural density and which one has the higher agricultural density?" Direct students to record their findings on the [Population Density worksheet](#).
25. After students complete these activities, conduct a whole group discussion on how arithmetic, physiological, and agricultural densities help geographers study populations. Ask, "How do geographers use population density to understand how human populations are distributed?" Encourage students to use these [conversation stems](#) and assess student participation with a [discussion tracker](#).
26. Instruct students to write an extended paragraph (half to one page but not a full essay) in response to the compelling question: "Why are human populations distributed the way they are?" Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.

## Population Profiles <sup>9</sup>

Demographers use various ways to measure and analyze population density. The arithmetic density, also called population density, of a population, is the total number of people in proportion to the area of land. This may not be the best indicator of actual population density because there are many environments humans cannot live comfortably in, including deserts, arctic, tropical forests, and mountainous regions. It also does not consider if the ground is used for producing food. The physiological density of a population is the total population in proportion to the area of arable land suited for agriculture. Even more specifically, agricultural density refers to the number of farmers available compared to arable land. A high agricultural density suggests that the available agricultural land used for farming and the farmers who are capable of producing and harvesting food is reaching its limit for that region. If the demand for food continues or rises, the risk is that there will not be enough arable land to feed their people. In contrast, an area with a low agricultural density has a higher potential for agricultural production. Economically, a low agricultural density would be favorable for future growth.

To understand these methods, let us look at an example. Let us say we have City X, which is home to 10,000 people, 6,000 of whom are farmers, and has a square area of 10,000 kilometers and a farmable square area of 4,000 kilometers. If we look at the arithmetic density, we come up with a population density of 1 person per kilometer (10,000 people/10,000 kilometers). If we look at the agricultural density, we come up with 1.5 people per kilometer (6,000 farmers/4,000 kilometers of farmable land).

Finally, if we look at the physiological density, we come up with 2.5 people per kilometer (10,000 people/4,000 kilometers of farmable land). Each of these numbers tells us something different.

Of these three methods, physiological density is considered the best way to measure population density because it is most reflective of population pressure on arable land. Arable land is any land that is suitable for growing crops. The higher the population density we find from this method, the faster the arable land is going to be used up or reach its output limit. That means there will not be enough land for the people that are coming into the area. In our example, if 100,000 more people moved to the same area, we would end up with a physiological density of 27.5 people per square kilometer (110,000 people/4,000 kilometers of farmable land).

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<sup>9</sup> This work by R. Adam Dastrup, MA, GISP is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/), except where otherwise noted. The original work is available at <https://humangeography.pressbooks.com/chapter/2-1/>.

Definition and Formula	Country 1 Calculation	Conclusions	Country 2 Calculation	Conclusions
arithmetic density:       Total Population / Total Land Area (square ft.)				
physiological density:       Total population / Total Arable Land (square ft.)				
agricultural density:       Number of farmers / Total Arable Land (square ft.)				

## World Geography Instructional Task: Population Growth and Decline

### Unit 2: Population and Migration, Topic 1: Population

**Description:** Students investigate theories and models of population growth and decline by analyzing population pyramids and geographic data at different scales and different geographic regions. This instructional task will support students' understanding of trends and patterns of population growth and decline. At the end of the instructional task, students will answer the compelling question: "How will the world's population change in the future?"

**Suggested Time:** 15 class periods

**Materials:** [World population from 10,000 BC to today](#); [How has the world population growth rate changed?](#) [Population, Sustainability, and Malthus](#); [The Malthusian Catastrophe](#); [Proving Malthus wrong, one farm at a time](#); [S-I-T Teaching Strategy from Facing History and Ourselves](#); [Future Population Growth](#); [World Population Pyramid](#); [Population Pyramids: Powerful Predictors of the Future - Kim Preshoff](#); [Global Population Trends](#); [Key Factors Influencing Population Change](#); [Population Data Worksheet](#); [Population and Migration](#); [population pyramid of Niger](#); [population pyramid of Germany](#); [50 years ago the average woman had five children, since then the number has halved](#); [Why is population growth a temporary phenomenon?](#); [Demographic Transition Overview](#); [International Data Base](#); [One Child Policy in China](#); [Global Population Growth](#); [conversation stems](#); [discussion tracker](#); [Social Studies Extended Response Rubric](#)

#### Instructional Process:

1. Say, "In the previous instructional task, we identified the factors that influence human population distribution and population density at different scales. In this instructional task, we will explore the uses of demographic data. 'Demography' is the study of populations. We will examine how mortality rates and fertility rates change and how they affect population growth and decline. We will also explore theories of population growth and decline. The compelling question "How will the world's population change in the future?" In order to predict how the world's population will change in the future, we will start with investigating how the world's population has changed in the past."
2. Post and read aloud the first supporting question for the instructional task: "How did the world's population change in the past?"
3. Provide students access to [World population from 10,000 BC to today](#) and [How has the world population growth rate changed?](#) by Our World in Data. Direct students to read and study the graphs independently. Then, lead a brief discussion on past trends in global population growth to check for understanding. Possible guiding questions include:
  - a. How has the population of the world changed over time?
  - b. How is population growth and rate of population growth different?
4. Say, "Before we think about how to predict future population trends, we are going to explore one prediction that was made in the past. In 1798, Thomas Malthus published an essay which theorized that future population growth would outpace agricultural production of food, leading to massive famines. His ideas on overpopulation

are known as the Malthusian Theory. Those who agree with Malthus' concerns on overpopulation today are referred to as Neo-Malthusians."

5. Post and read aloud the second supporting question for the instructional task: "Why was Thomas Malthus' theory of overpopulation inaccurate?"
6. Show the 12 minute video [Population, Sustainability, and Malthus](#) from Crash Course. Then, project [The Malthusian Catastrophe](#) chart. Lead students in a brief discussion about the Malthus' theory. Potential questions include:
  - a. Why did Malthus believe human population growth would be limited?
  - b. What is the relationship between agriculture and human population growth in Malthusian theory?
  - c. How did contemporary events influence Malthus' theory?
  - d. What contemporary events did Malthus' theory not take into account?
  - e. Why was Malthusian theory influential?
7. Provide students access to [Proving Malthus wrong, one farm at a time](#) from the Peace Corps and direct students to read independently. Direct students to write down one surprising fact, one interesting fact, and one troubling fact as they read ([S-I-T Teaching Strategy from Facing History and Ourselves](#)). Lead a brief discussion on the reading using their observations and the supporting question, "Why was Thomas Malthus' theory of overpopulation inaccurate?" Direct students to record their thoughts and the claims and evidence used by other students.
8. Direct students to write a paragraph answering the second supporting question for the instructional task: "Why is Thomas Malthus' theory of overpopulation inaccurate?"
9. Post and read aloud the third supporting question for the instructional task: "How do geographers use demographic data to analyze populations?"
10. Divide the class into small groups using an established classroom routine.
11. Provide students access to [Future Population Growth](#) from Project X by the OER Project and have them read independently. After reading, instruct students to discuss the following questions in small groups:
  - a. How has the global mortality rate impacted population growth?
  - b. Why have fertility rates decreased in the recent past?
  - c. How do global population trends differ from national or regional trends?
12. Say, "A useful tool for studying population is a population pyramid. These pyramids provide information on the age and gender<sup>10</sup> of the population, but they can also be useful tools to predict other demographic data of a place including birth rates, death rates, and life expectancy."
13. Provide students access to the [World Population Pyramid](#) from census.gov. Say, "The vertical axis is divided into age groups. The male population is shown on the left and the female population on the right. The horizontal axis displays the percentage of males and females of the total population." Show the video [Population Pyramids: Powerful Predictors of the Future - Kim Preshoff](#). After watching the video, briefly discuss the following questions as a class:
  - a. Why do geographers and social scientists organize demographic data into population pyramids?
  - b. What can geographers/demographers predict from population pyramids?

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<sup>10</sup> For more information on how gender is used in demographic data the instructor may read [Our World in Data Gender Ratio](#).

- c. What process occurs that changes a country's population pyramid?
  - d. How will a country's population change in the next few decades if the majority of its population is young? Why?
  - e. How will a country's population change in the next few decades if the majority of its population is concentrated in the middle of its population pyramid? Why?
14. Say, "Demographers use a variety of terms when analyzing population pyramids." Provide students with access to [Global Population Trends](#) and [Key Factors Influencing Population Change](#) and instruct them to read independently. Then, direct students to write definitions for the following terms in their own words on the [Population Data Worksheet](#): total fertility rate, crude birth rate, crude death rate, infant mortality rate, life expectancy.
  15. Next, say, "Data from population pyramids help geographers identify population trends and help determine the economic development of a country." Project the population pyramids from [Population and Migration](#) from the BBC and read the text aloud.
  16. Say, "Let's analyze some population pyramids together. We will analyze the population pyramids of a less developed country (LDC), Niger, and a more developed country (MDC), Germany." Project the [population pyramid of Niger](#) and say, "Niger's three longest bars are at the bottom of the pyramid and represent ages 0 to 14. Does this country have a high or low total fertility rate? Is the population of this country increasing or decreasing?" Project the [population pyramid of Germany](#) from the International Data Base at census.gov. Say, "If a population pyramid has a narrow base and wider midsection, like Germany, the country has a lower birth rate and an ageing population. Is the population of Germany increasing or decreasing?"
  17. Divide the class into small groups using an established classroom routine and direct each group to select a different country and analyze its population pyramid (Suggested source: [International Data Base Census.org](#)). Have groups complete the second page of the [Population Data Worksheet](#). Collect and check for content accuracy.
  18. Direct students to write a paragraph in response to the supporting question: "How do geographers use demographic data to analyze populations?" Encourage students to use information from the secondary sources analyzed in the activity to support their claim. Collect and grade for content accuracy.
  19. Post and read aloud the fourth supporting question for the task: "Why do demographic measurements in countries change over time?"
  20. Say, "The total fertility rate plays a large role in the population growth of a country. Changes in the total fertility rate (TFR) of a country can occur for many reasons, including changes in the roles of women in a society." Provide students with access to [50 years ago the average woman had five children, since then the number has halved](#) from Our World in Data and direct them to read independently. After reading, lead the class in a brief discussion on why the total fertility has fallen globally. Possible questions include:
    - a. Why does the total fertility rate change as women's role in society changes?
    - b. How does health and advances in medicine affect the total fertility rate?
    - c. Using the information from the article, what predictions can you make about future population growth?
  21. Say, "Demographic measurements also change as a country develops economically. Changes in birth rates and life expectancies are shaped by a country's transition to an industrial society. Geographers use the Demographic

Transition Model (DTM) to show five stages of population change that countries go through as they economically develop.” Divide students into five small groups using an established classroom routine. Provide students access to [Why is population growth a temporary phenomenon?](#) from Our World in Data and direct them to read the text independently. After reading, instruct students to discuss the following questions in small groups:

- a. How is data used in the demographic transition model?
  - b. What are the factors that impact the data used in the demographic transition model?
  - c. How can the demographic transition model be used to predict future population growth?
22. Assign each group a country. Say, “Now you will investigate the economic development of your assigned country using demographic data and the demographic transition model. Provide students access to the [International Data Base](#) from census.gov and project the [Demographic Transition Overview](#) chart. Direct students to use the population pyramid to determine which stage of the demographic transition model their country is currently in. Then, allow each group to share their findings with the entire class.
23. Instruct students to write a paragraph outlining the stages of the demographic transition model and make a prediction on the future population growth of their assigned country. Collect and grade for content accuracy.
24. Say, “Governments can also influence the total fertility rate of a country with policies that encourage or discourage women from having children. One example of a government policy that discouraged women from having children, or an anti-natalist policy, was China’s One child policy.” Provide students access to [One Child Policy in China](#) from the BBC and direct them to read independently. Explain to students that the one-child policy in China has ended, but a two child policy is still in place.<sup>11</sup>
25. Project the Patterns and Trends for China data from the [International Data Base](#) from census.org. (Note: The population pyramid defaults to the most current year. The year can be adjusted to the past and future by moving the circle on the dotted line under the pyramid.) Lead a discussion on the causes and effects of China’s One Child policy. Direct students' attention to the relevant data under Patterns and Trends as you pose questions and they discuss. Possible guiding questions:
- a. What was the purpose of the One Child policy?
  - b. Did the population of China grow or decline during the years the One Child policy was in effect?
  - c. Did the annual growth rate grow or decline during the years the One Child policy was in effect? (Note: You may need to explain that while the population was growing, the rate at which it was growing declined. Display China’s population pyramids from 1990, 2000, 2010, and 2020 to show how the growth rate changed over time.
  - d. Using information from China's 2000 population pyramid, how did the One Child policy affect the gender ratio of children born between 1996 to 2000? (Note: the natural gender ratio is 105 males to 100 females.<sup>12</sup> According to this population pyramid, the ratio of children born between 1996 and 2000 was 116.2478 males to 100 females.)

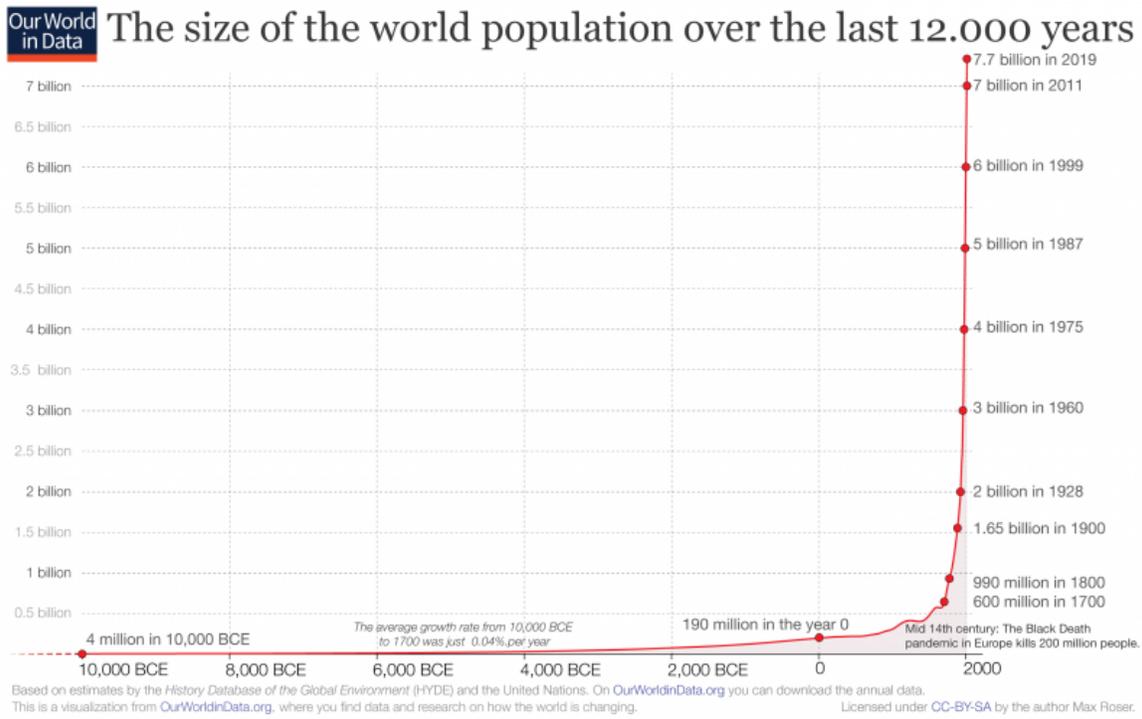
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<sup>11</sup> <https://www.brookings.edu/articles/the-end-of-chinas-one-child-policy/>

<sup>12</sup> <https://ourworldindata.org/gender-ratio#biology-or-discrimination-which-countries-have-skewed-sex-ratios-at-birth>

- e. How can government policies affect trends in population growth? (Note: Explain that some countries also use government policies to increase fertility rates, such as expanding free childcare and increasing paid maternity and paternity leave.)
26. Show the 9 minute video [Global Population Growth](#) by Hans Rosling. After watching the video, lead students in a brief discussion about overpopulation. Possible guiding questions include:
    - a. According to Hans Rosling, how did the world population change from 1960 to 2010?
    - b. What predictions does Hans Rosling make about future population growth?
    - c. According to Hans Rosling, what is the best way to curtail overpopulation?
  27. Conduct a class discussion on the supporting question: “Why do demographic measurements in countries change over time?” Encourage students to use the [conversation stems](#) and assess student participation with a [discussion tracker](#).
  28. To culminate the instructional task, direct students to write an essay in response to the instructional task’s compelling question: “How will the world’s population change in the future?” Encourage students to use evidence from sources and incorporate the Demographic Transition Model in their analysis. Use the [Social Studies Extended Response Rubric](#) to grade the essay.

### World population from 10,000 BC to today<sup>13</sup>



The chart shows the increasing number of people living on our planet over the last 12,000 years. A mind-boggling change: The world population today that is 1,860-times the size of what it was 12 millennia ago when the world population was around 4 million – half of the current population of London.

What is striking about this chart is of course that almost all of this growth happened just very recently. Historical demographers estimate that around the year 1800 the world population was only around 1 billion people. This implies that on average the population grew very slowly over this long time from 10,000 BCE to 1700 (by 0.04% annually). After 1800 this changed fundamentally: The world population was around 1 billion in the year 1800 and increased 7-fold since then.

Around 108 billion people have ever lived on our planet. This means that today’s population size makes up 6.5% of the total number of people ever born.<sup>2</sup>

For the long period from the appearance of modern Homo sapiens up to the starting point of this chart in 10,000 BCE it is estimated that the total world population was often well under one million.<sup>3</sup>

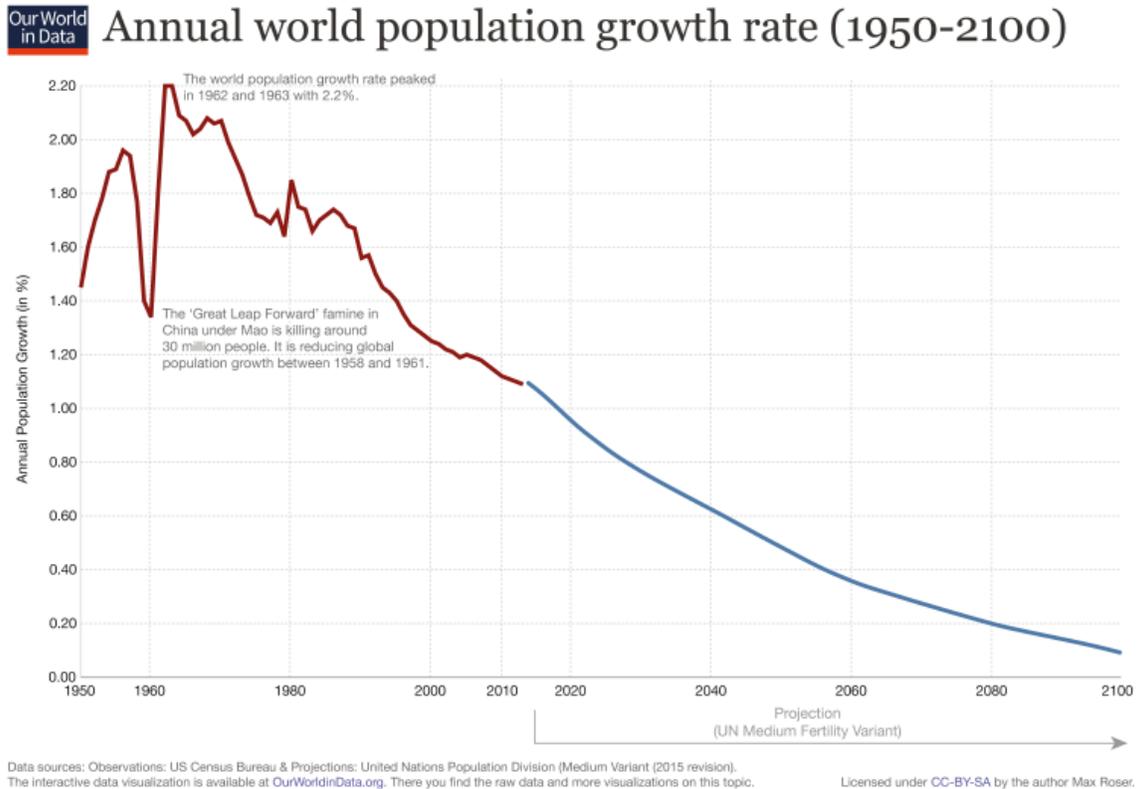
In this period our species was often seriously threatened by extinction.<sup>4</sup>

<sup>13</sup> This work by Our World in Data is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). The original work is available at <https://ourworldindata.org/world-population-growth#world-population-from-10-000-bc-to-today>.

The interactive visualization is [here](#). And you can also download the [annual world population data](#) produced by Our World in Data.

A number of researchers have published estimates for the total world population over the long run, we have brought these estimates together and you can explore these various sources [here](#).

## How has the world population growth rate changed?<sup>14</sup>



In terms of recent developments, the data from the UN Population Division provides consistent and comparable estimates (and projections) within and across countries and time, over the last century. This data starts from estimates for 1950, and is updated periodically to reflect changes in fertility, mortality and international migration.

In the section above we looked at the absolute change in the global population over time. But what about the rate of population growth?

The global population growth rate peaked long ago. The chart shows that global population growth reached a peak in 1962 and 1963 with an annual growth rate of 2.2%; but since then, world population growth has halved.

For the last half-century we have lived in a world in which the population growth rate has been declining. The UN projects that this decline will continue in the coming decades.

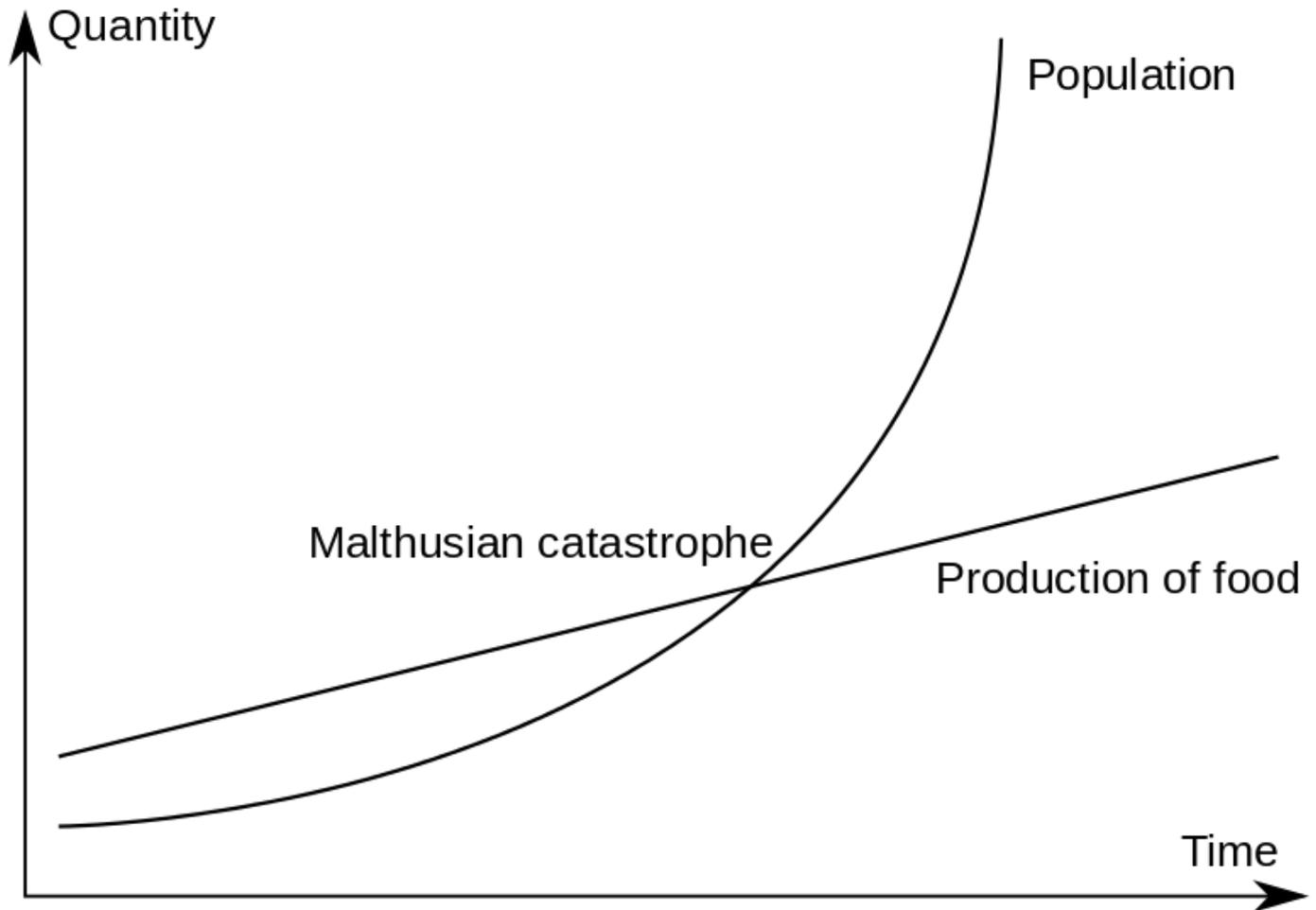
A common question we're asked is: is the global population growing exponentially? The answer is no. For population growth to be exponential, the growth rate would have to be the same over time (e.g. 2% growth every year). In absolute terms, this would result in an exponential increase in the number of people. That's because we'd be multiplying an ever-

<sup>14</sup> This work by Our World in Data is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). The original work is available at <https://ourworldindata.org/world-population-growth#how-has-the-world-population-growth-rate-changed>.

larger number of people by the same 2%. 2% of the population this year would be larger than 2% last year, and so on; this means the population would grow exponentially.

But, as we see in this chart, since the 1960s the growth rate has been falling. This means the world population is not growing exponentially – for decades now, growth has been more similar to a linear trend.

### The Malthusian catastrophe<sup>15</sup>



<sup>15</sup> Illustration by Kravietz. Licensed under the [Creative Commons Attribution-Share Alike 3.0 Unported license](https://creativecommons.org/licenses/by-sa/3.0/). Available online at [https://en.wikipedia.org/wiki/Malthusianism#/media/File:Malthus\\_PL\\_en.svg](https://en.wikipedia.org/wiki/Malthusianism#/media/File:Malthus_PL_en.svg)

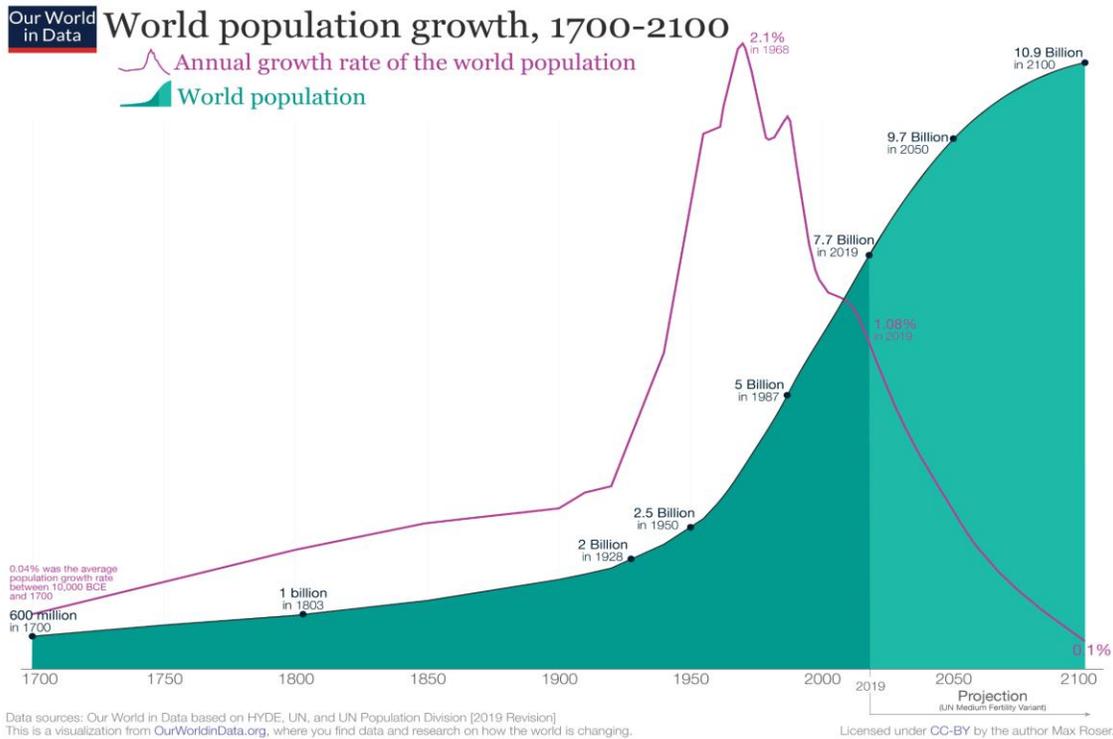
### Future Population Growth Data Introduction<sup>16</sup>

There are a lot of us living on this planet. But the rate of population growth has slowed in recent decades. Can data help us predict our population future?

#### Population growth—past, present, and future

Over the course of the last school year, you’ve probably noticed something about population on this planet: there are more of us here than there used to be. We know approximately how many people inhabit this planet today (around 7.7 billion in 2019). We have reasonably good estimates for the recent past (2 billion in 1928; 1 billion in 1803). But the further back we go, the murkier the data gets. The same is true for the future—the further we travel forward in time, the less certain we can be about how many people there will be on Earth. For much of human history, the global population was much smaller than it currently is, and it grew at a relatively slow rate. But during the twentieth century, our global population quadrupled. Since then, population growth appears to be slowing down. Though our overall population has continued to rise, the rate of its increase started to decline in the 1960s. Today, the global population grows by about 1 percent each year. You can see these trends illustrated in Chart 1.

Chart 1:



Will these trends continue? That’s a really important question. Population affects things like available space and resources, which are increasingly limited. The more people there are on Earth, the more food, fuel, space, and materials are needed to sustain them. Think of it this way: The number of people keeps changing, but the planet and the

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resources on it are a lot more fixed. That’s a problem. That’s part of the story. But there’s more to it. Humans aren’t just stomachs—they’re also brains. As our population has grown, so has the pace of innovation in technologies and institutions that have allowed us to use our limited resources in new problem-solving ways. Our recent past has shown that more people can mean more food, new fuels, and more useful innovations. We just might be more brain than stomach.

**Predicting the future with data**

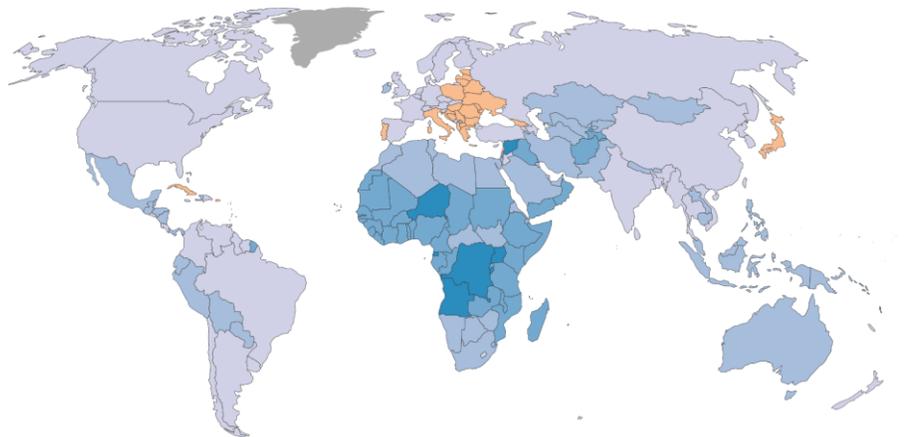
Whether you think population growth is a problem for the future or might provide solutions to our most pressing problems, it will be central to our future as a species on this planet. Scholars have spent a lot of time trying to predict what our population will look like in the next century. To understand where we might be headed, we need to know where we’ve been.

As one example, explore the two maps below. Map 1 shows past data (1950–2015) about population growth rate by country. Map 2 uses past data, like that in Map 1, to make predictions about the future (2015–2100) of population growth by country. Note: While exploring these maps, you might see the phrase “medium variant” pop up. Don’t worry too much about what it means—just think of it as the most likely scenario.

Map 1:

**Population growth rate, 2020**

Annual rate of population change from 1950, including UN projections to 2099 based on its median scenario. This takes births, deaths and migration into account.

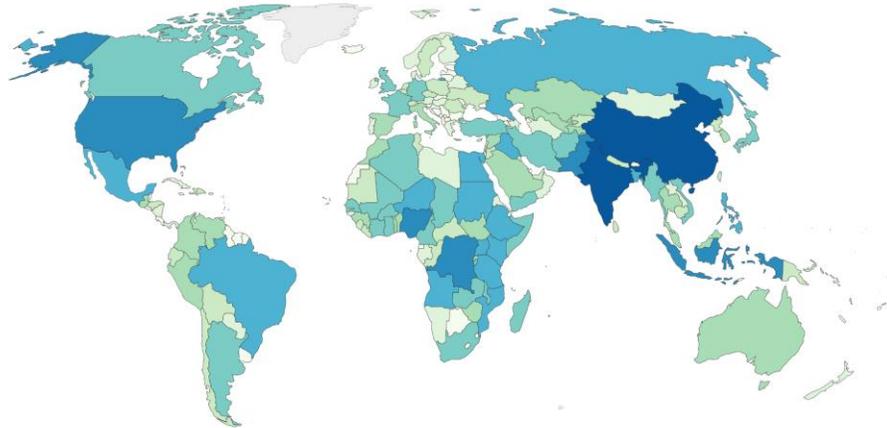


Source: United Nations – Population Division (2019 Revision) OurWorldInData.org/world-population-growth/ • CC BY

Map 2:

Population projection by the UN, 2100

Shown is the total population since 1950 and the Medium Variant projections by the UN Population Division until 2100.



Source: United Nations – Population Division (2019 Revision)

OurWorldInData.org/future-population-growth/ • CC BY

By exploring these two maps as well as Chart 1, you can see that there are past trends that scholars use to predict the future of the global population. The twentieth century saw huge increases in both our population and the rate at which it grew. More recently, the global rate of growth has started to slow, and we expect that trend to continue. But by switching scales, we see dramatic differences in the rates of population growth. While Eastern Europe has seen its population shrink in recent years, many countries in Sub-Saharan Africa are experiencing higher than average growth rates. But why has any of this happened? What causes the population size to change?

**Three drivers of population growth**

There are three main factors that affect population growth in a country or region: mortality, fertility, and migration. Just so we're on the same page, let's define them:

- Mortality: Death rates across a country, region, or globally.
- Fertility: The average number of children born per women.
- Migration: Migration into (immigration) or migration out of (emigration) a region/country.

### Global Population Trends<sup>17</sup>

A region's population will grow as long as their crude birth rates are higher than their crude death rates. A crude birth rate (CBR) is the total number of live births for every 1,000 people in a given year. So, a crude birth rate of 10 would mean ten babies are born every year for every 1,000 people in that region. Crude death rates (CDR) are the total number of deaths per 1,000 people in a given year.

When comparing CBRs to CDRs, a region's natural increase rate can be determined. A natural increase rate (NIR) is the percent a population will grow per year, excluding annual migration. Usually, an NIR of 2.1 is required to maintain or stabilize a region's population. Any more than that and the population will grow, any less than a NIR of 2.1 causes population contraction. The reason why the NIR percent is 2.1 and not 2.0 for stability is because not every human will pair up and have a child because of genetics, choice, or death before childbearing years. Once we know the NIR, we can determine the doubling time. Doubling time is how many years it would take for a defined population to double in size, assuming that NIR stays the same over time. Currently, about 82 million people are added to the world's global population every year.

### Key Factors Influencing Population Change<sup>18</sup>

Three key factors to understand when trying to predict or analyze population change are the total fertility rate, infant mortality rate, and life expectancy at birth. Total fertility rate (TFR) is the average number of children a woman would be expected to have during childbearing years (between 15-49 years old). The global average for TFRs is about 2.5, but in less developed countries, it is as high as 5.0 or higher, and in more developed countries, it is as low as 2.0 or less. Fertility patterns can vary widely within countries. Racial and ethnic minorities may have higher fertility rates than the majority, and families with low incomes or low levels of education typically have more children than those that are affluent or well-educated. Women who work outside the home typically have fewer children than those who stay home, and rural families tend to have more children than city dwellers. In 2016, the number of births per 1,000 people worldwide was 20, with extremes ranging from a low of 8 or 9 (mainly in Northern and Western Europe and Hong Kong), to 60 or more in a few West African nations (Population Reference Bureau, 2016 World Population Data Sheet, pp. 10-19).

Mortality is the second significant variable that shapes population trends. A population's age structure is an essential factor influencing its death rate. Death rates are highest among infants, young children, and the elderly, so societies with many older adults are likely to have more deaths per 1,000 people than those where most citizens are young adults. Developed countries with excellent medical services have more people in older age brackets than developing countries, so the developed societies can have higher death rates even though they are healthier places to live overall. Infant mortality rate (IMR) is determined by calculating how many children die before the age of 1 per 1,000 live births

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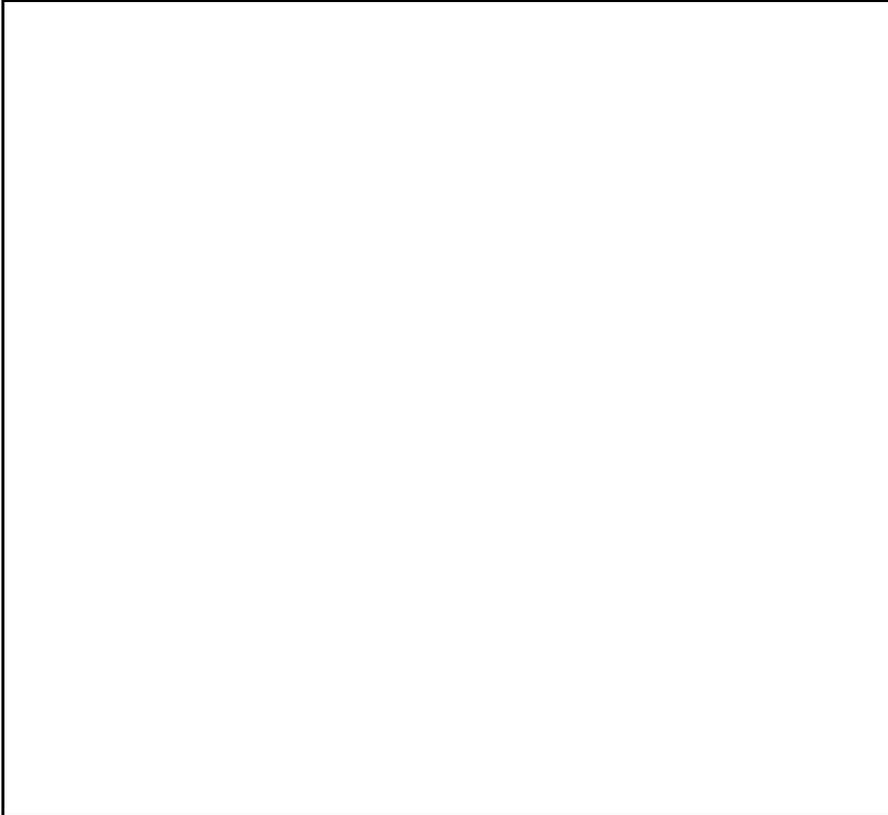
annually. The highest IMRs are in less developed countries where rates can be as high as 80 or more. Conversely, in a place like Europe, it is as low as 5 percent.

Life expectancy at birth is straightforward—it is an average of how many years a newborn is expected to live, assuming that mortality rates stay consistent. In more developed countries, the average life expectancy is over 80 years old, and in less developed countries, it is only around 40 years (Figure 2.6). When we compare CBRs, CDRs, and TFRs, we find that the world has a large population of youth with the most substantial percent in less developed countries. This causes high stress on the education systems and, to some extent, the health care systems in poorer countries. However, more developed countries tend to have older demographics, which tends to cause stress on the health care and social safety nets of those countries. The dependency ratio discussed later in this chapter, is used to understand these stresses and is the number of people who are too young or too old to work compared to the number of people who are in their “productive years.” The larger the ratio, the greater the economic stress on those nations.

**Population Data Worksheet**

Term	Definition
Total Fertility Rate (TFR)	
Crude Birth Rate (CBR)	
Crude Death Rate (CDR)	
Infant Mortality Rate (IMR)	
Life Expectancy	

**Draw the population pyramid of your chosen country in the space below.**



**Answer the questions below using information from the country's population pyramid.**

Which age group(s) make up the largest percentage of the population?  
What does that tell you about the country?

Is the population growing or declining? How do you know?

Is your country a less developed or more developed country? Explain your answer using information from the population pyramid.

### 50 years ago the average woman had five children, since then the number has halved<sup>19</sup>

In the past people had many more children than today. The number fluctuated over time and there were some differences between countries, but for much of our history, the average woman had at least five children, and often more. Two centuries ago this was true for the US, the UK, Russia, India, China and many other countries [for which we have data](#).

The metric demographers use to measure offspring per parent is the Total Fertility Rate. The TFR is defined as the average number of children that would be born to a woman over her lifetime if the woman were to experience the current age-specific fertility rates throughout her lifetime.<sup>1</sup> It is a metric that captures the fertility rate in one particular year rather than over the life course of a generation of women – it is a period, not a cohort metric. [More information on the measurement you find the relevant [section](#) below].

From 1950 onwards we have very good data from the UN Population Division. The chart below shows the average: the global Total Fertility Rate. Up to 1965 the average woman in the world had more than 5 children. Since then we have seen an unprecedented change. The number has halved. Globally, the average per woman is now below 2.5 children.

Why has the global fertility rate fallen so rapidly?

We discuss the reasons for this change in [this detailed section](#) below. The three major reasons are the empowerment of women ([increasing access to education](#) and [increasing labour market participation](#)), declining [child mortality](#), and a rising cost of bringing up children (to which the decline of [child labor](#) contributed).

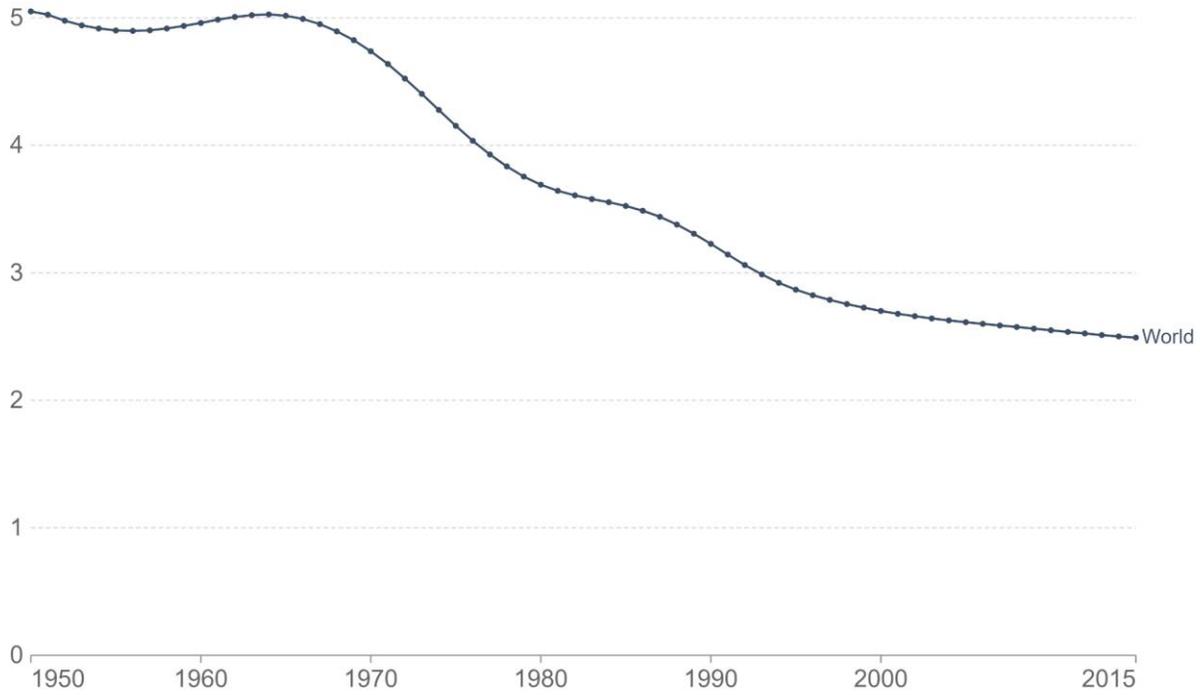
As a consequence of the declining global fertility rate the global population growth rate has declined, from a peak of 2.1% per year in 1968 to less than 1.1% today. In our discussion on the global population rate, [we explain](#) that we are therefore in the transition to a new balance where rapid population change will come to an end. “The big global demographic transition that the world entered more than two centuries ago is then coming to an end: This new equilibrium is different from the one in the past when it was the very high mortality that kept population growth in check. In the new balance it will be low fertility keeps population changes small.”

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## Children per woman

Our World  
in Data



Source: United Nations – Population Division (2019 Revision)

OurWorldInData.org/fertility-rate • CC BY

Note: Children per woman is measured as the total fertility rate, which is the number of children that would be born to the average woman if she were to live to the end of her child-bearing years and give birth to children at the current age-specific fertility rates.

## Why is rapid population growth a temporary phenomenon?<sup>20</sup>

### The Demographic Transition

Population growth is determined by births and deaths and every country has seen very substantial changes in both: In [our overview](#) on how health has changed over the long run you find the data on the dramatic decline of child mortality that has been achieved in all parts of the world. And in our [coverage of fertility](#) you find the data and research on how modern socio-economic changes – most importantly structural changes to the economy and a rise of the status and opportunities for women – contributed to a very substantial reduction of the number of children that couples have.

But declining mortality rates and declining fertility rates alone would not explain why the population increases. If they happened at the same time the growth rate of the population would not change in this transition. What is crucial here is the timing at which mortality and fertility changes.

The model that explains why rapid population growth happens is called the ‘demographic transition’. It is shown in the schematic figure. It is a beautifully simple model that describes the observed pattern in countries around the world and is one of the great insights of demography.<sup>9</sup>

The demographic transition is a sequence of five stages:

- Stage 1: high mortality and high birth rates. In the long time before rapid population growth the birth rate in a population is high, but since the death rate is also high we observe no or only very small population growth. This describes the reality through most of our history. Societies around the world remained in stage 1 for many millennia as the long-run perspective on extremely slow population growth highlighted. At this stage the population pyramid is broad at the base but since the mortality rate is high across all ages – and the risk of death is particularly high for children – the pyramid gets much narrower towards the top.
- Stage 2: mortality falls but birth rates still high. In the second phase the health of the population slowly starts to improve and the death rate starts to fall. Since the health of the population has already improved, but fertility still remains as high as before, this is the stage of the transition at which the size of the population starts to grow rapidly. Historically it is the exceptional time at which the extended family with many (surviving) children is common.
- Stage 3: mortality low and birth rates fall. Later the birth rate starts to fall and consequentially the rate at which the population grows begins to decline as well. Why the fertility rate falls is a question that we answer [here](#). But to summarize the main points: When the mortality of children is not as high as it once was parents adapt to the healthier environment and choose to have fewer children; the economy is undergoing structural changes that makes children less economically valuable; and women are empowered socially and within partnerships and have fewer children than before.

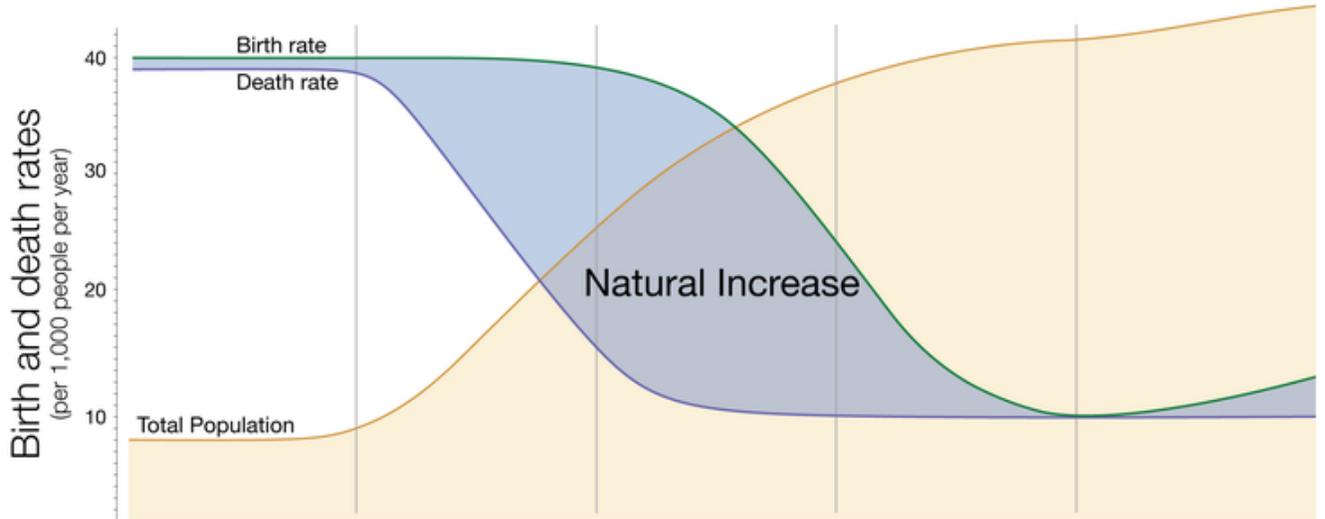
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- Stage 4: mortality low and birth rates low. Rapid population growth comes to an end in stage 4 as the birth rate falls to a similar level as the already low mortality rate. The population pyramid is now box shaped; as the mortality rate at young ages is now very low the younger cohorts are now very similar in size and only at an old age the cohorts get smaller very rapidly.
- Stage 5: mortality low and some evidence of rising fertility. The demographic transition describes changes over the course of socio-economic modernization. What happens at a very high level of development is not a question we can answer with certainty since only few societies have reached this stage. But we do have some good evidence – which we review [here](#) – that at very high levels of development fertility is rising again. Not to the very high levels of pre-modern times, but to a fertility rate that gets close to 2 children per woman. What level exactly the fertility rate will reach is crucial for the question of what happens to population growth in the long run. If the fertility rate stays below 2 children per woman then we will see a decline of the population size in the long run. If indeed the fertility rate will rise above 2 children per woman we will see a slow long-run increase of the population size.

Demographic Transition Overview<sup>21</sup>

# The demographic transition in 5 stages



	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
<b>Birth rate</b>	High	High	Falling	Low	Rising again
<b>Death rate</b>	High	Falls rapidly	Falls more slowly	Low	Low
<b>Natural increase</b>	Stable or slow increase	Very rapid increase	Increase slows down	Falling and then stable	Stable or slow increase
<b>Population Pyramid</b>					

The author Max Roser licensed this visualisation under a CC BY-SA license. You find more information at the source: <http://www.OurWorldInData.org/world-population-growth>

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## Unit Two Instruction

**Topic Two:** Migration (WG.1.4, WG.3.1, WG.3.2, WG.3.3, WG.4.4, WG.4.5, WG.5.1, WG.6.2, WG.6.3)

**Connections to the unit question:** Students will examine the causes and effects of migration patterns, trends and theories through geographic and demographic representations and models. Students will use their knowledge of migration to evaluate how changes in migration affect the economic, cultural, and political aspects of a place.

**Suggested Time:** 20 class periods

**Use these sample instructional tasks:**

- [Causes of Migration](#)
- [Effects of Migration](#)

**To explore these compelling and supporting questions:**

- What factors influence how and why people migrate in the world?
- How do people migrate?
- Why do people migrate?
- Who is migrating in the world today and why?
- How do historical and current trends of migration help or hurt society?
- What were some causes and effects of historical migrations?
- Is migration good for the economy?
- What are the economic, social, political, and cultural effects of migration?

**That students answer through this assessment:**

- Students write a paragraph that answers the supporting question: “How do people migrate?”
- Students write a paragraph that answers the supporting question: “Why do people migrate?”
- Students analyze a current event of migration and participate in a gallery walk and brief discussion about causes of present day migrations.
- Students participate in a seminar based on the compelling question: “What factors influence how and why people migrate in the world?”
- Students analyze a current event of migration and participate in a gallery walk and brief discussion about causes and effects of some historical cases of migration.
- Students will write a paragraph that answers the supporting question: “Is migration good for the economy?”
- Students will complete the [Effects of Migration Case Study](#) and discuss the economic, social, political, and cultural effects of migrations with a partner.
- Students write an essay in response to the instructional task’s compelling question: “How do historical and current trends of migration help or hurt society?” using evidence from sources.

## World Geography Instructional Task: Causes of Migration

### Unit 2: Population and Migration, Topic 2: Migration

**Description:** Students investigate the factors that cause people to migrate in the world. This instructional task will support students' understanding of push and pull factors of migration as well as historical, political, economic, and environmental characteristics of various places in the world. At the end of the instructional task, students will answer the compelling question: "What factors influence how and why people migrate in the world?"

**Suggested Time:** 11 class periods

**Materials:** [Peopling the Earth: The Origin of Humans and Human Societies](#); [Net Migration, 2017](#); [Global migration, by the numbers: who migrates, where they go and why](#); [S-I-T Teaching Strategy from Facing History and Ourselves](#); [Introduction to Human Geography \(Dorrell and Henderson\)](#); [Global Patterns of Human Migration Lesson](#); [Why Communities Move](#); [Causes and Effects of Human Migration](#); [International Migration Policies Data Booklet](#); [International Data Base for Portugal](#); [China: An Emerging Destination for Economic Migration](#); ['Refugees' and 'Migrants' Frequently Asked Questions by the UN Refugee Agency](#); [Syria Refugee Crisis Explained](#); [Current Migration Case Study](#) and [Map](#); [El Salvador](#); [Philippines](#); [Tanzania](#); [Bangladesh](#); [India](#); [Socratic seminar](#); [conversation stems](#); [discussion tracker](#)

#### Instructional Process:

1. Say, "In the previous instructional task, we examined how mortality rates and fertility rates change in a population and explored theories of population growth and decline. Demographic measures are also influenced by migration. In this instructional task, we will explore causes of human migrations. We will use the question 'What factors influence how and why people migrate in the world?' to guide our inquiry."
2. Say, migration is "is the physical movement of people from one place to another."<sup>22</sup>
3. Write the terms immigration and emigration on the board, and project the following definitions:
  1. Immigration: those moving into an area
  2. Emigration: those moving from an area
4. Post and read aloud the first supporting question for this instructional task: "How do people migrate?"
5. Say, "Let's first look at how early humans migrated to the different regions of the world." Show the video [Peopling the Earth: The Origin of Humans and Human Societies](#) from Khan Academy starting at the 8:04 minute mark. Then, lead a brief discussion on how early humans first migrated to different regions of the world. Possible discussion questions include:
  1. What are the possible theories of the first human migration to the Americas?
  2. What is one possible explanation as to why first peoples migrated to new areas?
6. Say, "Now let's look at how people migrate in the world today." Project the interactive map [Net Migration, 2017](#) from Our World in Data. Say "Net migration is the net total of migrants during the period, that is, the total number of immigrants less the annual number of emigrants, including both citizens and non-citizens. Countries

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<sup>22</sup> From [Introduction to Human Geography](#)

on this map with negative net migration have populations that are emigrating from the country at higher rates than immigrating to the country.” Scroll over the key at the bottom of the map and point out countries that have negative net migration, such as India, Egypt, and Nicaragua. Say, “Countries on this map with positive net migration have higher numbers of people immigrating into the country than leaving the country.” Scroll over the key at the bottom of the map and point out countries that have positive net migration, such as Brazil, Germany, and Saudi Arabia.

7. Provide students access to [Global migration, by the numbers: who migrates, where they go and why](#) from World Economic Forum and instruct students to read independently. Direct students to write down one surprising fact, one interesting fact, and one troubling fact as they read ([S-I-T Teaching Strategy from Facing History and Ourselves](#)).
8. Lead a brief discussion on the reading using their observations and the supporting question “How do people migrate in the world?”
9. Say, “In 1885, British demographer Ernst Ravenstein drafted rules regarding migration and migrants. This is called Ravenstein's Laws of Migration. Many of these laws are still seen in the migration patterns of people today.” Post the following summary of Ravenstien’s Laws of Migration from [Introduction to Human Geography \(Dorrell and Henderson\)](#).
  1. Most move only a short distance.
  2. Each migration flow produces a counter-flow of migrants.
  3. Long-distance migrants tend to move to major cities.
  4. Rural residents are more migratory than those in towns.
  5. Females are more migratory than males.
  6. Economic factors are the main reason for migration.
10. Ask, “Which of Ravenstein’s Laws of Migration are still relevant today?” and lead a brief discussion on the question. Note: Ravenstein’s Laws of Migration are generally relevant today, with the exception of the fifth one, as explained in [Introduction to Human Geography \(Dorrell and Henderson\)](#).
11. Conduct steps 1 and 2 of the [Global Patterns of Human Migration Lesson](#) from National Geographic Education with the following adjustment: omit the discussion of push and pull factors in step one since students will discuss this later in the instructional task. Conducting the entire activity is optional, and will extend the instructional task by half a class period.
12. Next, ask students to identify examples of Ravenstein’s Laws of Migration in the map and data they explored in the Global Patterns of Human Migration Lesson and invite students to share out. Students should identify that migrants in South America are most likely to move to North America, which provides evidence supporting Ravenstein's first law.
13. Direct students to write a paragraph that answers the supporting question, “How do people migrate?” Encourage students to use information from the articles to support their claim.
14. Post and read aloud the second supporting question for this instructional task: “Why do people migrate?”
15. Say, “Today you will explore factors that cause human migration, also known as push and pull factors.” Write the terms push factor and pull factor on the board, and project the following definitions:
  1. Push factor: events and conditions that compel people to move from a place.

2. Pull factor: events and conditions that influence migrants to move to a place.
16. To activate prior knowledge, lead students in a brief discussion of push and pull factors of migration they remember learning about in previous social studies or history courses. Note: If students have limited knowledge and understanding of push and pull factors of migration complete step 1 of the [Why Communities Move](#) lesson from National Geographic Education.
17. Say, “Let’s first look at some causes of historical migrations.” Provide students access to [Causes and Effects of Human Migration](#) from Khan Academy.
18. Divide the class in half using an established classroom routine. Instruct one half to read “Causes of migration in Africa” and the other half to read “Causes of migration in the Pacific.” Direct students to read the appropriate paragraphs under “Effects of Migration” for their assigned topic (Africa-paragraph 1; Pacific-paragraphs 2-4). Instruct students to read their assigned section independently and jot down the answers to the following questions as they read:
  1. What environmental factors influenced this migration?
  2. How did technology influence this migration?
  3. What was the environmental effect of this migration?
19. Lead a brief discussion with students about the causes and effects of historical migrations in Africa and the Pacific. Students should identify the need to grow food sources as a reason for migration and environmental degradation as an effect.
20. Say, “In the recent past, government policies can be either push or pull factors that affect migration patterns. Let’s look at government policies and actions that increase immigration into a country, or pull factors.”
21. Project page 5 of the [International Migration Policies Data Booklet](#) from the United Nations and read aloud the first two paragraphs. Say, “The United Nations is an international organization founded in 1945. Although most countries seek to only maintain their current levels of immigration, some countries use immigration and economic policies to encourage immigration to their country. As you recall from our discussion of Ravenstein’s Laws of Migration, economic considerations and factors have a large influence on the choices of migrants.” Then, read aloud the last three paragraphs on page 5 of the [International Migration Policies Data Booklet](#).
22. Say, “Let’s look closely at a country that is seeking to raise immigration levels. Portugal is a country in Southern Europe that has policies to raise immigration.” Then, project the “Population”, “Annual Growth Rate %”, and “Population Pyramid” charts and graphs from the [International Data Base for Portugal](#). Pair students using an established classroom routine, and instruct them to do a [Think-Pair-Share](#) around the following question: “Based on what you know about population data and population pyramids, what are some factors that have caused Portugal to increase its population through immigration?” Call on student pairs to share out and chart student responses. Then, project page 22 of the [International Migration Policies Data Booklet](#) from the United Nations and point out Portugal’s rationale for current immigration policy and measures on integration of immigrants.
23. Say, “Today we are going to look at factors attracting immigrants to China.” Provide students access to [China: An Emerging Destination for Economic Migration](#) from the Migration Policy Institute and instruct them to read the section “China’s New Era of Immigration” independently.
24. Provide sufficient time for independent reading, then ask: “What pull factors increased migration to China starting in 2010?” Call on students to share out, and chart student responses. Students should come up with

- examples such as high numbers of job vacancies caused by an ageing population, similar culture to other countries in the region, and opportunities for education.
25. Say, “Government policies and actions can also urge or push people to leave a country. Wars and political turmoil are common push factors.” Write the terms refugee and asylum seeker on the board, and project the following definitions<sup>23</sup>:
1. refugee: someone who has been forced to flee their country because of persecution, war, or violence
  2. asylum seeker: someone who flees their own country and applies for asylum-the right to be recognized as a refugee and receive legal protection and material assistance
26. Say, “The office of the United Nations High Commissioner for Refugees (UNHCR) was created in 1950, during the aftermath of the Second World War, to help millions of Europeans who had fled or lost their homes. Over 70 years later, the organization still works to protect and assist refugees around the world.<sup>24</sup>”
27. Provide students access to [‘Refugees’ and ‘Migrants’ Frequently Asked Questions by the UN Refugee Agency](#) and instruct them to read numbers 1-8 independently. After reading the article, lead students in a brief discussion to check for understanding. Possible guiding questions:
1. What are the differences between the terms “refugee” and “migrant”?
  2. How do the 1951 Convention and its 1967 Protocol provide protection for refugees?
  3. What are the distinctions between people who experience “forced migration” and refugees?
28. Provide students access to [Syria Refugee Crisis Explained](#) from the UNHCR and instruct them to read independently. After reading, conduct a brief whole-class discussion on causes of the Syrian Refugee Crisis. (Note: students may also view [Escape from Syria: Riana's Journey](#). This 20 minute documentary by the *Guardian* may be too intense for some students, so teachers should use their own discretion in determining whether it is appropriate for class viewing). Possible questions include:
1. How did Syria become home to the world’s largest refugee crisis?
  2. What actions, if any, should international organizations like the United Nations take in order to solve issues that cause migration?
29. Direct students to write a paragraph that answers the supporting question: “Why do people migrate?” Encourage students to use information from the articles to support their claim.
30. Post and read aloud the third supporting question for this instructional task: “Who is migrating in the world today and why?”
31. Divide the class into small groups using an established classroom routine.
32. Assign each group one of the following case studies of migration: El Salvador, Philippines, Tanzania, Bangladesh, India. Say, “Today you will explore an example of migration that has recently occurred in the world and identify causes of this migration.” Provide each group with a copy of [Current Migration Case Study](#) Worksheet and [Map](#) and provide access to one of the articles:
1. [El Salvador](#) from Migration Policy Institute
  2. [Philippines](#) from the Philippine Statistics Authority
  3. [Tanzania](#) from Migration Policy Institute

<sup>23</sup> <https://www.unrefugees.org/refugee-facts/what-is-a-refugee/>

<sup>24</sup> <https://www.unhcr.org/en-us/history-of-unhcr.html>

4. [Bangladesh](#) from the Office for the Coordination of Humanitarian Affairs
5. [India](#) from Migration Policy Institute

Instruct students to read the article independently and then complete the [Current Migration Case Study](#) Worksheet and [Map](#) as a group.

33. After students have completed the [Current Migration Case Study](#) Worksheet and [Map](#), direct students to post their papers around the room and conduct a gallery walk where students can read their peers' claims.
34. After students complete the gallery walk, lead the class in a brief discussion about causes of migration by asking "What push and pull factors influence migration in today's world?"
35. After these activities, conduct a [Socratic seminar](#) with students based on the compelling question, "What factors influence how and why people migrate in the world?" Encourage students to use these [conversation stems](#) and assess student participation with a [discussion tracker](#).

### Current Migration Case Study

Country of Case Study:

Identify the location of the case study on the world map and draw an arrow showing the flow of the migration. Label all countries that are involved in the flow of the migration.

Describe the migration taking place in the assigned region/country.

What are the push factors in this case of migration?

What are the pull factors in this case of migration?

Are the people migrating in this case refugees, asylum seekers, or migrants? Explain your answer.

Claim: What are the causes of migration in this case study? Should steps be taken to lessen this migration, and if so, what steps and by whom?

Current Migration Case Study Map<sup>25</sup>



<sup>25</sup> This image is in the public domain and is available online at <https://upload.wikimedia.org/wikipedia/commons/d/d6/Eckert-iv-atlantic.jpg>.  
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## World Geography Instructional Task: Effects of Migration

### Unit 2: Population and Migration, Topic 2: Migration

**Description:** Students investigate the effects of historical and current migrations. This instructional task will support students’ understanding of historical, social, political, and cultural characteristics of various places in the world. At the end of the instructional task, students will answer the compelling question: “How do historical and current trends of migration help or hurt society?”

**Suggested Time:** 9 class periods

**Materials:** [Historical Migration Case Study](#) Worksheet and [Map](#); [Irish and German Immigration 1820s to 1840s](#); [How the Partition of India happened](#); [African American Great Migration](#); [The Changing Nature of European Immigration](#); [Indian Removal](#); [Transatlantic Migration Patterns: The Voluntary and Involuntary Movement of People](#); [Cuba](#); [Effects of Migration on the Economy](#); [Immigration and the Economy](#); [Is migration good for the economy?](#); [The Economic Impact of Forced Migration](#); [What is the Kafala System](#); [the population pyramid of Qatar](#); [Qatar: Little Progress on Protecting Migrant Workers](#); [The People of the Isle de Jean Charles Are Louisiana’s First Climate Refugees—but They Won’t Be the Last](#); [Migration in Brazil: The Making of a Multicultural Society](#); [Australia: A Welcoming Destination for Some](#); [Social Studies Extended Response Rubric](#)

#### Instructional Process:

1. Say, “In the previous instructional task, we explored various causes of migrations. In this instructional task, we will explore the effects of historic and current trends in human migration. We will use the compelling question ‘How do historical and current trends of migration help or hurt society?’ to guide our inquiry.”
2. Post and read aloud the first supporting question, “What were some causes and effects of historical migrations?”
3. Divide the class into small groups using an established classroom routine and assign each group a case of historical migration. Instruct students to complete the [Historical Migration Case Study](#) Worksheet and [Map](#).

Possible historical migrations and resources:

1. [Irish and German Immigration 1820s to 1840s](#), Khan Academy
2. [How the Partition of India happened](#), The Conversation
3. [African American Great Migration](#), Openstax
4. [The Changing Nature of European Immigration](#), Openstax
5. [Indian Removal](#), Khan Academy
6. [Transatlantic Migration Patterns: The Voluntary and Involuntary Movement of People](#), OER Project
7. [Cuba](#), PBS

Instruct students to read the article independently and then complete the [Historical Migration Case Study](#) handout and [Map](#) as a group.

4. After students have completed the [Historical Migration Case Study](#) Worksheet and [Map](#), direct students to post their papers around the room and conduct a [gallery walk](#) where students can read and respond to their peers’ claims.

5. After students complete the gallery walk, lead the class in a brief discussion about causes and effects of historical migrations using the following questions:
  1. What were some push factors that caused historical migrations?
  2. What were some pull factors that caused historical migrations?
  3. What were some effects of the historical migrations?
6. Say, “According to the Pew Research Center, ‘In the U.S., the nation with the world’s largest number of immigrants, six-in-ten adults (59%) say immigrants make the country stronger because of their work and talents, while one-third (34%) say immigrants are a burden because they take jobs and social benefits. Views about immigrants have shifted in the U.S. since the 1990s, when most Americans said immigrants were a burden to the country.’<sup>26</sup> Views on migration vary in different countries. Today you will investigate the economic effects of migration and consider the supporting question: ‘Is migration good for the economy?’”
7. Post and read aloud the second supporting question: “Is migration good for the economy?”
8. Provide each student with the [Effects of Migration on the Economy](#) worksheet. Play the audio or provide students with the transcript for [Immigration and the Economy](#) from NPR. Have students take notes on the effects of migration as they listen. Then, call on students to share their notes.
9. Divide students into small groups according to an established classroom routine.
10. Provide each group with access to [Is migration good for the economy?](#) by Organisation for Economic Co-operation and Development (OECD) and direct them read independently. Then, direct students to work with their small group to continue taking notes on the economic effects of migration on the [Effects of Migration on the Economy](#) worksheet.
11. Provide each group with access to [The Economic Impact of Forced Migration](#) by Organisation for Economic Co-operation and Development (OECD) and read independently. Then, direct students to work with their small group to continue taking notes on the economic effects of migration on the [Effects of Migration on the Economy](#) worksheet.
12. Then, as a class, have students present their main takeaway from the chart and conduct a whole class discussion on the economic effects of migration.
13. Direct students to write a paragraph that answers the supporting question: “Is migration good for the economy?” Instruct students to use information from the articles to support their claim.
14. Post and read aloud the third supporting question: “What are the economic, social, political, and cultural effects of migration?”
15. Provide students access to [What is the Kafala System](#) by the Council on Foreign Relations. Instruct students to read the sections “What is the kafala system?” and “What are its origins?” independently, and then discuss the following questions in small groups:
  1. What is the purpose of the kafala system?
  2. How are migrant workers’ rights limited through the kafala system?
16. Project [the population pyramid of Qatar](#) and lead a brief discussion on the demographic effects of the kafala system on the population of Qatar.
17. Provide students access to [Qatar: Little Progress on Protecting Migrant Workers](#) from Human Rights Watch and

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<sup>26</sup> <https://www.pewresearch.org/global/2019/03/14/around-the-world-more-say-immigrants-are-a-strength-than-a-burden/>  
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direct them to read independently. After reading, lead a discussion on the social and political effects of the kafala system on the migrant workers in Qatar. Possible guiding questions include:

1. According to the article, how are migrant workers in Qatar treated?
  2. How has the government of Qatar reacted to criticisms over the treatment of migrant workers?
18. Provide students access to [The People of the Isle de Jean Charles Are Louisiana’s First Climate Refugees—but They Won’t Be the Last](#) from Human Rights Watch. After reading, lead a discussion on the cultural effects of migration on Isle de Jean Charles (IDJC) Biloxi-Chitimacha-Choctaw tribe. Possible guiding questions include:
1. How did the Indian Removal Act affect the Isle de Jean Charles Biloxi-Chitimacha-Choctaw tribe?
  2. What are the environmental and economic causes of resettlement of the Isle de Jean Charles Biloxi-Chitimacha-Choctaw tribe?
  3. What are some possible cultural consequences of the migration and resettlement of the Isle de Jean Charles Biloxi-Chitimacha-Choctaw tribe?
19. Say, “Today you will evaluate historical and current trends in migration and their economic, social, political, and cultural effects of two countries.”
20. Divide the class into pairs using an established classroom routine. Provide half of the pairs with access to [Migration in Brazil: The Making of a Multicultural Society](#) and the other half with [Australia: A Welcoming Destination for Some](#) from the Migration Policy Institute and instruct students to read their assigned article one time in with their partner. Then, direct each pair to complete step one of the [Effects of Migration Case Study](#) using the information in their article. Each student should complete their own chart. Then, have each student pair up with a student who completed the chart for the other country and complete step two of the handout in pairs. Each student should complete their own handout.
21. To culminate the instructional task, direct students to write an essay in response to the instructional task’s compelling question: “How do historical and current trends of migration help or hurt society?” Encourage students to use evidence from the case studies they investigated in order to support their claims. Use the [Social Studies Extended Response Rubric](#) to grade the essay.

### Historical Migration Case Study

Region/Country of Case Study:

Identify the location of the case study on the world map and draw an arrow showing the flow of the migration. Label all countries that are involved in the flow of the migration.

Describe the migration taking place in the assigned region/country.

What are the push factors and pull factors in this case of migration?

Are the people migrating in this case refugees, asylum seekers, migrants, or something else? Explain your answer.

Claim: How did this migration affect the receiving country or area, the departing country or area, and the people who migrated?

**Historical Migration Map<sup>27</sup>**



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<sup>27</sup> This image is in the public domain and is available online at <https://upload.wikimedia.org/wikipedia/commons/d/d6/Eckert-iv-atlantic.jpg>.

**Effects of Migration on the Economy**

Effect	Positive or Negative?	Explanation

**Effects of Migration Case Study**

Step 1: Record economic, social, political, and cultural effects of migration using the assigned country in the chart below.

Economic	
Social	
Political	
Cultural	

Step 2: With your partner, identify how the case studies are similar and different and record your findings in the chart below.

Similarities	
Differences	

## Unit Two Assessment

**Description:** Students write a well-developed essay addressing the unit question: How do changes in population and migration affect the economy, culture, and politics of a place?

**Suggested Time:** 1 class period

### **Student Directions:**

Based on your knowledge of World Geography, evaluate how migration or changes in population affect the economy, culture, and politics of a place.

As you respond to the prompt, follow the directions below.

- Address all parts of the prompt.
- Include accurate information and examples from your knowledge of World Geography.
- Use relevant evidence from the sources to support your response.

**Teacher Notes:** In successfully completing this culminating writing task, students meet the expectations for the following social studies GLEs: WG.1.4, WG.3.1, WG.3.2, WG.3.3, WG.4.1, WG.4.2, WG.4.4, WG.4.5, WG.5.1, WG.5.2, WG.5.4, WG.6.2, WG.6.3

Use the [LEAP assessment social studies extended-response rubric](#) to grade this assessment. Note: Customize the Content portion of the rubric for this assessment. Use the Claims portion of the rubric as written.

## Unit Three Overview

### Unit Three: Political and Economic Geography

**Description:** Students study political boundaries, globalization, economic development, and economic indicators. Students will analyze a variety of primary and secondary sources in order to develop a claim about how geography affects political and economic systems.

**Suggested Time:** 8 weeks

Content	Claims
Unit 3: Political and Economic Geography	How does geography affect political and economic systems?

#### Topics (GLEs):

1. [Political Geography](#) (WG.1.4, WG.3.1, WG.3.2, WG.3.3, WG.4.5)
2. [Economic Geography](#) (WG.1.1, WG.1.4, WG.3.1, WG.3.2, WG.3.3, WG.4.5, WG.5.3, WG.5.4)

#### Use these sample instructional tasks:

- [Political Boundaries and States](#)
- [Political and Economic Effects of Political Boundaries](#)
- [Globalization](#)
- [Economic Development](#)

**Culminating Unit Assessment:** Students write a well-developed essay addressing the unit question: Based on your knowledge of World Geography, evaluate how geography affects political or economic systems.

## Unit Three Instruction

**Topic One:** Political Geography (WG.1.4, WG.3.1, WG.3.2, WG.3.3, WG.4.5)

**Connections to the unit claim:** Students will examine political boundaries, types of political entities, types of governments, and interactions between states by analyzing various primary and secondary sources. Students will use their knowledge to analyze how geography affects political systems.

**Suggested Time:** 15 class periods

**Use these sample instructional tasks:**

- [Political Boundaries and States](#)
- [Political and Economic Effects of Political Boundaries](#)

**To explore these compelling and supporting questions:**

- How do people organize the world?
- Why are political boundaries created?
- How are people affected by political boundaries?
- How do centripetal and centrifugal forces affect states?
- How do political boundaries affect states politically and economically?
- What types of governments exist in the world and how do they differ from one another?
- How do political states cooperate with other states?
- How do boundaries affect electoral processes?

**That students answer through this assessment:**

- Students write a paragraph explaining why their chosen state is either a nation state or multinational state.
- Students engage in a class discussion addressing the supporting question: “Why are political boundaries created?”
- Students engage in a class discussion addressing the supporting question: “How are people affected by political boundaries?”
- Students write an extended paragraph in response to the supporting question: “How do centripetal and centrifugal forces affect states?”
- Students write an essay in response to the compelling question: “How do people organize the world?”
- Students participate in a small group discussion about political regimes and democracy.
- Students write an extended paragraph in response to the supporting question: “How do political states cooperate with other states?”
- Students participate in a class discussion on gerrymandering.
- Students write an essay in response to the compelling question: “How do political boundaries affect states politically and economically?”

## World Geography Instructional Task: Political Boundaries and States

### Unit 3: Political and Economic Geography, Topic 1: Political Boundaries and States

**Description:** Students explore the purpose and creation of political boundaries and states. This instructional task will support students’ understanding of political boundaries and characteristics of various states in the world. At the end of the instructional task, students will answer the compelling question: “How do people organize the world?”

**Suggested Time:** 9 class periods

**Materials:** [United Nations World Political Map](#); [Animated Map Shows How World War I Changed Europe's Borders](#); [Boundaries and Boundary Disputes](#); [Boundaries and Borders](#); [How Political Space is Organized](#); [CIA World Factbook](#); [Why Don't Syria, Iran, Iraq and Turkey Want a Kurdistan](#); [How Political Space is Organized](#); [CIA World Factbook](#); [Why Don't Syria, Iran, Iraq and Turkey Want a Kurdistan?](#); [Samurai, Daimyo, Matthew Perry, and Nationalism: Crash Course World History #34](#); [Ethnic nationalism in the Habsburg Empire](#); [Italian and German Unification: Crash Course European History #27](#); [Italian Unification](#); [Language and Religion of former Yugoslavia](#); [Former Yugoslavia: A Valuable Lesson in Political and Cultural Geography](#); [political map of Africa from the CIA Factbook](#); [Introduction: Background, Ethnic Groups, and Languages](#); [South Sudan Just Ended It's Civil War - For Now](#); [The Shape of States](#); [Google Maps](#); [The World Factbook](#); [conversation stems](#); [discussion tracker](#); [Social Studies Extended Response Rubric](#)

#### Instructional Process:

1. Say: “In the previous task, we explored the causes and effects of migration. We will continue to explore how people move through the world and organize societies, but this time through the lens of political boundaries. We will use the compelling question ‘How do people organize the world?’ to guide our inquiry.”
2. Post and read aloud the compelling question for the task: “How do people organize the world?”
3. Post and read aloud the first supporting question for the task: “Why are political boundaries created?”
4. Project a current political map of the world. (This political map was updated in October of 2020: [United Nations World Political Map](#). You may read aloud the notes on disputed boundaries.) Remind students that this political map is a reference map. Ask, “What do the lines on this map represent?” Students should identify political boundaries as representations created by people rather than lines that are present on the physical landscape. Say, “Sometimes people use physical boundaries as political boundaries, but not always. Since political boundaries are created by people, they change over time.”
5. Show the class the 2 minute video [Animated Map Shows How World War I Changed Europe's Borders](#).
6. Direct students to read [Boundaries and Boundary Disputes](#) independently. Project the story map [Boundaries and Borders](#). Read the text aloud as you project the examples of boundaries.
7. Divide the class into small groups using an established classroom routine.
8. Provide students with access to [How Political Space is Organized](#). Instruct students to read the first two paragraphs independently and then answer the following questions in small groups:
  1. What is a state?
  2. What is a nation-state?

3. What is a nation?
4. What is a multinational state?
5. What is a stateless nation?
9. Ask, “Why is Japan a nation-state?” and take a few responses. Then ask, “What kind of state is the United States?” and take a few responses. Students should recognize that the United States is a multinational state because it is not nationally or culturally homogenous.
10. Say, “Now you will choose a country that is not discussed in the article and decide if it is a nation-state or multinational state.” Provide students access to the resource [CIA World Factbook](#). Instruct students to write a paragraph explaining why their chosen state is either a nation state or multinational state. Collect and grade for content accuracy.
11. Conduct a whole group discussion around the first supporting question “Why are political boundaries created?” Encourage students to use the [conversation stems](#) and assess student participation with a [discussion tracker](#).
12. Post and read aloud the second supporting question for the task: “How are people affected by political boundaries?”
13. Say, “Now we are going to examine one example of a stateless nation. The Kurds are the largest national group without a state. There are over 30 million Kurds living in Iraq, Iran, Syria and Turkey.<sup>28</sup> Show the 9 minute video [Why Don't Syria, Iran, Iraq and Turkey Want a Kurdistan?](#) from AJ+. Divide the class into pairs using an established classroom routine, and do a [Think-Pair-Share](#) around the following questions:
  1. How did the events of World War I affect the possibility of a Kurdish state?
  2. What factors have led to more support for a Kurdish state?
  3. Why do Turkey and Iraq oppose a Kurdish state?
  4. How does state status and political boundaries affect individuals?
14. Conduct a whole group discussion around the second supporting question “How are people affected by political boundaries?” Encourage students to use the [conversation stems](#) and assess student participation with a [discussion tracker](#).
15. Post and read aloud the third supporting question for the task: “How do centripetal and centrifugal forces affect states?”
16. Read aloud the last two paragraphs from [How Political Space is Organized](#): “Centripetal forces tend to bind a state together, and centrifugal forces act to break up a state. Examples of centripetal forces include nationalism, economic prosperity, and strong, ethical security forces. Centrifugal forces include wars, ineffective or corrupt governments, and market failure. Other factors that can influence the solidarity of a state include types of boundaries, ethnic differences (which may result in unity or discord), and the compactness of a state.”
17. Show the video [Samurai, Daimyo, Matthew Perry, and Nationalism: Crash Course World History #34](#) stopping at minute 4:53. Ask students to define nationalism in their own words. Then, instruct students to do a [Think-Pair-Share](#) on their definition of nationalism.
18. Say, “Nationalism can unite or divide a country. In the case of Italy and Germany, nationalism was a uniting force.”

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<sup>28</sup> More information on the Kurds can be found at <https://insidestory.org.au/the-worlds-largest-stateless-nation/> and <https://www.bbc.com/news/world-middle-east-29702440>

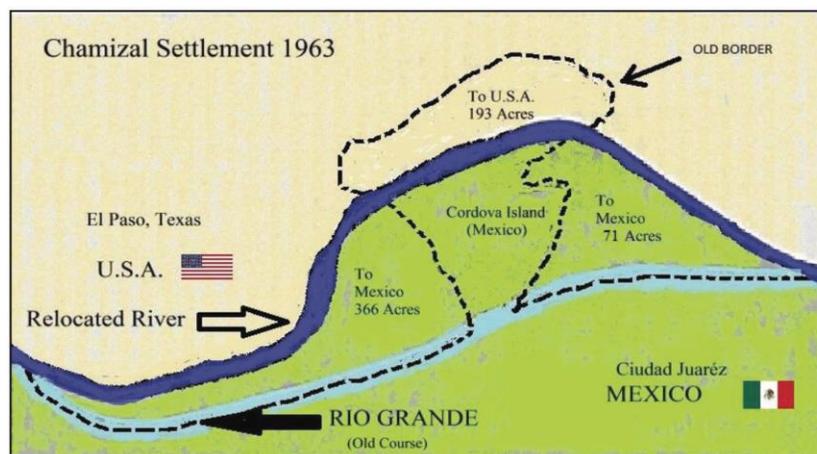
19. Divide the class into small groups using an established classroom routine.
20. Provide access to [Ethnic nationalism in the Habsburg Empire](#). Instruct students to read independently and then answer the following questions in small groups:
  1. What were some barriers to Italian and German unification?
  2. How were the results of the Italian and German unification movements similar? Different?
21. Show the video [Italian and German Unification: Crash Course European History #27](#) until minute 3:57. Instruct students to answer the following questions in small groups:
  1. What was Camillo di Cavour's plan for Italy?
  2. Why did Napoleon III ally with Victor Emmanuel and Camillo di Cavour? Why did his plan fail?
  3. How did Giuseppe Garibaldi help Italian unification?
  4. Display the animated map [Italian Unification](#). Ask, "How was Italy unified?" (Note: Students should understand that nationalism played a role in Italian unification, but that political alliances and war were also means by which Italy became unified.)
22. Say, "Nationalism can also be a centrifugal force, one that divides a state or country. One example of this is the former state of Yugoslavia."
23. Show the video [Language and Religion of former Yugoslavia](#) from Khan Academy. After viewing, direct students to read [Former Yugoslavia: A Valuable Lesson in Political and Cultural Geography](#) independently and then answer the following questions in small groups:
  1. What factors unite the area that became Yugoslavia?
  2. What religious groups are found in this region and what is the historical context of those different religions?
  3. Did Marshal Tito unify or divide Yugoslavia? How?
  4. What is ethnic cleansing and why did it occur during the breakup of Yugoslavia?
24. Say, "As in the case of Yugoslavia, war sometimes precipitates the break up of states. Another example of a state breaking up after armed conflict is Sudan and South Sudan." Project the [political map of Africa from the CIA Factbook](#) and point out Sudan and South Sudan. Explain that South Sudan gained independence from Sudan in 2011. Direct students to read [Introduction: Background, Ethnic Groups, and Languages](#) independently. Then, show the video 10 minute video [South Sudan Just Ended It's Civil War - For Now](#) from Vice News and then direct students to answer the following questions in small groups:
  1. Why did South Sudan fight for independence?
  2. How have people in South Sudan experienced their new country since 2011?
  3. Do you think changing the political borders within South Sudan would help end the conflicts there? Why or why not?
25. Say, "The availability of natural resources and the ease of communication within a state are also linked to the ability of a state to stay unified. The shape of a state helps geographers make predictions of possible forces that might disunify a state." Provide access to [The Shape of States](#) and instruct students to read independently. Then divide the class in small groups using an established classroom routine. Assign each group a state from the following list: Burundi, Austria, Chile, Philippines, Thailand.

26. Provide students access to [Google Maps](#) or a world political map and direct each group to determine the shape of their state and discuss the effects of that shape. Call on each group to share their findings. (Note: Students may also use [The World Factbook](#) to research the effects of their countries' shape.)
27. Instruct students to write an extended paragraph (half to one page but not a full essay) in response to the supporting question: “How do centripetal and centrifugal forces affect states?” Encourage students to use information from the secondary sources analyzed in the activity in supporting their claim. Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.
28. To culminate the task, direct students to write an essay in response to the task’s compelling question: “How do people organize the world?” Use the [Social Studies Extended Response Rubric](#) to grade the essay.

## Boundaries and Boundary Disputes<sup>29</sup>

A boundary is essentially an invisible, vertical plane that separates one state from another, so it includes both the airspace above the line on the surface and the ground below. Boundaries can be both physical and anthropogenic, and while it is difficult to categorize all boundaries, some prominent boundary types exist.

Physical boundaries are natural features on the landscape such as rivers, lakes, and mountains. The Rio Grande is an important physical boundary on the southern border of the United States. Like most rivers, the Rio Grande shifts gradually (and sometimes abruptly) through time. As a result of the fact that the course of a river is not fixed, a river boundary can be problematic. In fact, because of the gradual shift in the Rio Grande in the vicinity of El Paso, the United States and Mexico established the Chamizal Treaty which reestablished the boundary and included a more permanent relocation of the river channel by engineering (Figure 8.5). Some examples of mountain ranges as boundaries include the Zagros Mountains between Iraq and Iran, the Pyrenees between Spain and France, and the Andes Mountains between Chile and Argentina.



**Figure 8.5 | Chamizal Treaty map**  
**Author |** Mike Hayes  
**Source |** Wikimedia Commons  
**License |** Public Domain

In contrast to physical boundaries, geometric boundaries and ethnic boundaries are not related to natural features. Instead, in the case of geometric boundaries, they are straight lines. These straight lines could coincide with latitude or longitude, as is the case with the northwestern boundary of the United States with Canada along 49° north latitude. Likewise, Indonesia and Papua New Guinea is separated by another geometric boundary along the 141st meridian.

<sup>29</sup> This work by David Dorrel & Joseph P. Henderson is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). The original work is available at [https://socialsci.libretexts.org/Bookshelves/Geography\\_\(Human\)/Book%3A\\_Introduction\\_to\\_Human\\_Geography\\_\(Dorrell\\_and\\_Henderson\)/08%3A\\_Political\\_Geography/8.04%3A\\_Boundaries\\_and\\_Boundary\\_Disputes](https://socialsci.libretexts.org/Bookshelves/Geography_(Human)/Book%3A_Introduction_to_Human_Geography_(Dorrell_and_Henderson)/08%3A_Political_Geography/8.04%3A_Boundaries_and_Boundary_Disputes).

For ethnic boundaries, they are drawn based on a cultural trait, such as where people share a language or religion. The border between India, which is predominantly Hindu, and Pakistan, which is predominantly Muslim, is one example. Some borders split ethnic groups that are more closely related to the people on the other side of the border. For example, in eastern Ukraine, the majority of the population speaks Russian and is sympathetic to Russians on the other side of the border. As a result, the current conflict between Russia and Ukraine has been problematic for the Ukrainian central government because of the Russian affiliation with eastern Ukraine. Russian influence in eastern Ukraine is an example of irredentism, or an effort to expand political influence of a state on a group of people in a neighboring state.

Another prime example of where boundaries do not coincide closely with ethnic groups is in Africa. Almost 50 percent of the boundaries in Africa are geometric, and at least 177 ethnic groups are split in two or more states. If all ethnic groups in Africa were to be enclosed in their own boundaries, Africa would have over 2,000 countries (1). Because ethnic groups straddle many boundaries in Africa, this situation has led to considerable cross-border trade, but also has created numerous conflicts. For instance, several wars have occurred because the Somali ethnic group is split between five different countries.

### How Political Space Is Organized<sup>30</sup>

The fundamental unit of political space is the state, and this type of state is different than the states that make up the United States. A state is basically synonymous to a country and represents a formal region in which the government has sovereignty or control of its own affairs within its territorial boundaries. The number of states in the world is currently 196, but this number changes through military conquests or the devolution, or breakup, of states. For example, the United Kingdom has devolved over the past 70 years as the Republic of Ireland has broken away from the UK, and a new referendum may occur in the next few years to decide whether or not Scotland will become independent. Another prime example of the creation of new states occurred after the breakup of the Soviet Union, when fifteen states were created in Eastern Europe. Even a terrorist group, the Islamic State, has tried to establish its own state in portions of Syria and Iraq, even though their legitimacy is not recognized by the international community.

States in which the territorial boundaries encompass a group of people with a shared ethnicity are known as nation-states. These states are generally homogeneous in terms of the cultural and historical identity of the people, and these groups of people are referred to as a nation. A few current examples of nation-states are Japan, Finland, and Egypt. Nation-states are actually in the minority compared to multinational states, which are states that have more than one nation within their borders. With international migration being a significant phenomenon worldwide, more states become multinational. In contrast, some nations exist but do not have their own state, and those nations that desire to become nation-states are known as stateless nations. In the United States, a prime example of stateless nations are the many Native American tribes scattered throughout the countries. Other examples include the Palestinians living in Israel, Syria, Lebanon and Jordan, and the Kurds found in Iraq, Turkey, Syria, and Iran (Figure 8.1). Both the Kurds and the Palestinians are actively seeking statehood, but serious obstacles must be overcome because the countries where they live are reluctant to grant them independent territories.



**Figure 8.1 | Kurd-majority areas in Turkey, Syria, Iraq, and Iran**  
 Author | U.S. Central Intelligence Agency  
 Source | Wikimedia Commons  
 License | Public Domain

<sup>30</sup> This work by David Dorrel & Joseph P. Henderson is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). The original work is available at [https://socialsci.libretexts.org/Bookshelves/Geography\\_\(Human\)/Book%3A\\_Introduction\\_to\\_Human\\_Geography\\_\(Dorrell\\_and\\_Henderson\)/08%3A\\_Political\\_Geography/8.02%3A\\_How\\_Political\\_Space\\_Is\\_Organized](https://socialsci.libretexts.org/Bookshelves/Geography_(Human)/Book%3A_Introduction_to_Human_Geography_(Dorrell_and_Henderson)/08%3A_Political_Geography/8.02%3A_How_Political_Space_Is_Organized).

The solidarity and unity of a state is influenced by both centripetal and centrifugal forces. Centripetal forces tend to bind a state together, and centrifugal forces act to break up a state. Examples of centripetal forces include nationalism, economic prosperity, and strong, ethical security forces. Centrifugal forces include wars, ineffective or corrupt governments, and market failure. Other factors that can influence the solidarity of a state include types of boundaries, ethnic differences (which may result in unity or discord), and the compactness of a state.

The compactness of a state is related to the shape of a state, and a compact state is one that is ideally circular in shape, where the distance from the center to any border is roughly equal. In contrast, a fragmented state is one that is discontinuous in nature and may consist of a number of islands. A few examples of fragmented states include Indonesia and the Philippines. Indonesia consists of over 17,000 islands, and in order to increase the solidarity of the state, the government actively encouraged migration to less populated islands in order to assimilate indigenous populations. In the Philippines, control of its southern islands such as Mindanao is problematic because of terrorist groups that are active in those areas.

### Former Yugoslavia: A Valuable Lesson in Political and Cultural Geography<sup>31</sup>

The name Yugoslavia, applied to the region along the Adriatic in 1929, means Land of the South Slavs. From 1918 to 1929, the region had been called the Kingdom of Serbs, Croats, and Slovenes. Non-Slavic populations surround Yugoslavia. The region's core is mountainous. The Dinaric Alps, with the highest peak at just below nine thousand feet in elevation, run through the center of the Balkan Peninsula. The rugged mountains separate and isolate groups of Slavic people who, over time, have formed separate identities and consider themselves different from those on the other sides of the mountain ridges. Distinct subethnic divisions developed into the Slovenes, Macedonians, Bosnians, Montenegrins, Croats, and Serbs, with various additional groups. These differences led to conflict, division, and war when the breakup of former Yugoslavia began.

World War I started in the city of Sarajevo, Bosnia, when a Serb advocate assassinated Archduke Ferdinand of the Austria-Hungarian Empire. In the next conflict, World War II, there was also divisiveness within Yugoslavia: Croatia sided with Nazi Germany, but Serbia was an ally with the Communist Soviet Union. The region of Bosnia, with a Muslim majority, faced religious opposition from its mainly Christian neighbors. A group headed by Marshal Tito (a.k.a. Josip Broz) led Yugoslavia after World War II ended in 1945. Tito created a Communist state that attempted to retain its own brand of neutrality between the Warsaw Pact nations led by the Soviet Union and the NATO nations of the West.

Tito was a centripetal force for the region of Yugoslavia. For over forty years, he held the many ethnic Slavic groups together under what he called Brotherhood and Unity, which was actually the threat of brute military force. It appears to have been effective. The 1984 Winter Olympics were held in Sarajevo as witness to the progress and unity of Tito's Yugoslavia. At the same time, Yugoslavia started manufacturing a model of automobiles called the Yugo. While the Yugo was not in the same league as high-end European luxury cars, the ability to make and purchase automobiles was a testimony to the rising industrial level of the Yugoslav economy. This progressive trend, unfortunately, was not to last.

Figure 2.34 The Balkan Peninsula and Former Yugoslavia. Macedonia is officially called the Former Yugoslav Republic of Macedonia (FYROM) because of a name conflict with Greece. Albania is an independent country and was never a part of Yugoslavia.



<sup>31</sup>This work by LibreTexts is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). The original work is available at [https://socialsci.libretexts.org/Bookshelves/Geography\\_\(Human\)/Book%3A\\_World\\_Regional\\_Geography\\_-\\_People\\_Places\\_and\\_Globalization/02%3A\\_Europe/2.04%3A\\_Eastern\\_Europe](https://socialsci.libretexts.org/Bookshelves/Geography_(Human)/Book%3A_World_Regional_Geography_-_People_Places_and_Globalization/02%3A_Europe/2.04%3A_Eastern_Europe).

### The Shape of States<sup>32</sup>

While not the only factor in determining the political landscape, the shape of a state is important because it helps determine potential communication internally, military protection, access to resources, and more. Find the example listed on a political map and try to find one other state that has the same physical shape.

Compact states have relatively equal distances from their center to any boundary, much like a circle. They are often regarded as efficient states. An example of a compact state would be Kenya.

Elongated states have a long and narrow shape. The major problem with these states is with internal communication, which causes isolation of towns from the capital city. Vietnam is an example of this.

Prorupted states occur when a compact state has a portion of its boundary extending outward exceedingly more than the other portions of the boundary. Some of these types of states exist so that the citizens can have access to a specific resource, such as a large body of water. In other circumstances, the extended boundary was created to separate two other nations from having a common boundary. An example of a prorupted state would be Namibia.

Perforated states have other state territories or states within them. A great example of this is Lesotho, which is a sovereign state within South Africa.

Fragmented states exist when a state is separated. Sometimes large bodies of water can fragment a state. Indonesia is an example of a fragmented state.

Landlocked states lack a direct outlet to a major body of water, such as a sea or ocean. This becomes problematic specifically for exporting trade and can hinder a state's economy. Landlocked states are most common in Africa, where the European powers divided up Africa into territories during the Berlin Conference of 1884. After these African territories gained their independence and broke into sovereign states, many became landlocked from the surrounding ocean. An example here would be Uganda.

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## World Geography Instructional Task: Political and Economic Effects of Political Boundaries

### Unit 3: Political and Economic Geography, Topic 1: Political Boundaries and States

**Description:** Students investigate the effects of political boundaries in global politics. This instructional task will support students’ understanding of governments and characteristics of various states in the world. At the end of the instructional task, students will answer the compelling question: “How do political boundaries affect states politically and economically?”

**Suggested Time:** 6 class periods

**Materials:** [The State of States](#); [Democracy and Political Regimes](#); [Political Regime 2015](#); [Political Regime 2015](#); [Cooperation Between States: NATO and Warsaw Pact](#); [The Formation of NATO and the Warsaw Pact](#); [Political Regimes in 1962 map](#); [Cold War 1962 Map](#); [The United Nations](#); [Gerrymandering](#); [Gerrymandering: Is Geometry Silencing Your Vote?](#); [What is Gerrymandering?](#)

#### Instructional Process:

1. Say: “In the previous task, we explored how political borders are created and the effects that they have on individuals and states. We will continue to explore political boundaries, but this time through the lens of how they affect politics within a state and across regions. We will use the compelling question ‘How do political boundaries affect states politically and economically?’”
2. Post and read aloud the first supporting question for the task: “What types of governments exist in the world and how do they differ from one another?”
3. Write the term *sovereignty* on the board, and project the following definition<sup>33</sup>:
  - a. the power of a country to control its own government
4. Say, “A sovereign state controls its own government and is free from outside rule. Sovereign states therefore choose their own forms of government.”
5. Instruct students to read the first four paragraphs of [The State of States](#) independently. Then, lead a brief discussion to ensure that students understand the definitions of unitary and federal states. Possible discussion questions include:
  - a. Why is the United States a federal state?
  - b. What are the local controlled territories in the United States called?
  - c. How are unitary states different from federal states?
6. Divide the class into small groups using an established classroom routine.
7. Provide students with access to [Democracy and Political Regimes](#) from the OER Project. Instruct students to read independently and then answer the following questions in small groups:
  - a. What is a democracy?
  - b. How is an autocracy different from a democracy?

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<sup>33</sup> <https://dictionary.cambridge.org/us/dictionary/english/sovereignty>

- c. How has the prevalence of democracies in the world changed over time? Note: You may project the map [Political Regime 2015](#) and move the slider at the bottom of the map from 1816 to 2015.
  - d. Are all autocracies and democracies equally autocratic or democratic? How does the map [Political Regime 2015](#) differentiate between full democracies and other democracies?
  - e. Which continents/regions are mostly democratic? Which are the most autocratic?
8. Post and read aloud the second supporting question for the task: “How do political states cooperate with other states?”
9. Divide the class into small groups using an established classroom routine.
10. Provide students with access to [Cooperation Between States: NATO and Warsaw Pact](#). Instruct students to read independently and then answer the following questions in small groups:
  - a. Why was NATO formed?
  - b. What happened to the Warsaw Pact after the fall of the USSR?
11. Show the three minute video [The Formation of NATO and the Warsaw Pact](#) from History. Then, project the [Political Regimes in 1962 map](#) and the [Cold War 1962 Map](#). Instruct students to compare the two maps. (Note: Although the Political Regimes map shows that data was not available for the USSR in 1962, it was an autocracy.<sup>34</sup>) Lead a discussion about the relationship between the forms of government and the alignment to Nato and the Warsaw Pact. Possible guiding questions:
  - a. Why did the Soviet Union form the Warsaw Pact?
  - b. What type of government did many NATO aligned states have? (Note: students should identify that many states, but not all, with a democracy or open anocracy were aligned with NATO.)
  - c. Why do states with similar governments align with each other?
12. Write the term *supranational organization* on the board, and project the following definition<sup>35</sup>:
  - a. an international organization, or union, whereby member states transcend national boundaries or interests to share in the decision-making and vote on issues pertaining to the wider grouping.
13. Say, “Let’s look at some activities that a supranational organization may conduct in order to solve global problems. If you believe that a supranational organization should conduct the activity, raise one hand, if you believe that the activity is not the role of a supranational organization, raise two hands.” Project each statement below separately and call on students to share their reasoning as they raise their hands. When students disagree with a statement, you may ask them to explain who or what organization they believe should be responsible for the problem presented. Statements: (Note: adapted from [Examples of UN Achievements](#) by the [United Nations Matters](#).)
  - a. Helping people in various countries to participate in free and fair elections, including in Cambodia, Nicaragua, South Africa, Kosovo and East Timor.
  - b. Negotiating peace settlements that have ended regional conflicts.
  - c. Providing aid for refugees fleeing persecution, violence, and war.
  - d. Creating a comprehensive system of international laws to protect human rights.
  - e. Helping people gain access to safe drinking water.

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<sup>34</sup> <https://www.britannica.com/topic/Communist-Party-of-the-Soviet-Union>

<sup>35</sup> <https://www.unescwa.org/supranational-organizations#:~:text=Title%20English%3A,pertaining%20to%20the%20wider%20grouping>

- f. Providing food for on average 90 million hungry people in 80 countries every year.
  - g. Providing education programs for women in order to raise the female literacy rate in developing countries.
  - h. Facilitating global health initiatives to eradicate polio.
  - i. Helping countries preserve their ancient, cultural and natural sites by giving important historical sites protected status.
14. Say, “The United Nations is one example of a supranational organization.” Provide access to [The United Nations](#) from Khan Academy. Instruct students to read independently and then answer the following questions in small groups:
- a. What role did the United States play in the formation of the United Nations?
  - b. What is the role of the Security Council and UN peacekeepers?
15. Instruct students to write an extended response to the supporting question: “How do political states cooperate with other states?”
16. Post and read aloud the third supporting question for the task: “How do boundaries affect electoral processes?”
17. Provide students with access to [Gerrymandering](#) and instruct students to read the first paragraph independently.
18. Show the 5 minute video [Gerrymandering: Is Geometry Silencing Your Vote?](#)
19. Provide access to [What is Gerrymandering?](#) and instruct students to read independently. Then, conduct a class discussion using the following guiding questions:
- a. Why does redistricting occur every ten years?
  - b. What is gerrymandering and why is it important to understand?
  - c. Should gerrymandering be allowed?
  - d. If you believe gerrymandering is wrong, how should it be avoided?
20. To culminate the task, direct students to write an essay in response to the task’s compelling question: “How do political boundaries affect states politically and economically?”

### The State of States<sup>36</sup>

Independent states are the primary building blocks of the world political map. A state (also called a nation or country) is a territory with defined boundaries organized into a political unit and ruled by an established government that has control over its internal and foreign affairs. When a state has total control over its internal and foreign affairs, it is called a sovereign state. A location claimed by a sovereign state is called a territory. According to the United Nations, in 2016, the world had 193 nations; however, many of those nations dispute their boundaries.

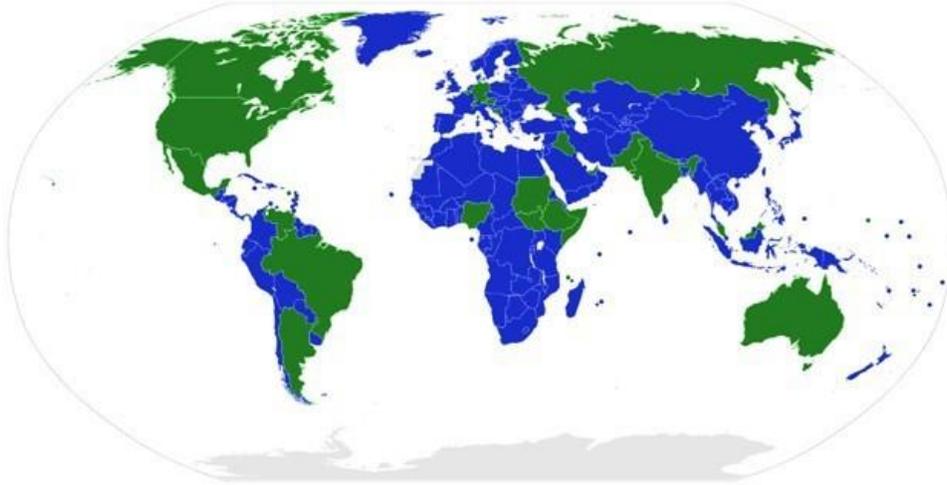
Some nations are stateless. This means that there are groups of people who share a collective identity and history, but who have no parcel of land that they fully control. The Palestinians are perhaps the world's best-known stateless nation, owed to their long struggle with Israeli Jews – some of whom, until 1948, belonged to the previously best-known nation without a state.

Federalism is a system of government with one, strong, central governing authority as well as smaller units, such as states. If the central government grows too strong, then federalism comes closer to a unitary state, where the governing body has supreme authority and dictates how much power the units are allowed to have. In those places like Egypt, France, and Japan, where nationalist feelings are strong, and there are many centripetal forces like language, religion, and economic prosperity uniting people, a unitary state makes much sense. Unitary systems work best where there is no strong opposition to central control. Therefore, the political elite in a capital city (like Paris or Tokyo) frequently have outsized power over the rest of the country. Fights over local control are minimal, and the power of local (provincial) governments is relatively weak.

Many countries have an underdeveloped sense of nationhood and therefore are better suited to use a Federalist style of government where power is geographically distributed among several subnational units. This style of governance makes sense when a country is “young” – and is still in the process of nation-building or developing a common identity necessary to the establishment of a unified nationality. Federations may also work best when nations have multi-ethnic or multi-national countries. Rather than break into multiple smaller states, a country can choose to give each of its ethnicities or nationalities some measure of political autonomy. If they want to speak their language or teach their specific religion in the local schools, then the central government allows local people to make those decisions. The central government in a federal system focuses on things like national defense, managing interstate transportation, and regulating a common currency. The U.S. began as a federalist system.

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- Federal State
- Unitary State

### **Cooperation Between States: NATO and Warsaw Pact<sup>37</sup>**

In order to provide shared military and economic security as a unified entity, states engage in alliances. Military alliances help protect states from common enemies, and economic alliances allow for the free exchange of goods in a larger market. These alliances are also referred to as supranational organizations, and they all involve states giving up some of their sovereign power for the common good.

The largest supranational organization in the world is the United Nations (UN). Formed originally as the League of Nations after World War II, the UN now includes 193 states. The work of the UN includes peacekeeping, humanitarian relief, and the establishment of internationally approved standards of behavior. The headquarters of the UN is in New York City, and important subsidiary organizations of the UN include the World Health Organization (WHO), UNESCO (United Nations Educational, Cultural and Cultural Organization) and the Food and Agriculture Organization (FAO).

#### **NATO and Warsaw Pact**

In terms of military alliances on a regional scale, the North Atlantic Treaty Organization (NATO) comprises 28 states and was developed after World War II to counter the threat of the former Soviet Union. Member states include numerous Western European states as well as the United States and Canada (Figure 8.2.).

When the Soviet Union existed, the Warsaw Pact was a military alliance between the Soviet Union and seven satellite states of Eastern and Central Europe (Figure 8.2). The Warsaw Pact disbanded in 1991, and several of the former Soviet states as well as satellite states have subsequently joined NATO. As a result, Russia has felt isolated and vulnerable, and as a result, has been aggressively acting to seize or control territories in states close to its borders.

For example, in 2008, Russia engaged in a military conflict in Georgia, one of the former Soviet states, in order to support a separatist movement allied with Russia. In 2014, Russia invaded the peninsula of Crimea, within the territorial boundaries of Ukraine, one of the former states in the Soviet Union. Furthermore, Russia has intervened militarily against the rebel forces fighting in eastern Ukraine. In response to these provocations, NATO commenced Operation Atlantic Resolve, an ongoing series of training exercises between the United States and other NATO countries in former Warsaw Pact countries such as Poland, Romania, and Latvia.

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### Gerrymandering<sup>38</sup>

In the United States, boundaries play an important role in the electoral process, but in this case, district, and precinct boundaries are significant in contrast to the country boundaries that have been previously discussed. Political parties in power will sometimes rearrange the boundaries of voting districts in order to ensure victory in elections, and this practice is called gerrymandering. Gerrymandering strategies can involve drawing the boundaries so that the majority of voters in a district favor the party in power. Another method is to segregate the opposition voters into several different districts (Figure 8.6). While gerrymandering is not generally illegal in the United States, it can be challenged in court when it appears to clearly discriminate against minority populations. For example, when legislative districts were redrawn in 2015 in Gwinnett and Henry counties in Georgia, the NAACP filed a federal lawsuit because of the perception that the adjustment violated the rights of minority black voters. A 2013 Supreme Court decision, however, declared that a requirement in the 1965 Voting Rights Act for federal oversight of redistricting is not constitutional, and this decision may have an impact on such lawsuits.

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## Unit Three Instruction

**Topic Two:** Economic Geography (WG.1.1, WG.1.4, WG.3.1, WG.3.2, WG.3.3, WG.4.5, WG.5.3, WG.5.4)

**Connections to the unit question:** Students will examine past and present global systems of trade and interdependence, the effects of technological innovation on economic systems, economic development, and economic indicators by analyzing various primary and secondary sources. Students will use their knowledge to analyze how geography affects economic systems.

**Suggested Time:** 24 class periods

**Use these sample instructional tasks:**

- [Globalization](#)
- [Economic Development](#)

**To explore these compelling and supporting questions:**

- To what extent has globalization changed the world?
- How were people globally connected before modern day globalization?
- How did industrialization change societies?
- Is globalization of the recent past a net positive or negative?
- Will global economic inequality exist in the future?
- How has global economic inequality changed over time?
- What indicators and factors do geographers use to determine the level of economic development of a country?
- How can economic inequality and poverty be addressed in the future?

**That students answer through this assessment:**

- Students write an extended paragraph in response to the supporting question: “How were people globally connected before modern day globalization?”
- Students write an extended paragraph in response to the supporting question: “How did industrialization change society?”
- Students write an extended paragraph in response to the supporting question: “Is globalization of the recent past a net positive or negative?”
- Students engage in a class discussion addressing the compelling question: “To what extent has globalization changed the world?”
- Students engage in a class discussion addressing the supporting question: “How has global economic inequality changed over time?”
- Students engage in a class discussion addressing the supporting question: “What indicators and factors do geographers use to determine the level of economic development of a country?”
- Students will research and make a claim about how attainable one of the United Nations’ Sustainable Development Goals and participate in a gallery walk and provide feedback on other students’ claims.

- Students will participate in a Socratic seminar addressing the compelling question: “Will global economic inequality exist in the future?”

## World Geography Instructional Task: Globalization

### Unit 3: Political and Economic Geography, Topic 2: Economic Geography

**Description:** Students explore past and present examples of global trade and interdependence and the effects of industrialization on economic systems. This instructional task will support students’ understanding of global economic interdependence and economic characteristics of various states in the world. At the end of the instructional task, students will answer the compelling question: “To what extent has globalization changed the world?”

**Suggested Time:** 13 class periods

**Materials:** [Trade Goods, and Ideas, Travel the Silk Roads Between Asia and Europe](#); Causes and Effects of the Silk Road Trade Networks ([blank](#) and [completed](#)); [The Columbian Exchange: Crash Course History of Science #16](#); [Overview: Industrialization](#); [Origins of the Industrial Revolution](#); [Industrialization changed the world's labor and everyday life](#); [“The Spread of the Industrial Revolution”](#); [“Consequences of the Industrial Revolution”](#); [Fossil Fuels, Steam Power, and the Rise of Manufacturing](#); [Urbanization and the evolution of cities across 10,000 years](#); [Urbanization](#); [Did you know? The Industrial Revolution](#); [The Rise of the Machines: Pros and Cons of the Industrial Revolution](#); [The Global Network](#); [Observing Physical and Cultural Landscape](#); [Communication](#); [Globalization](#); [Understanding Globalization Map](#); [Understanding Globalization](#); [The impact of globalization on the physical and human characteristics of communities](#); [Global Interdependence](#); [Globalization-trade and transnational corporations](#); [Imports, Exports, and Exchange Rates](#); [Economic Effects of Globalization](#); [Social Studies Extended Response Rubric](#); [Socratic seminar](#); [conversation stems](#); [discussion tracker](#)

#### Instructional Process:

1. Say, “In the previous instructional task we discussed how political institutions affect economic systems. In this instructional task, you will explore the development of economic systems over time and how they have affected the world we live in today.”
2. Post and read aloud the first compelling question for the instructional task: “To what extent has globalization changed the world?”
3. Post and read aloud the first supporting question: “How were people globally connected before modern day globalization?”
4. Write the term *globalization* on the board and read or project the following definitions<sup>39</sup>:
  - a. the connection between people's activities and organizations around the world
  - b. the global scale on which businesses operate, and the exchange of goods and services between businesses, organizations and countries
  - c. cultural changes that happen as a result of these business exchanges
5. Say, “Trade has been a significant economic activity in and across regions and has connected people within and across regions. One example of a historical trade network that increased interconnectedness is the Silk Roads.”

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<sup>39</sup> <https://newsela.com/read/natgeo-impact-globalization-place/id/53349/>

6. Provide students access to [Trade Goods, and Ideas, Travel the Silk Roads Between Asia and Europe](#) by Newsela.<sup>40</sup> Read the first paragraph aloud. Then, say, “How are societies connected today?” and take a few responses. Encourage students to brainstorm ways in which their lives are affected by global interconnectedness today. Students should identify technologies that have increased global connectivity today, including communication technology, such as the cell phone and internet, and transportation technologies, such as the airplane.
7. Direct students to read the sections [Trade Goods, and Ideas, Travel the Silk Roads Between Asia and Europe](#) independently and take notes on the [Causes and Effects of the Silk Road Trade Networks](#) organizer.
8. Divide the class into small groups using an established classroom routine. Direct students to compare their notes. Then, ask students to discuss how the causes and effects of the Silk Road Trade networks compare to globalization today. Students should identify that advances in technology caused both increased trade over the Silk Roads and current globalization, and that the diffusion of culture and ideas are common in both.
9. Say, “Another example in history of increasing global interconnection is the Columbian Exchange. Christopher Columbus departed from Europe and arrived in the Americas in 1492. This voyage prompted more European exploration and colonization of the Americas. The exchange network that developed between Europe, Africa, and the Americas became known as the Columbian Exchange. Today we will look at some of the effects of the Columbian Exchange.”
10. Show the video [The Columbian Exchange: Crash Course History of Science #16](#) from the beginning to minute 9:06. Then, conduct a class discussion in which students discuss the effects of the Columbian Exchange. Possible guiding questions include:
  - a. What were the biological effects of the exchange between the Americas and Europe?
  - b. How did the Columbian Exchange affect Africa?
  - c. How were the Silk Roads and Columbian Exchange similar? How were they different?
  - d. What are the similarities between the Columbian Exchange and current globalization?
11. Instruct students to write an extended response to the supporting question “How were people globally connected before modern day globalization?” Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.
12. Post and read aloud the second supporting question: “How did industrialization change societies?”
13. Write the term *industrial revolution* on the board and read or project the following definition<sup>41</sup>:
  - a. a rapid major change in an economy (as in England in the late 18th century) marked by the general introduction of power-driven machinery or by an important change in the prevailing types and methods of use of such machines
14. Say, “The Industrial Revolution had major societal consequences. Let’s first examine the reasons that the Industrial Revolution first began in Great Britain.”
15. Provide students access to [Overview: Industrialization](#) by the OER Project. Direct students to read the section [Origins of the Industrial Revolution](#) independently. Then, ask, “What unique factors in Great Britain, rather than in other areas of the world, encouraged the start of the Industrial Revolution?” and lead a brief discussion.

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<sup>40</sup> Access to resources from Newsela requires a free [K-12 Teacher Account](#). Text levels can be adjusted for all Newsela articles by using the dropdown menu in the top right corner of the article page.

<sup>41</sup> <https://www.merriam-webster.com/dictionary/industrial%20revolution>

16. Provide students access to [Industrialization changed the world's labor and everyday life](#) by Newsela<sup>42</sup> and instruct students to read independently. Then, lead a brief discussion on the effects of industrialization. Possible guiding questions:
  - a. How did the way in which people work change after industrialization?
  - b. How did industrialization affect families and children?
17. Direct students to read the sections "[The Spread of the Industrial Revolution](#)" and "[Consequences of the Industrial Revolution](#)" from [Fossil Fuels, Steam Power, and the Rise of Manufacturing](#) by Khan Academy.
  - a. How did industrialization diffuse?
  - b. How did industrialization affect war technology?
  - c. What are some of the benefits of the Industrial Revolution?
  - d. What are some negative effects of the Industrial Revolution?
18. Say, "One of the effects of industrialization was an increase in urbanization, although urbanization was occurring in societies prior to the Industrial Revolution." Show the class the 3 minute video [Urbanization and the evolution of cities across 10,000 years](#) from TedEd.
19. Provide access to [Urbanization](#) by the OER Project. Direct students to read "Introduction" and "What is a city?" and then examine the text for Chart 1 and Chart 2. Ask, "What is urbanization and what are the trends of urbanization over time?" and take a few responses.
20. Provide access to [Urbanization](#) by National Geographic Education and direct students to read independently.
  - a. How did industrialization increase urbanization?
  - b. Approximately what percentage of the population of the world lives in cities today?
  - c. What is urban sprawl?
21. Say, "Today you will investigate the positive and negative effects of the industrial revolution."
22. Show the class the 2 minute video [Did you know? The Industrial Revolution](#) by the Encyclopedia Britannica.
23. Divide the class into small groups using an established classroom routine.
24. Provide each student with Industrialization Positive and Negative Effects t-chart. Direct students to discuss positive and negative effects of industrialization and take notes on their t-chart.
25. Then, provide students with access to [The Rise of the Machines: Pros and Cons of the Industrial Revolution](#) by Britannica and direct them to read independently and take notes on their t-chart. After reading, direct students to answer the following questions in small groups:
  - a. Which effects of the industrial revolution are still relevant today?
  - b. What do you think is the most convincing evidence that the industrial revolution was bad for society?
  - c. What do you think is the most convincing evidence that the industrial revolution was good for society?
26. After students have discussed in small groups, instruct students to write an extended response to the supporting question: "How did industrialization change society?"
27. Post and read aloud the third supporting question: Is globalization of the recent past a net positive or negative?
28. Project the first image from the [The Global Network](#) article by National Geographic Education. Read aloud the caption that accompanies the first image. Then, say, "Cultural changes caused by globalization are sometimes

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<sup>42</sup> Access to resources from Newsela requires a free [K-12 Teacher Account](#). Text levels can be adjusted for all Newsela articles by using the dropdown menu in the top right corner of the article page.

evident on the landscape. This image shows evidence of globalization on the cultural landscape of places throughout the world.” Provide access to the [Globalization](#) handout and explain to students that they will use this handout to take notes as they complete activities in order to help them prepare to write an extended response answering the supporting question: “Is globalization of the recent past a net positive or negative?”

29. Provide students access to [The Global Network](#) article by National Geographic Education and direct them to read independently starting with the [Communication](#) section. Instruct students to take notes on the technological, cultural, social, political, and economic factors of globalization on the [Globalization](#) handout.
30. Say, “Today you will use geographic technology to investigate how globalization has grown and how it has affected the world.”
31. Provide students access to the [Understanding Globalization Map](#) from ESRI Geoinquiries and direct them to complete the [Understanding Globalization](#) lesson. Note: Teachers may project the map to the whole class as you move through the lesson, or provide access to the map in pairs, groups, or individual students as access to devices allow. The lesson contains an answer key, and students should not be provided with direct access to complete work independently.
32. Provide students access to [The impact of globalization on the physical and human characteristics of communities](#) from Newsela<sup>43</sup> and direct them to read independently. Instruct students to take notes on the cultural factors of globalization on the [Globalization](#) handout.
33. Provide access to [Global Interdependence](#) and direct students to read independently. Instruct students to take notes on the economic factors of globalization on the [Globalization](#) handout.
34. Show the class the 7 minute video [Globalization-trade and transnational corporations](#) from Khan Academy. Instruct students to take notes on the economic factors and benefits and drawbacks of globalization on the [Globalization](#) handout as they watch. Then, lead a brief discussion to check for understanding. Possible guiding questions include:
  - a. What are the goals of trade regulatory groups such as NAFTA?
  - b. What are trans-national corporations and why are they significant?
  - c. What are some drawbacks of trans-national corporations?
  - d. What are some benefits of trans-national organizations?
  - e. Why has cultural diffusion intensified in the recent past?
35. Show the video [Imports, Exports, and Exchange Rates](#) from Crash Course stopping at minute 5:25. Note: NAFTA was replaced by the United States-Mexico-Canada Agreement. Differences between the two trade agreements can be found on the [International Trade Administration’s](#) website.
36. Provide access to [Economic Effects of Globalization](#) by National Geographic Education and direct students to take notes on the economic factors of globalization on the [Globalization](#) handout.
37. Instruct students to write an extended response to the supporting question: “Is globalization of the recent past a net positive or negative?” Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.
38. After these activities, conduct a [Socratic seminar](#) with students based on the compelling question: “To what extent has globalization changed the world?” Encourage students to use these [conversation stems](#) and assess student participation with a [discussion tracker](#).

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<sup>43</sup> Access to resources from Newsela requires a free [K-12 Teacher Account](#).

<b>Causes and Effects of Silk Road Trade Networks</b>		
	<b>Causes</b>	<b>Effects</b>
<b>Technological</b>		
<b>Cultural (religion, language, art, intellectual)</b>		
<b>Economic</b>		
<b>Social and political</b>		
<b>Biological (Disease)</b>		

<b>Causes and Effects of Silk Road Trade Networks (completed)</b>		
	<b>Causes</b>	<b>Effects</b>
<b>Technological</b>	advances in metallurgy and transportation technology; construction of roads; use of “trade winds” in the Indian Ocean	People exchanged technology on the Silk Roads  today, Afro-Eurasia shares common technologies
<b>Cultural (religion, language, art, intellectual)</b>		People learned other languages; spread of religious beliefs, including the spread of Buddhism and Islam in China  today, Afro-Eurasia shares common artistic styles, culture, and religion
<b>Economic</b>	1st silk roads: Agricultural production increased; coinage currency; Demand for foreign luxury goods in Rome like silk; Demand for goods in China like grapes, glassware, art, and horses  2nd silk roads: growth of economy in China during the Tang and Song Dynasties, use of printed paper money; increased trade between Arab and Chinese	Exchange of goods across Afro-Eurasia like silk, iron, china, textiles, Arabic spices, stones, grapes, glassware
<b>Social and political</b>	warfare connected people in Afro-Eurasia and China; peace and prosperity in Rome and prosperity under the Abbasids helped start the second Silk Roads era  pastoral nomads in Inner Asia helped facilitate travel in harsh and dangerous terrain	
<b>Biological (Disease)</b>		Disease was spread including smallpox, measles, and bubonic plague, populations in the Roman Empire and China declined because of spread of diseases  People in Afro-Eurasia have similar immunities built up to diseases

<b>Globalization</b>	
<b>Technological</b>	
<b>Social/Political</b>	
<b>Cultural</b>	
<b>Economic</b>	
<b>Use the space below to jot down positive and negative effects of globalization.</b>	
<b>Positive:</b>	
<b>Negative:</b>	

## World Geography Instructional Task: Economic Development

### Unit 3: Political and Economic Geography, Topic 2: Economic Geography

**Description:** Students investigate measures of economic development of various states in the world and efforts to reduce economic inequality. This instructional task will support students’ understanding of economic indicators and economic characteristics of various states in the world. At the end of the instructional task, students will answer the compelling question: “Will global economic inequality exist in the future?”

**Suggested Time:** 11 class periods

**Materials:** [How to End Poverty in 15 Years by Hans Rosling](#); [Global Divergence Followed by Convergence](#); [Global Income Inequality Increased for Two Centuries and Is Now Falling](#); [inequality index line chart tool](#); [Economic Development Indicators](#); [The many factors of economic development](#); [Economic Development Indicators](#); “[The Geography of Economics](#)”; [Global Stratification and Poverty](#); [Economic Development Indicators](#); [Global Stratification and Poverty](#); [Asia's rise -- how and when | Hans Rosling](#); [Human Development Index Map](#); [Human Development Index](#); [Country Economic Development Comparison](#); [CIA Factbook Countries](#); [United Nations Development Programme Human Development Reports](#); [Economic Development Indicators Handout](#); [Human Development Index \(HDI\) Ranking](#); [World Bank Data](#); [What Does the Future Hold For Development Around The World?](#); [Poverty Overview](#); [Sustainable Development Goals](#); [United Nations Sustainable Development Goals](#)

#### Instructional Process:

1. Say, “In the previous instructional task we discussed the development and the interconnectedness of the global economy. In this instructional task, you will explore the development of economic systems over time and how they have affected the world we live in today. We will use the compelling question, ‘Will global economic inequality exist in the future?’ to guide our inquiry.”
2. Post and read aloud the first supporting question: “How has global economic inequality changed over time?”
3. Write the term *poverty* on the board, and project the following definition<sup>44</sup>:
  - a. the state of one who lacks a usual or socially acceptable amount of money or material possessions
4. Say, “Poverty is measured differently by different entities. For example, the World Bank defines someone who is in ‘extreme poverty’ as a person who lives on less than \$1.90 per day.<sup>45</sup> The US Census Bureau uses ‘a set of money income thresholds that vary by family size and composition’ to determine if someone is living in poverty.”<sup>46</sup> Ask, “Why are these definitions different?” and take a few responses. Ask students to define poverty in their own words and call on a few students to share out.
5. Show the 6 minute video [How to End Poverty in 15 Years by Hans Rosling](#). Then, conduct a brief discussion on the trends in global poverty over time. Possible guiding questions:
  - a. How has the number of people in poverty, globally, changed over time?

<sup>44</sup> <https://www.merriam-webster.com/dictionary/poverty>

<sup>45</sup> <https://www.worldbank.org/en/publication/global-monitoring-report/poverty-forecasts-2015>

<sup>46</sup> <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>

- b. How has the number of people in poverty changed over time in each of the following regions: Europe, the Americas, Africa, and Asia?
6. Write the term *economic inequality* on the board, and project the following definition<sup>4748</sup>:
  - a. the unequal distribution of income and opportunity between different groups in society
  - b. there are three types of economic inequality: income inequality, pay inequality, wealth inequality
7. Divide the class into small groups using an established classroom routine.
8. Provide students access to [Global Divergence Followed by Convergence](#) and [Global Income Inequality Increased for Two Centuries and Is Now Falling](#) by Our World in Data. Instruct students to read and study the graphics independently. After reading, direct students to answer the following questions in small groups:
  - a. What are the trends over time of the global distribution of income?
  - b. How do trends since 1975 in global distribution of income in Europe, Asia, Africa, and North and South America compare to each other?
  - c. How has global income inequality changed since 1800?
  - d. How did industrialization affect global income distribution?
  - e. How have the incomes of the poorer half of the world population changed compared to the incomes of the richer half of the world population since 1988?
9. Say, “One way to measure inequality in a country is to use the Gini index, which measures the distribution of income across a population. Countries with a high level of inequality have a high Gini index.”<sup>49</sup>
10. Project the [inequality index line chart tool](#) from Gapminder on the board. Click on the question mark next to “Inequality Index (Gini)” in the top left corner of the page and read aloud the information on the Gini index. Provide each student with the [Economic Development Indicators](#) handout and direct them to take notes on the definition and significance of the Gini index. Then, ask, “Which of these countries had the highest level of inequality in 2000, according to the Gini index? What about in 2014?” Note: To change the countries on the line graph, click on “Find” on the right side of the page, then “X”, then select the countries to present.
11. Conduct a brief discussion on the supporting question: “How has global economic inequality changed over time?”
12. Post and read aloud the second supporting question: “What indicators and factors do geographers use to determine the level of economic development of a country?”
13. Write the term *economic development* on the board, and project the following definition<sup>50</sup>:
  - a. the process by which countries with low living standards become nations with high living standards.
  - b. the process by which the overall health, well-being, and academic level of the general population improves
14. Provide students access to [The many factors of economic development](#) by Newsela<sup>51</sup> and direct them to read independently. Direct students to take notes on the definition and significance of gross national income (GNI) per capita, literacy rate, and life expectancy on the [Economic Development Indicators](#) handout.

<sup>47</sup> <https://wol.iza.org/key-topics/economic-inequality>

<sup>48</sup> <https://www.britannica.com/topic/income-inequality>

<sup>49</sup> <https://www.investopedia.com/terms/g/gini-index.asp>

<sup>50</sup> <https://marketbusinessnews.com/financial-glossary/economic-development/>

<sup>51</sup> Access to resources from Newsela requires a free [K-12 Teacher Account](#). Text levels can be adjusted for all Newsela articles by using the dropdown menu in the top right corner of the article page.

15. Say, “A common economic indicator used to measure a country’s economy is the Gross Domestic Product (GDP).” Write the following term and definition on the board:
  - a. Gross Domestic Product: total monetary or market value of all the finished goods and services produced within a country’s borders in a specific time period<sup>52</sup>
16. Provide students with access to [The Geography of Economics](#) adapted from *Introduction to Human Geography* and instruct students to read independently. Then, lead a discussion on the use of GDP and HDI (Human Development Index) to measure economic development and characteristics of more developed economies. Possible guiding questions include:
  - a. Why does the United Nations use HDI, rather than GDP, to measure the economic development of a country?
  - b. What types of jobs are more prevalent in more developed countries?
  - c. What are some characteristics and indicators of more developed countries?
  - d. What are some characteristics and indicators of less developed countries?
17. Say, “You are going to explore how indicators of economic development are used to classify the economic development of countries.” Show the video [Global Stratification and Poverty](#) by Crash Course stopping at minute 4:45. Direct students to complete the [Economic Development Indicators](#) handout as they watch the video. Note: The instructor may need to pause the video to allow students time to take notes. Students should record some examples of countries for each level of economic development so that they may choose appropriate countries to compare later in the instructional task.
18. Say, “You’ve explored many measures of economic development and their significance when determining the level of economic development of a country. Now let’s discuss the historical, demographic, cultural, technological, and political factors that affect the economic development of a country.”
19. Show the video [Global Stratification and Poverty](#) by Crash Course from minute 4:45 to 9:30. Ask students to jot down factors that influence economic development as they watch.
20. Show the video [Asia's rise -- how and when | Hans Rosling](#) from TED stopping at the 10:00 minute mark. Ask students to jot down factors that influence economic development as they watch.
21. After watching the two videos, lead a brief discussion on historical, demographic, cultural, technological, and political factors that influence the economic development of a country. Possible guiding questions:
  - a. How does gender inequality affect the level of poverty of a country?
  - b. How has colonialism affected the economic development of countries, including China, India, and formerly colonized countries in Africa?
  - c. How does access to technology affect the economic development of a country?
  - d. What are some historical factors that have stalled economic growth in China and India? Note: Students should identify colonialism or lack of sovereignty, wars, diseases, and changes in political leadership as factors that stalled economic growth.
22. Provide students access to the [Human Development Index Map](#) from ESRI Geoinquiries and direct them to complete the [Human Development Index](#) lesson. Note: Teachers may project the map to the whole class as you

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<sup>52</sup> <https://www.investopedia.com/terms/g/gdp.asp>

move through the lesson, or provide access to the map in pairs, groups, or individual students as access to devices allow. The lesson contains an answer key and should not be given directly to students to work from.

23. Say, “Today you will research two countries in order to analyze the factors that determine their level of economic development.”
24. Divide students into pairs using an established classroom routine.
25. Provide students with the [Country Economic Development Comparison](#) handout and the following resources:
  - a. [CIA Factbook Countries](#)
  - b. [United Nations Development Programme Human Development Reports](#)
26. Say, “With your partner, you will research the indicators and factors of economic development of one high or upper middle income country and one lower middle or low income country. Use the completed [Economic Development Indicators Handout](#) to guide your work.”
27. Project the [Human Development Index \(HDI\) Ranking](#) chart from the United Nations Development Programme. Say, “This chart ranks countries by their HDI. On the right side of the chart, the GNI per capita is listed for each country. You should use this tool to determine which countries you will research. Use the CIA Factbook to find the literacy rate, life expectancy, and Gini Index coefficient for the countries. You will also use ‘Background’ information for your country from CIA Factbook in order to identify historical factors that have influenced the economic development of your country.” Instruct students to complete the handout with their small group.  
Note: Another possible source for this activity is [World Bank Data](#).
28. After the pair has completed the handout, direct students to discuss the following questions in small groups:
  - a. Are the literacy rate and life expectancy for each country what you expected? Why or why not?
  - b. Which country has more economic inequality and why is that so?
  - c. What historical factors do the two countries share and how are their histories different?
29. Following small group discussions, conduct a brief discussion on the supporting question: “What indicators and factors do geographers use to determine the level of economic development of a country?”
30. Post and read aloud the third supporting question: “How can economic inequality and poverty be addressed in the future?”
31. Ask, “What predictions about the future of global poverty and the economic development of countries have you heard or read about in this instructional task so far?” and take a few responses. Students should recall predictions that global poverty will continue to decline and that the economies of India and China will continue to grow.
32. Provide students access to [What Does the Future Hold For Development Around The World?](#) Ask, “What factors indicate that global poverty will continue to decline?” and take a few responses.
33. Say, “There are supranational organizations that work to decrease poverty and increase economic growth worldwide. For example, the World Bank seeks ‘to end extreme poverty and promote shared prosperity.’ However, according to the World Bank, the global Covid-19 pandemic may stall their efforts.”
34. Provide students access to [Poverty Overview](#) by the World Bank and instruct them to read independently. Then, lead a discussion on barriers preventing global poverty reduction. Possible guiding questions:
  - a. What factors might prevent global poverty reduction?
  - b. According to the article, how might the characteristics and locations of the global poor be different in the near future?

35. Read aloud the first paragraph and the 17 sustainable goals listed in the article [Sustainable Development Goals](#) from National Geographic Education.
36. Divide students into pairs using an established classroom routine.
37. Say, “With your partner, you will explore one United Nation Sustainable Development goal by identifying its purpose, targets, and barriers to success.” Assign one goal to each pair of students.
38. Provide students with the [Sustainable Development Goals](#) handout and access to the [United Nations Sustainable Development Goals](#) website.
39. Say, “Using the [United Nations Sustainable Development Goals](#) website and the information you have learned in this instructional task, determine if your assigned goal is possible to achieve.” Direct students to click on their assigned goal. Students should use the “Facts and figures” section to identify the problem the goal addresses, the “Goal targets” section to identify how the goal will be achieved, and the introduction to the goal to identify barriers to achieving the goal.
40. After students have written their claims to the question: Is this goal attainable? Why or why not? direct students to post their papers around the room, and conduct a [gallery walk](#) where students can read and respond to their peers' claims. After reading each of their peer’s claims, instruct students to note one thing they wonder, one question they may have, and one connection they can make. Students can write directly on the papers with different color pens or use sticky notes.
41. To culminate the task, conduct a [Socratic seminar](#) with students based on the compelling question: “Will global economic inequality exist in the future?” Encourage students to use the [conversation stems](#) and assess student participation with a [discussion tracker](#)

Economic Development Indicators Handout				
GINI Coefficient Index	Gross National Income per capita	Literacy Rate	Life Expectancy	Human Development Index

	GNI range	Examples and Characteristics
High Income Countries		
Upper Middle Income Countries		
Lower Middle Income Countries		
Low Income Countries		

### The Geography of Economics<sup>53</sup>

Gross Domestic Product (GDP) and economic growth emerged as leading indicators of national progress in many countries, yet GDP was never intended to be used as a measure of wellbeing. In the 1970s and 80s, development debate considered using alternative focuses on going beyond GDP, including putting greater emphasis on employment, followed by redistribution with growth, and then whether people had their basic needs met. These ideas helped pave the way for human development (both the approach and its measurement).

The human development index (HDI) was developed in 1990 and is used by the United Nations Development Program to measure a standard of human development, which refers to the widening opportunities available to individuals for education, health care, income, and employment. The HDI incorporates variables such as standards of living, literacy rate, and life expectancy to indicate a measure of well-being or the quality of life for a specific country.

One of the more notable achievements of the human development approach has been to ensure a growing acceptance of the fact that monetary measures, such as GDP per capita, are inadequate representations of development. This measure of human development remains a simple unweighted average of a nation's longevity, education, and income and is widely accepted in development discourse. Over the years, however, some modifications and refinements have been made to the index. Indeed, the critics of the HDI and their concerns have stimulated, and continue to stimulate, adjustments to the index and the development of companion indices, which help paint a broader picture of global human development.

The HDI emphasizes that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. The HDI can also be used to question national policy choices, asking how two countries with the same level of GNI per capita can end up with different human development outcomes. These contrasts can stimulate debate about government policy priorities.

Jobs can be classified into three major types of sectors, which greatly influence the economics, standards of living, trade, and even social classes within a society. The first is called the primary sector, which are jobs directly related to the extraction of the Earth's natural resources (e.g., forestry, raw materials, or agriculture). In the secondary sector, jobs are focused on manufacturing raw materials from the primary sector to usable products. The tertiary sector provides goods and services to people in exchange for payment. These types of jobs include lawyers, doctors, educators, banking, retail, athletes, and others.

It is probably apparent that the majority of the jobs in more developed countries (MDCs) are tertiary. There are primary and secondary sector jobs in countries like the United States, but the driving economic force is in the tertiary sector. MDCs are also more productive than LDCs (less developed countries), not because they work harder, but because of access and use of technology. In economics, productivity is the value of a product compared to the amount of labor.

MDCs also can invest more money and resources because of their economies. Thus their people tend to be more educated and healthier; children are more likely to survive, and adults tend to live longer than those in LDCs. Probably the two most important or essential components to have a nation's developmental status begin to rise is through education and health care. There is a direct correlation to development and education: the more developed a nation, the more

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<sup>53</sup> [Introduction to Human Geography](#) by R. Adam Dastrup, MA, GISP is licensed under a [Creative Commons Attribution 4.0 International License](#). The original work is available at <https://humangeography.pressbooks.com/chapter/5-2/>.

educated the population. One of the best indicators of a nation's level of development is its literacy rate, the percent of people who can read or write.

In most developed countries, the literacy rate is usually around 98 percent, whereas, in emerging countries, the literacy rate is roughly 60 percent. The impact of this is that books are written for people in MDCs, and scientific advances tend to occur in these countries. Regarding percentage, least developed countries spend more of their GDP on education than most developed countries need to. In LDCs, the children going to school often have outdated books and not written in their primary language. Often in LDCs, more schools are private than public because the government cannot fund them. Outside religious groups and nonprofit organizations fund many of these schools.

Country Economic Development Comparison: High Income or Upper Middle Income Country		
High Income or Upper Middle Income Country	Name:	
	Continent:	
Economic and Development Indicators and their significance	<a href="#">GNI per capita</a>	
	<a href="#">HDI</a>	
	<a href="#">Life Expectancy</a> (total population)	
	<a href="#">Literacy Rate</a> (total population)	
	<a href="#">Gini Index Coefficient</a>	

<p><b>Historical factors that have affected economic development:</b></p>	
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Country Economic Development Comparison: Low Income or Lower Middle Income Country		
<b>Lower Middle Income or Low Income Country</b>	Name:	
	Continent:	
<b>Economic and Development Indicators and their significance</b>	<a href="#">GNI per capita</a>	
	<a href="#">HDI</a>	
	<a href="#">Life Expectancy</a> (total population)	
	<a href="#">Literacy Rate</a> (total population)	
	<a href="#">Gini Index Coefficient</a>	

<p><b>Historical factors that have affected economic development:</b></p>	
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<b>Sustainable Development Goals</b>	
<b>What is the problem this goal is addressing? (from “Facts and figures” section)</b>	
<b>What targets need to be reached in order to meet this goal? (from “Goal targets” section)</b>	
<b>What barriers exist that will prevent progress towards reaching this goal? (from introductory paragraphs)</b>	

<p><b>Is this goal attainable? Why or why not?</b></p>	
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## Unit Three Assessment

**Description:** Students write a well-developed essay addressing the unit question: “How does geography affect political and economic systems?”

**Suggested Time:** 1 class period

### **Student Directions:**

Based on your knowledge of World Geography, analyze how geography affects political and economic systems.

As you respond to the prompt, follow the directions below.

- Address all parts of the prompt.
- Include accurate information and examples from your knowledge of World Geography.
- Use relevant evidence from the sources to support your response.

**Teacher Notes:** In successfully completing this culminating writing task, students meet the expectations for the following social studies GLEs: WG.1.1, WG.1.4, WG.3.1, WG.3.2, WG.3.3, WG.4.5, WG.5.3, WG.5.4.

Use the [LEAP assessment social studies extended response rubric](#) to grade this assessment. Note: Customize the Content portion of the rubric for this assessment. Use the Claims portion of the rubric as written.

## Unit Four Overview

### Unit Four: Human-Environment Interaction

**Description:** Students investigate ways in which humans interact with their environment by studying past and present methods of agriculture, natural resource use and distribution, and causes of, effects of, and measures to mitigate natural disasters. Students will analyze a variety of primary and secondary sources in order to develop a claim about how people affect and how people are affected by their natural environment.

**Suggested Time:** 7 weeks

Content	Claims
Unit 4: Human-Environment Interaction	How do people affect and how are people affected by the natural environment?

#### Topics (GLEs):

1. [Agriculture](#) (WG.1.4, WG.2.4, WG.4.2, WG.6.1)
2. [Natural Resources](#) (WG.1.4, WG.4.2, WG.6.1, WG.6.3)
3. [Natural Disasters](#) (WG.1.1, WG.2.4, WG.4.2, WG.6.1, WG.6.2, WG.6.4)

#### Use these sample instructional tasks:

- [Effects of Agriculture](#)
- [Natural Resources and Sustainability](#)
- [Natural Hazard Mitigation](#)

**Culminating Unit Assessment:** Students write a well-developed essay addressing the unit question: Based on your knowledge of World Geography, evaluate how humans affect and are affected by the natural environment.

## Unit Four Instruction

**Topic One:** Agriculture (WG.1.4, WG.2.4, WG.4.2, WG.6.1)

**Connections to the unit question:** Students will examine past and present methods of agriculture and the effects of technological innovation on agriculture by analyzing various sources. Students will use their knowledge to analyze how people adapt to their physical environment.

**Suggested Time:** 11 class periods

**Use this sample instructional task:**

- [Effects of Agriculture](#)

**To explore these compelling and supporting questions:**

- How has agriculture changed the world?
- How has agriculture changed societies over time?
- How has technology changed agriculture?
- Where is food grown and why?
- What does the future of agriculture look like?

**That students answer through this assessment:**

- Students write an extended paragraph in response to the supporting question: “How has agriculture changed societies over time?”
- Students write an extended paragraph in response to the supporting question: “How has technology changed agriculture?”
- Students write an extended paragraph in response to the supporting question: “Where is food grown and why?”
- Students engage in a class discussion addressing the supporting question: “What does the future of agriculture look like?”
- Students write an essay in response to the compelling question: “How has agriculture changed the world?”

## World Geography Instructional Task: Effects of Agriculture

### Unit 4: Political and Economic Geography, Topic 1: Agriculture

**Description:** Students examine the beginnings of agriculture and how technology has changed agriculture over time. This instructional task will support students' understanding of how people adapt to and change their environments to meet their needs. At the end of the instructional task, students will answer the compelling question: How has agriculture changed the world?

**Suggested Time:** 11 class periods

**Materials:** [Neolithic Period](#); [The Development of Agriculture](#); [“Start of Agriculture”](#); [Where Farming Began](#); [Urban area over the long-term, 10,000 BCE to 2000](#); [Agriculture](#); [Improved Technology, Machinery, Agricultural Science](#); [Genetic Modification](#); Agriculture Technology graphic organizer ([blank](#) and [completed](#)); [Yields vs. Land Use: How the Green Revolution enabled us to feed a growing population](#); [“Global Cereal Production”](#); [Change in cereal production, yield and land use, World 1961 to 2018](#); [The Green Revolutionaries: Mexico, India, China, and Brazil](#); [Agricultural Land Use Over the Long Run](#); [How much land do countries use for agriculture?](#); [Agricultural Patterns Map](#); [Agricultural Patterns](#); [Yields Across the World](#); [World Map by the United Nations](#); World Crops chart ([blank](#) and [completed](#)); [Agriculture Challenges and Innovations](#); [Environmental impacts of agricultural changes](#); [Environmental Impact of Agriculture](#); [Ecological Concerns of Agriculture](#); [How many people does nitrogen fertilizer feed?](#); [Agriculture Challenges and Innovations](#); [Preventing Runoff Into the Mississippi River](#); [Can we create the perfect farm? - Brent Loken](#); [Sustainable Farming - TechKnow](#); [Vertical Farming - TechKnow](#); [Precision Agriculture](#); [7 Amazing Agriculture Technologies](#)

#### Instructional Process:

1. Say, “In the previous instructional task we discussed measures of economic development and the possibilities of future economic development. In this unit, you will explore ways the environment is used to support the development of societies. In this instructional task, you will examine ways in which people have altered the environment to meet their needs through the use of agriculture. We will use the compelling question ‘How has agriculture changed the world?’ to guide our inquiry.”
2. Write the term *agriculture* on the board, and project the following definition<sup>54</sup>:
  - a. the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products
3. Post and read aloud the first supporting question: “How has agriculture changed societies over time?”
4. Divide students into small groups using an established classroom routine.
5. Provide students with access to [Neolithic Period](#). Instruct students to read independently and then answer the following questions in small groups:
  - a. How did early people sustain themselves before the invention of agriculture?
  - b. What is the Neolithic period?

<sup>54</sup><https://www.merriam-webster.com/dictionary/agriculture>

- c. When and where did agriculture begin in the world?
  - d. How did agriculture change the way people lived?
6. Provide students with access to [The Development of Agriculture](#). Instruct students to read independently and then answer the following questions in small groups:
  - a. What are some examples of plants and animals domesticated by early people?
  - b. What are some possible causes that spurred the development of agriculture?
  - c. How did people transition from hunting and gathering to agriculture?
  - d. How did the introduction of dairy change early humans?
7. Read aloud the “[Start of Agriculture](#)” section of the Agriculture entry by National Geographic Education.
8. Project the infographic [Where Farming Began](#). Read aloud the captions as you display the timeline at the bottom of the infographic. Then, project the graph [Urban area over the long-term, 10,000 BCE to 2000](#). Ask, “How did agriculture lead to the formation of civilizations and urban areas?” and take a few responses. Students should identify that although agriculture led to the settlement of early people, rapid urbanization is a modern trend.
9. Instruct students to write an extended paragraph (half to one page but not a full essay) in response to the supporting question: “How has agriculture changed societies over time?” Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.
10. Post and read aloud the second supporting question: “How has technology changed agriculture?”
11. Divide the class into groups of four using an established classroom routine. Conduct a [jigsaw reading](#) of four sections of [Agriculture](#) from National Geographic Education: [Improved Technology](#), [Machinery](#), [Agricultural Science](#), and [Genetic Modification](#). Instruct students to complete the corresponding section of the [Agriculture Technology](#) graphic organizer to prepare to present their excerpt to their group of four. Direct students to complete the other sections of the graphic organizer as their group presents. After each student presents their section, direct students to answer the following question in small groups:
  - a. How has technology changed agricultural productivity over time?
12. Say, “We have discussed the use of technology to increase agricultural production. In a previous instructional task, we discussed the growth of the global population. Technological innovation in agricultural production has made this increase possible.”
13. Project [Yields vs. Land Use: How the Green Revolution enabled us to feed a growing population](#) from Our World in Data. Read aloud the first two paragraphs of the article. Ask, “Which do you think has been the most effective in increasing the amount of food that is produced, expansion or intensification?” and take a few responses.
14. Provide students access to [Global Cereal Production](#) and instruct them to read the first four paragraphs and study the graph [Change in cereal production, yield and land use, World 1961 to 2018](#).
15. Divide students into small groups using an established classroom routine.
16. Read aloud the paragraph [The Green Revolutionaries: Mexico, India, China, and Brazil](#) from Our World in Data.
17. Assign each small group one of the following countries: [Mexico](#), [India](#), [China](#), or [Brazil](#). Direct students to read the text and study the graph for their corresponding country from [Yields vs. Land Use: How the Green Revolution enabled us to feed a growing population](#) independently and then answer the following questions in small groups:
  - a. Has this country increased cereal production through intensification, expansion, or both?
  - b. Has this country’s cereal production been sufficient to support its population growth?

- c. How has land used for cereal production changed over time and how did these changes affect cereal production?
18. Then, lead a whole class discussion on the question, “Is expansion or intensification more effective for increasing the amount of food that is produced?” Encourage students to use evidence from the article [Yields vs. Land Use: How the Green Revolution enabled us to feed a growing population](#) to support their answer.
19. Instruct students to write an extended paragraph (half to one page but not a full essay) in response to the supporting question: “How has technology changed agriculture?” Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.
20. Post and read aloud the third supporting question: Where is food grown and why?
21. Say, “In the previous activity, we discussed countries where technologies of the “green revolution” made a significant impact on the production of cereals. In this activity, you will explore regions and areas that are used for agriculture. First, let’s look at how agricultural land use has changed over time in different regions of the world.
22. Provide students access to [Agricultural Land Use Over the Long Run](#) and [How much land do countries use for agriculture?](#) from Our World in Data. Direct students to read the text and study the graphics independently. Note: Students can scroll over the chart or graph in order to get more detailed information. Then, lead a brief discussion on the use of agricultural land in regions throughout the world. Possible guiding questions include:
  - a. How has total land used for agriculture changed in all regions since 1600?
  - b. Which region uses the largest area of land for agricultural production (both crops and livestock)?
  - c. Which region uses the largest percentage of its total land for agricultural production (both crops and livestock)?
23. Say, “Now let’s explore factors that make agriculture possible in different regions of the world.”
24. Provide students access to the [Agricultural Patterns Map](#) from ESRI Geoinquiries and direct them to complete the [Agricultural Patterns](#) lesson. Note: Teachers may project the map to the whole class as you move through the lesson, or provide access to the map in pairs, groups, or individual students as access to devices allow. The lesson contains an answer key and should not be given directly to students to work from.
25. Provide students access to [Yields Across the World](#) and a map of the world that identifies countries (suggested resource: [World Map by the United Nations](#)). Say, “Use the resources to identify crops that are produced in a significant amount in countries.” Direct students to complete the [World Crops](#) chart.
26. Instruct students to write an extended paragraph (half to one page but not a full essay) in response to the supporting question: “Where is food grown and why?” Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.
27. Post and read aloud the third supporting question: “What does the future of agriculture look like?”
28. Say, “Agricultural production throughout the world has been affected by technological innovation. These innovations were necessary in order to meet the demands of a growing population. But, is agriculture today sustainable for the future? Today you will identify challenges of agriculture today and investigate the future of agriculture.
29. Write the term *sustainable development* on the board, and project the following definition<sup>55</sup>:
  - a. development that meets the needs of the present without compromising the ability of future generations to meet their own needs
30. Divide students into small groups using an established classroom routine.

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<sup>55</sup> <http://www.un-documents.net/our-common-future.pdf>

31. Provide each student with the [Agriculture Challenges and Innovations](#) handout. Direct students to read the articles below independently and take notes on challenges facing agriculture today on their handout.
  - a. [Environmental impacts of agricultural changes](#) from Newsela<sup>56</sup>
  - b. [Environmental Impact of Agriculture](#)
  - c. [Ecological Concerns of Agriculture](#) by the U.S. Department of Agriculture (USDA)
32. After students have completed taking notes on the challenges of agriculture, direct students to answer the following questions in small groups:
  - a. What are the most pressing challenges facing sustainable agriculture?
  - b. What are some possible solutions to the challenges facing agriculture?
33. Ask, “What are the downsides of the use of chemical fertilizers, as identified by the articles?” and take a few responses. Students should identify water pollution and destruction of ecosystems as downsides of the use of chemical fertilizers.
34. Project the chart and text [How many people does nitrogen fertilizer feed?](#) From Our World in Data and read aloud the text. Ask, “Why do people still use chemical fertilizers if they are harmful to the environment? What are the possible effects of using less chemical fertilizers?” and take a few responses.
35. Say, “Now we are going to explore some ways in which people are trying to make agriculture sustainable.” Direct students to take notes on innovations and solutions that are making sustainable agriculture possible on the [Agriculture Challenges and Innovations](#) as they watch the videos. Students may watch all or some of the following videos as time allows:
  - a. 2 minute video [Preventing Runoff Into the Mississippi River](#) by the USDA.
  - b. 7 minute video [Can we create the perfect farm? - Brent Loken](#) by Ted Ed.
  - c. 7 minute video [Sustainable Farming - TechKnow](#) by Aljazeera America.
  - d. 7 minute video [Vertical Farming - TechKnow](#) by Aljazeera America.
  - e. 2 minute video [Precision Agriculture](#) by National Geographic Education.
  - f. 7 minute video [7 Amazing Agriculture Technologies](#) by Interesting Engineering.
36. Conduct a whole group discussion around the third supporting question “What does the future of agriculture look like?” Encourage students to use the [conversation stems](#) and assess student participation with a [discussion tracker](#).
37. To culminate the task, direct students to write an essay in response to the task’s compelling question: “How has agriculture changed the world?” Use the [Social Studies Extended Response Rubric](#) to grade the essay.

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<sup>56</sup> Access to resources from Newsela requires a free [K-12 Teacher Account](#).

### Neolithic Period<sup>57</sup>

The term Neolithic Period refers to the last stage of the Stone Age - a term coined in the late 19th century CE by scholars which covers three different periods: Palaeolithic, Mesolithic, and Neolithic. The Neolithic period is significant for its megalithic architecture, the spread of agricultural practices, and the use of polished stone tools.

#### Chronology

The term Neolithic or New Stone Age is most frequently used in connection with agriculture, which is the time when cereal cultivation and animal domestication was introduced. Because agriculture developed at different times in different regions of the world, there is no single date for the beginning of the Neolithic. In the Near East, agriculture was developed around 9,000 BCE, in Southeast Europe around 7,000 BCE, and later in other regions. Even within a specific region, agriculture developed during different times. For example, agriculture first developed in Southeast Europe about 7,000 BCE, in Central Europe about 5,500 BCE, and Northern Europe about 4,000 BCE. In East Asia, the Neolithic goes from 6000 to 2000 BCE.

Pottery is another element that makes the dating of the Neolithic problematic. In some regions, the appearance of pottery is considered a symbol of the Neolithic, but this notion makes the term Neolithic even more ambiguous, since the use of pottery does not always occur after agriculture: in Japan, pottery appears before agriculture, while in the Near East agriculture pre-dates pottery production.

All these factors make the starting point of the Neolithic somewhat fuzzy. It should be remembered that the origin of the term lies in a late 19th century CE classification system (detailed above) and we must keep in mind its limitations.

#### A Revolution?

In order to reflect the deep impact that agriculture had over the human population, an Australian archaeologist named Gordon Childe popularized the term “Neolithic Revolution” in the 1940s CE. However, today, it is believed that the impact of agricultural innovation was exaggerated in the past: the development of Neolithic culture appears to have been a gradual rather than a sudden change. Moreover, before agriculture was established, archaeological evidence has shown that there is usually a period of semi-nomadic life, where pre-agricultural societies might have a network of campsites and live in different locations according to how the resources respond to seasonal variations. Sometimes, one of these campsites might be adopted as a basecamp; the group might spend the majority of time there during the year exploiting local resources, including wild plants: this is a step closer to agriculture. Agriculture and foraging are not totally incompatible ways of life. This means that a group could perform hunter-gatherer activities for part of the year and some farming during the rest, perhaps on a small scale. Rather than a revolution, the archaeological record suggests that the adoption of agriculture is the result of small and gradual changes.

Agriculture was developed independently in several regions. Since its origin, the dominant pattern in these separate regions is the spread of agricultural economies and the reduction of hunting and gathering activities, to the point that

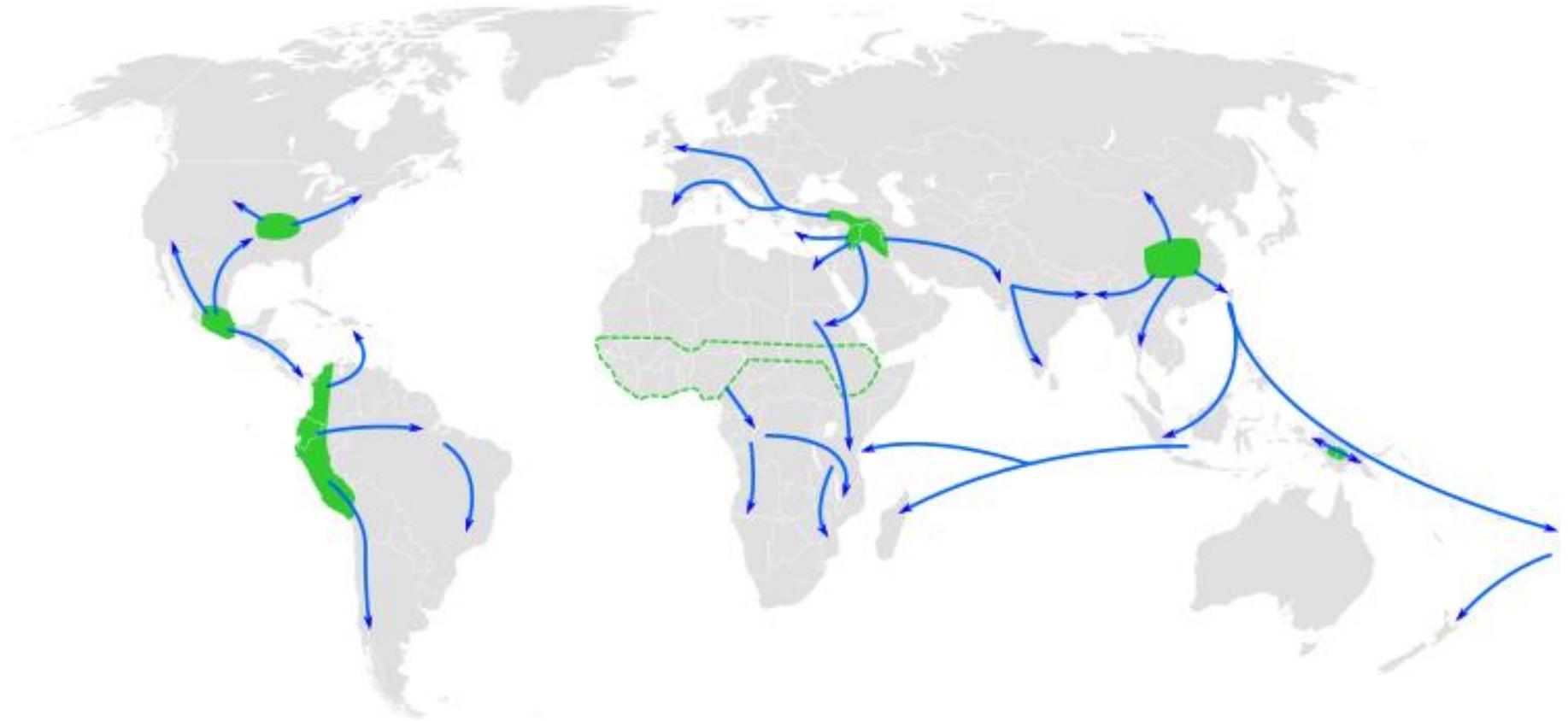
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<sup>57</sup> <https://www.worldhistory.org/Neolithic/>

today hunting economies only persist in marginal areas where farming is not possible, such as frozen arctic regions, densely forested areas, or arid deserts.

Major changes were introduced by agriculture, affecting the way human society was organized and how it used the earth, including forest clearance, root crops, and cereal cultivation that can be stored for long periods of time, along with the development of new technologies for farming and herding such as plows, irrigation systems, etc. More intensive agriculture implies more food available for more people, more villages, and a movement towards a more complex social and political organization. As the population density of villages increases, they gradually evolve into towns and finally into cities.

### Origins and Spread of Agriculture<sup>58</sup>



<sup>58</sup> This image is licensed under [Creative Commons Attribution-Share Alike 3.0 Unported](https://creativecommons.org/licenses/by-sa/3.0/) license. The original work is available at [https://commons.wikimedia.org/wiki/File:Centres\\_of\\_origin\\_and\\_spread\\_of\\_agriculture.svg](https://commons.wikimedia.org/wiki/File:Centres_of_origin_and_spread_of_agriculture.svg)

**Agriculture Technology Graphic Organizer**

Improved Technology	Summary (in 10 words or less):	What locations were discussed in this section?
	What time period does this excerpt cover?	According to this excerpt, what kinds of technologies improved agricultural productivity?
Machinery	Summary (in 10 words or less):	What locations were discussed in this section?
	What time period does this excerpt cover?	According to this excerpt, what kinds of technologies improved agricultural productivity?
Agricultural Science	Summary (in 10 words or less):	What locations were discussed in this section?
	What time period does this excerpt cover?	According to this excerpt, what kinds of technologies improved agricultural productivity?

Genetic Modification	Summary (in 10 words or less):	What locations were discussed in this section?
	What time period does this excerpt cover?	According to this excerpt, what kinds of technologies improved agricultural productivity?

**Agriculture Technology Graphic Organizer (completed)**

Improved Technology	<p>Summary (in 10 words or less): <i>Agricultural technology improved slowly, and knowledge spread around the world.</i></p>	<p>What locations were discussed in this section? <i>The Americas, Egypt, China, Mesopotamia, Roman Empire, Africa, Asia, Europe, Middle East</i></p>
	<p>What time period does this excerpt cover? <i>Early agriculture tools to 16<sup>th</sup> century</i></p>	<p>According to this excerpt, what kinds of technologies improved agricultural productivity? <i>Early Agriculture: fire, bone, stone, bronze, and iron tools, clay pottery for storage</i> <i>5500 BCE onward: irrigation systems, improved plant varieties, open field system, crop rotation, new varieties of plants were introduced to new areas</i></p>
Machinery	<p>Summary (in 10 words or less): <i>Europe developed advanced machinery and techniques in the 1700s.</i></p>	<p>What locations were discussed in this section? <i>Europe (Great Britain, Belgium, Luxembourg, and the Netherlands) and European colonies, particularly the United States and Canada.</i></p>
	<p>What time period does this excerpt cover? <i>1700s and 1800s</i></p>	<p>According to this excerpt, what kinds of technologies improved agricultural productivity? <i>horse-drawn seed drill, cotton gin, mechanical reaper, horse-powered thresher, steel plow, selectively breeding plants and animals, new crop rotation methods such as the Norfolk four-field system</i></p>
Agricultural Science	<p>Summary (in 10 words or less): <i>Developed countries used new machinery and chemical pesticides and fertilizers.</i></p>	<p>What locations were discussed in this section? <i>United States, Japan, Germany, but discussing all developed countries</i></p>
	<p>What time period does this excerpt cover? <i>1800s and 1900s</i></p>	<p>According to this excerpt, what kinds of technologies improved agricultural productivity? <i>machinery like tractors, electricity (to power machinery and livestock houses), chemical pesticides and fertilizers</i></p>

Genetic Modification	Summary (in 10 words or less): <i>The Green Revolution increased agricultural production but has drawbacks.</i>	What locations were discussed in this section? <i>Developed countries. Most of the world's farmers live in developing countries in Africa, Asia, and Latin America and do not use genetically modified plants or chemical fertilizers and pesticides as much as developed countries do.</i>
	What time period does this excerpt cover? <i>1950s to present</i>	According to this excerpt, what kinds of technologies improved agricultural productivity? <i>Green Revolution: genetically modified plants, chemical pesticides, fertilizers, and improved irrigation, antibiotics and growth hormones for livestock</i>

**World Crops**

Crop yields	Countries
Wheat (6 tonnes per hectare or more)	
Rice (8 tonnes per hectare or more)	
Maize (10 tonnes per hectare or more)	
Potatoes (40 tonnes per hectare or more)	
Cassava (20 tonnes per hectare or more)	
Beans (2 tonnes per hectare or more)	
Peas (2.5 tonnes per hectare or more)	
Soybean (3 tonnes per hectare or more)	
Sugar cane (80 tonnes per hectare or more)	
Bananas (40 tonnes per hectare or more)	
Tomatoes (100 tonnes per hectare or more)	
Cocoa beans (.75 tonnes per hectare or more)	
Coffee (1.25 tonnes per hectare or more)	

**World Crops (completed)**

Crop yields	Countries
Wheat (6 tonnes per hectare or more)	Chile, Saudi Arabia, France, Germany, Netherlands, United Kingdom, Ireland
Rice (8 tonnes per hectare or more)	United States, Qatar, Netherlands, Oman, Kuwait
Maize (10 tonnes per hectare or more)	United States, Spain, Chile, Italy, United Arab Emirates, Greece, Uzbekistan, Tajikistan, Jordan
Potatoes (40 tonnes per hectare or more)	Canada, United States, New Zealand, Kuwait
Cassava (20 tonnes per hectare or more)	Fiji, Suriname, Bahamas, Jamaica, Malawi, Niger, Ghana, India, Laos, Indonesia, Taiwan, Thailand
Beans (2 tonnes per hectare or more)	United States, Canada, Libya, South Sudan, Sudan, Egypt, Ireland, Belgium, Tajikistan, Iraq, Syria, Turkey, Iran, Greece, France, Latvia, Lithuania, Belarus, Poland, Azerbaijan
Peas (2.5 tonnes per hectare or more)	Canada, United Kingdom, Italy, Turkey, Uzbekistan, Greece, France, Germany, Brazil, Switzerland, New Zealand
Soybean (3 tonnes per hectare or more)	United States, Brazil, Paraguay, Egypt, Turkey, Georgia, Italy, Croatia, Slovenia
Sugar cane (80 tonnes per hectare or more)	United States, Columbia, Guatemala, Honduras, Zambia, Zimbabwe, Chad, Iran, Portugal, Cote d'Ivoire, Senegal, Burkina Faso, Egypt, Ethiopia,
Bananas (40 tonnes per hectare or more)	Indonesia, Laos, South Africa, Egypt, Turkey, Syria, Cote d'Ivoire, Spain, Ecuador, Costa Rica, Nicaragua, Honduras, Belize, Guatemala
Tomatoes (75 tonnes per hectare or more)	Sweden, Finland, Norway, France, Germany, Belgium, Iceland, United Kingdom, Ireland, Switzerland, Austria
Cocoa beans (.75 tonnes per hectare or more)	Thailand, Guatemala, Saint Lucia, Peru, Madagascar, Togo, Sri Lanka
Coffee (1.25 tonnes per hectare or more)	Paraguay, Belize, Ghana, Brazil, Malawi, Sierra Leone, Malaysia, China, Laos, Vietnam

### Agriculture Challenge and Innovations

Challenges	Innovations

## Environmental Impact of Agriculture<sup>59</sup>

No one argues with the understanding that agriculture, and increasingly aquaculture, are essential to supplying our food to sustain the world's population. Farming is also the world's largest industry, employing over one billion people and generating over one trillion dollars' worth of food annually. Moreover, it is the most significant driver of habitat and biodiversity loss around the world.

Agricultural ecosystems provide essential habitats for many wild plant and animal species. This is especially the case for traditional farming areas that cultivate diverse species. However, rising demand for food and other agricultural products has seen the large-scale clearing of natural habitats to make room for intensive monocultures. Recent examples include the conversion of lowland rainforests in Indonesia to oil palm plantations, and of large areas of the Amazon rainforest and Brazilian savanna to soybean and cattle farms. This ongoing habitat loss threatens entire ecosystems as well as many species. Expanding palm oil plantations in Indonesia and Malaysia, for example, pose the most significant threats to endangered megafauna, including the Asian elephant, Sumatran rhinoceros, and tigers.

Aquaculture is also in direct competition with natural marine and freshwater habitats for space. For example, marine fish farms often need the shelter of bays and estuaries to avoid damage from storms and currents. Also, farmed fish need good water quality, frequent water exchange, and other optimal environmental conditions. However, these locations are also very often ideal for wild fish and other marine life. Some European fish farms have been placed in the migratory routes of wild salmon, while in Asia and Latin America, mangrove forests have been cleared to make space for shrimp farms.

On top of habitat loss due to clearing, unsustainable agricultural practices are seeing 12 million hectares of land lost each year to desertification. Desertification is land degradation in arid, semi-arid, and dry sub-humid areas resulting from climatic variations and human activities. Desertification is potentially the most threatening ecosystem change impacting livelihoods of the poor. Persistent reduction of ecosystem services as a result of desertification links land degradation in drylands to loss of human well-being.

When natural vegetation is cleared, and when farmland is plowed, the exposed topsoil is often blown away by the wind or washed away by rain. Erosion due to soy production, for example, results in Brazil losing 55 million tons of topsoil every year. This leads to reduced soil fertility and degraded land. Other significant crops that cause soil erosion include coffee, cassava, cotton, corn, palm oil, rice, sorghum, tea, tobacco, and wheat.

Water resources are also impacted by modern agriculture. Globally, the agricultural sector consumes about 70 percent of the planet's accessible freshwater and many big food producing countries like the US, China, India, Pakistan, Australia, and Spain have reached, or are close to reaching, their renewable water resource limits.

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<sup>59</sup> This work by R. Adam Dastrup, MA, GISP is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). The original work is available at <https://humangeography.pressbooks.com/chapter/6-5/>.

The leading causes of wasteful and unsustainable water use are:

- leaky irrigation systems
- wasteful field application methods
- cultivation of thirsty crops not suited to the environment.

Unsustainable water use can harm the environment by changing the water table and depleting groundwater supplies. Studies have also found that excessive irrigation can increase soil salinity and wash pollutants and sediment into rivers – causing damage to freshwater ecosystems and species as well as those further downstream, including coral reefs and coastal fish breeding grounds.

Soil carried off in rain or irrigation water can lead to sedimentation of rivers, lakes and coastal areas. The problem is exacerbated if there is no vegetation left along the banks of rivers and other watercourses to hold the soil. Sedimentation causes severe damage to freshwater and marine habitats, as well as the local communities that depend on these habitats. For example, people living in Xingu Indigenous Park in Brazil report declines in fish numbers. This trend is attributed to changes in the courses of waterways resulting from farming-related erosion and the silt deposition this causes. In Central America, plantation soil run-off ends up in the sea, where it affects the Meso-American Reef.

It is not just the eroded soil that is damaging: pesticides and fertilizers carried in rainwater, and irrigation runoff can pollute waterways and harm wildlife. The use of pesticides, fertilizers, and other agrochemicals has increased enormously since the 1950s. For example, the amount of pesticide sprayed on fields has increased 26-fold over the past 50 years.

These chemicals do not just stay in the fields they are applied to. Some application methods, such as pesticide spraying by airplane, lead to pollution of adjacent land, rivers or wetlands. Pesticides often do not just kill the target pest. Beneficial insects in and around the fields can be poisoned or killed, as can other animals eating poisoned insects. Pesticides can also kill soil microorganisms. Also, some pesticides are suspected of disrupting the hormone messaging systems of wildlife and people, and many can remain in the environment for generations.

Unlike pesticides, fertilizers are not directly toxic. However, their presence in freshwater and marine areas alters the nutrient system, and in consequence the species composition of specific ecosystems. Their most dramatic effect is eutrophication, resulting in an explosive growth of algae due to excess nutrients. This depletes the water of dissolved oxygen, which in turn can kill fish and other aquatic life.

Food production is one of the primary causes of biodiversity loss through habitat degradation, overexploitation of species such as overfishing, pollution, and soil loss. Even though its environmental impacts are immense, the current food system is expected to expand rapidly to keep up with projected increases in population, wealth, and animal-protein consumption.

## Unit Four Instruction

**Topic Two:** Natural Resources (WG.1.4, WG.4.2, WG.6.1, WG.6.3)

**Connections to the unit question:** Students will explore ways that natural resources can be used sustainably by analyzing various primary and secondary sources. Students will use their knowledge to analyze how people adapt to and affect their physical environment.

**Suggested Time:** 7 class periods

**Use this sample instructional task:**

- [Natural Resources and Sustainability](#)

**To explore these compelling and supporting questions:**

- How can people use natural resources sustainably?
- In what ways do people use water and what are the challenges to sustainability?
- How should people provide for their energy needs in the future?

**That students answer through this assessment:**

- Students write an extended paragraph in response to the supporting question: “In what ways do people use water and what are the challenges to sustainability?”
- Students engage in a class discussion addressing the supporting question: “How should people provide for their energy needs in the future?”
- Students write an extended paragraph in response to the compelling question: “How can people use natural resources sustainably?”

## World Geography Instructional Task: Natural Resources and Sustainability

### Unit 4: Human-Environment Interaction, Topic 2: Natural Resources

**Description:** Students explore how people use natural resources available to them and ways people can use natural resources sustainably. This instructional task will support students' understanding of how people adapt to and change their environments to meet their needs. At the end of the instructional task, students will answer the compelling question: "How can people use natural resources sustainably?"

**Suggested Timeline:** 7 class periods

**Materials:** [Sustainability](#); [Natural Resources Uses and Challenges](#); [A River Runs Through It](#) map; [A River Runs Through It; Freshwater Access](#); [Water Inequality](#); [Natural Resources Uses and Challenges](#); [The Role of Water in the Generation of Electricity](#); [National Geographic Education: MapMaker Interactive](#); [Hydroelectric Power National Geographic](#); [Natural Resources Uses and Challenges](#); [Rivers and the Gabčíkovo-Nagymaros Project](#); [Underwater Farming](#); [Sustainable Fisheries](#); [Alternative Locations for the Dam](#); "Distribution of Fossil Fuels"; "Global fossil fuel consumption"; [Future Energy Needs](#); [Fossil fuel consumption: which countries use the most energy from fossil fuels?](#); [Per capita: where do people consume the most energy from fossil fuels?](#); [When will the world run out of fossil fuels?](#); [Annual percentage change in fossil fuel consumption, 2019](#)  
[Renewable energy](#)

#### Instructional Process:

1. Say, "In the previous instructional task we discussed how people have used agriculture to provide sustenance for a growing population and how people are working to make agriculture sustainable for the future. In this instructional task, you will continue to study ways in which people adapt and modify the environment in order to meet their needs. You will explore ways in which people use natural resources sustainably. We will use the compelling question 'How can people use natural resources sustainably?' to guide our inquiry."
2. Provide access to [Sustainability](#) by National Geographic Education and instruct them to read independently. Then, lead a brief discussion on the sustainability of natural resources. Possible guiding questions:
  - a. In your own words, what is sustainability?
  - b. What are some challenges to natural resource sustainability?
3. Provide students with the [Natural Resources Uses and Challenges](#) handout. Say, "In this instructional task, you will explore the uses of various natural resources and the challenges to their sustainable use. Use this handout to record notes as you complete the activities to prepare for the culminating activity."
4. Post and read aloud the first supporting question: In what ways do people use water and what are the challenges to sustainability?
5. Show the video [How Can Rain Create Conflict? Precipitation and Water Use](#) by Crash Course stopping at minute 9:30. Then lead a brief discussion on geographic issues of water resources. Possible guiding questions include:
  - a. How does access to water resources affect where people live?
  - b. What factors make precipitation unpredictable in some places?
  - c. Why is the management of water resources a spatial problem?

- d. Why does water cause conflict?
6. Say, “You will explore rivers as a possible source of water for people, rivers and watersheds will learn about the source of water resources by exploring rivers and watersheds using geographic technologies.”
7. Provide students access to the [A River Runs Through It](#) map from ESRI Geoinquiries and direct them to complete the [A River Runs Through It](#) lesson with the adjustments below. Note: Teachers may project the map to the whole class as you move through the lesson, or provide access to the map in pairs, groups, or individual students as access to devices allow. The lesson contains an answer key and should not be given directly to students to work from.
  - a. When conducting the “Engage” section of the lesson, make sure students understand that groundwater, not surface water like rivers, is a major source of water in Louisiana. Students can identify the source of their water supply using the article [Where does my water come from?](#) by the Louisiana Environmental Action Network.
8. Say, “Humans need to consume water in order to survive. However, accessing potable water, water that is safe for consumption, is a challenge for some people in some regions of the world.”
9. Provide students access to [Freshwater Access](#) and [Water Inequality](#) by National Geographic Education. Direct students to record information on the uses and challenges of water resources on the [Natural Resources Uses and Challenges](#) handout. Then, lead a discussion with the class about issues affecting access to clean water.

Possible guiding questions:

  - a. Where is water quality and inequality an issue?
  - b. What are some of the issues of water quality that make water unusable for humans?
10. Conduct steps 1 and 2 [The Role of Water in the Generation of Electricity](#) lesson from National Geographic Education with the following adjustments:
  - a. Step 2: Rather than have students access the interactive map in groups in this step, the instructor should project the map and complete the activity with the students as a whole class activity. When accessing the [National Geographic Education: MapMaker Interactive](#) choose “Explore the New Mapmaker (Beta)” when prompted.<sup>60</sup> Use the base layer “National Geographic” for this activity (under “Map Settings”). To help students predict and identify areas of water scarcity, search for “Precipitation” in the search bar and add the layer.
11. Say, “Water can also be used to generate electricity.” Provide students access to [Hydroelectric Power National Geographic](#) and instruct them to read independently. Direct students to record information on the uses and challenges of water resources on the [Natural Resources Uses and Challenges](#) handout.
12. Say, “Today you will investigate a case study of a dam project that posed environmental and political challenges.”
13. Conduct steps 1 through 4 from the lesson [Rivers and the Gabčíkovo-Nagymaros Project](#) and steps 1 and 2 of the [Alternative Locations for the Dam](#) lesson from National Geographic Education.
14. Say, “Another way people use water resources is through aquaculture.”
15. Write the term *aquaculture* on the board, and project the following definition<sup>61</sup>:
  - a. the breeding, rearing, and harvesting of fish, shellfish, algae, and other organisms in all types of water environments.
16. Say, “Aquaculture includes the cultivation of plants that are found underwater.” Show the 4 minute video [Underwater Farming](#). Then, ask, “What are the similarities between the cultivation of plants on land and the cultivation of plants under water?” and take a few responses.

<sup>60</sup> Access to [National Geographic Education: MapMaker Interactive](#) requires a free educator account.

<sup>61</sup> <https://oceanservice.noaa.gov/facts/aquaculture.html>

17. Conduct steps 1-6 [Sustainable Fisheries](#) lesson from National Geographic Education.
18. Instruct students to write an extended paragraph (half to one page but not a full essay) in response to the supporting question: “In what ways do people use water and what are the challenges to sustainability?” Encourage students to cite information from the secondary sources to support their claim. Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.
19. Post and read aloud the second supporting question: “How should people provide for their energy needs in the future?”
20. Say, “Earlier in this instructional task we discussed the use of water as an energy source. However, a significant portion of energy and electricity consumed by humans continues to be powered by fossil fuels.”
21. Read aloud the first two paragraphs of [Distribution of Fossil Fuels](#) by National Geographic Education.
22. Project the graph and text “[Global fossil fuel consumption](#)” from Our World in Data. Read the text aloud. Then, lead a brief discussion on how the global consumption of fossil fuels changed over time.
23. Divide students into small groups using an established classroom routine.
24. Say, “Now you will explore current and future trends in the consumption of fossil fuels in order to predict the most sustainable source for power for the future. Use the sources provided to gather evidence to support the use of fossil fuels or the use of renewable energy sources.” Encourage students to consider which source is most feasible for people to use in the future. Provide students with the [Future Energy Needs](#) handout and direct them to use the following resources to complete it:
  - a. [Fossil fuel consumption: which countries use the most energy from fossil fuels?](#)
  - b. [Per capita: where do people consume the most energy from fossil fuels?](#)
  - c. [When will the world run out of fossil fuels?](#)
  - d. [Annual percentage change in fossil fuel consumption, 2019](#)
  - e. [Renewable energy](#)
25. Conduct a class discussion on the supporting question: “How should people provide for their energy needs in the future?” Encourage students to use the [conversation stems](#) and assess student participation with a [discussion tracker](#).
26. To culminate the task, instruct students to write an extended paragraph (half to one page but not a full essay) in response to the compelling question: “How can people use natural resources sustainably?” Encourage students to support their claim with information from the secondary sources in the instructional task. Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.

Natural Resources Uses and Challenges

Uses	Challenges

Future Energy Needs

Evidence that supports fossil fuels.	Evidence that supports renewable energy.

## Unit Four Instruction

**Topic Three:** Natural Disasters (WG.1.1, WG.2.4, WG.4.2, WG.6.1, WG.6.2, WG.6.4)

**Connections to the unit question:** Students will investigate the causes and effects of various natural hazards and ways that people try to mitigate the effects of natural hazards for people by analyzing various sources. Students will use their knowledge to analyze how people adapt to and affect the physical environment.

**Suggested Time:** 14 class periods

**Use this sample instructional task:**

- [Natural Hazard Mitigation](#)

**To explore these compelling and supporting questions:**

- How can people mitigate the effects of natural hazards?
- How has people’s ability to prepare for natural hazards changed over time?
- How can people adapt to and modify the environment in order to prepare for natural hazards?
- How can communities increase resilience to natural disasters?
- How does climate change affect natural hazards?

**That students answer through this assessment:**

- Students write an extended paragraph in response to the supporting question: “How has people’s ability to prepare for natural hazards changed over time?”
- Students engage in a class discussion addressing the supporting question: “How can people adapt to and modify the environment in order to prepare for natural hazards?”
- Students engage in a class discussion addressing the supporting question: “How can communities increase resilience to natural disasters?”
- Students engage in a class discussion addressing the supporting question: “How does climate change affect natural hazards?”
- Students write an essay in response to the compelling question: “How can people mitigate the effects of natural hazards?”

## World Geography Instructional Task: Natural Hazard Mitigation

### Unit 4: Human-Environment Interaction, Topic 3: Natural Disasters

**Description:** Students investigate various events of natural disasters and ways people have tried to mitigate the effects of natural hazards. This instructional task will support students' understanding of how people adapt to and change their environments to meet their needs. At the end of the instructional task, students will answer the compelling question: "How can people mitigate the effects of natural hazards?"

**Suggested Timeline:** 14 class periods

**Materials:** ["How natural are natural hazards?"](#); [Billion-Dollar Weather and Climate Disasters: Time Series](#); [How the Galveston Hurricane of 1900 Became the Deadliest U.S. Natural Disaster](#); [Tropical Storms](#) map; [Tropical Storms](#); [public alert and warning systems](#); [current Doppler radar](#); [current forecast for cyclones](#); [Storm Surge](#); [Storm Surge and Coastal Communities](#); [Wildfires](#); [Smokejumper](#); [Why there's a ring of natural disasters around the Pacific](#); [Monsoon](#); [Seasonal Differences](#) map; [Seasonal Differences](#); [Flood](#); [Levee](#); [Storm Surge](#); [Wetlands](#); [Sustainable Development Goal 11: Sustainable Cities and Communities](#); [Cities and Sustainability](#); [Understanding Drought](#); [Drought Resilience and Water Conservation](#); [Fast Facts](#); [2010 Haiti earthquake: Facts, FAQs, and how to help](#); [Building a Resilient Haiti](#); [In Search Of The Red Cross' \\$500 Million In Haiti Relief](#); [Kansas Town Rebuilds Green after Disaster](#); [Weather Versus Climate Change | Cosmos: A Space Time Odyssey](#); [What's the difference between global warming and climate change?](#); [Climate Change](#) map; [Climate Change](#); [The Influence of Climate Change on Extreme Environmental Events National Geographic](#); [Natural Disasters and Climate Change National Geographic](#); [Climate change is part of California's perfect recipe for intense wildfire](#); [Climate Change and Rising Seas](#); [Waterworld](#) map; [Waterworld](#); [Data Exploration: Greenhouse Gas Emissions](#); [Who's Still Fighting Climate Change? The U.S. Military](#)

#### Instructional Process:

1. Say, "In the previous instructional task we discussed the sustainability of natural resources. In this instructional task, you will explore how people adapt to extreme weather events and mitigate, or lessen the effects of, the destruction caused by natural disasters. We will use the compelling question 'How can people mitigate the effects of natural hazards?' to guide our inquiry."
2. Write the term *natural hazard* on the board, and project the following definition<sup>62</sup>:
  - a. all atmospheric, hydrologic, geologic (especially seismic and volcanic), and wildfire phenomena that, because of their location, severity, and frequency, have the potential to affect humans, their structures, or their activities adversely.
3. Read aloud the section "[How natural are natural hazards?](#)" from The Organization of American States and lead a brief discussion on the terms natural disaster and natural hazard. Possible guiding questions:
  - a. Why are some physical events not considered hazardous events?
  - b. How is natural disaster defined?
  - c. How can human interventions cause so-called natural disasters?

<sup>62</sup> <https://www.oas.org/dsd/publications/unit/oea54e/ch05.htm>

4. Say, “According to the National Oceanic and Atmospheric Administration (NOAA), the United States has experienced “298 weather and climate disasters since 1980 where overall damages/costs reached or exceeded \$1 billion (including CPI adjustment to 2021). The total cost of these 298 events exceeds \$1.975 trillion.” Project the chart [Billion-Dollar Weather and Climate Disasters: Time Series](#) from the NOAA. Say, “This graph shows the cost of natural disasters from the past that have been adjusted for inflation. This means that the graphic shows events that cost less than \$1 billion in damage at the time of the event, but that cost would be higher with today’s money value.” Then, lead a brief discussion on the economic impact of natural disasters in the United States. Possible guiding questions include:
  - a. What trends can you identify in the cost of natural disasters in the United States over time?
  - b. What are some causes of trends in the cost of natural disasters in the United States over time?
5. Post and read aloud the first supporting question: How has people’s ability to prepare for natural hazards changed over time?
6. Divide students into small groups using an established classroom routine.
7. Provide students access to [How the Galveston Hurricane of 1900 Became the Deadliest U.S. Natural Disaster](#). Instruct students to read independently and then answer the following questions in small groups:
  - a. Why were people not warned of the hurricane that struck Galveston in 1900?
  - b. How did the hurricane warning system change after the Galveston hurricane of 1900?
  - c. How does present day technology differ from the technology that was present in 1900?
  - d. What are some challenges that exist today when preparing for hurricanes?
8. Say, “Geographic technology can be used to study past hurricanes in order to help prepare for future ones.”
9. Provide students access to the [Tropical Storms](#) map from ESRI Geoinquiries and direct them to complete the [Tropical Storms](#) lesson. Note: Teachers may project the map to the whole class as you move through the lesson, or provide access to the map in pairs, groups, or individual students as access to devices allow. The lesson contains an answer key and should not be given directly to students to work from.
10. Say, “Advancements in technology, including the use of [public alert and warning systems](#), and the internet, has greatly increased the amount of information made available to people who might be affected by extreme weather such as hurricanes.” Project the [current Doppler radar](#) from the National Weather service and the [current forecast for cyclones](#) from National Hurricane Center and Central Pacific Hurricane Center. Ask, “How does access to these forecasts help people prepare for extreme weather?” and take a few responses.
11. Provide students access to [Storm Surge](#) by *National Geographic Education*. Read aloud the first paragraph. Then, instruct students to read the section [Storm Surge and Coastal Communities](#) and answer the following questions in small groups:
  - a. How do meteorologists and emergency managers use technology to predict how storm surge will affect a community?
  - b. How does advanced warning help people prepare for natural hazards like storm surge?
12. After students have discussed in small groups, lead a brief classroom discussion on how technology has affected the ability to prepare for extreme weather events like hurricanes.
13. Provide students access to [Wildfires](#) by National Geographic Education. Instruct students to read independently and then answer the following questions in small groups:
  - a. How do wildfires start?
  - b. How are wildfires beneficial to the environment?

- c. Why are wildfires considered to be a natural hazard?
14. Provide students access to [Smokejumper](#) by National Geographic Education. Instruct students to read independently and then answer the following questions in small groups:
  - a. Why do smokejumpers respond to wildfires rather than traditional firefighters?
  - b. What techniques do smokejumpers use to stop wildfires?
15. Show the 7 minute video [Why there's a ring of natural disasters around the Pacific](#) by Vox. After viewing the video, lead the class in a discussion on the Ring of Fire and mitigation measures for volcanoes and earthquakes. Possible questions include:
  - a. Why does the area known as the Ring of Fire have more volcanic and earthquake activity than other parts of the world?
  - b. Why is it difficult to plan for volcanic eruptions and earthquakes and how do scientists predict future earthquakes?
  - c. How do people mitigate possible damage from earthquakes and volcanoes?
  - d. How do the preparation and mitigation measures for earthquakes and volcanoes differ from other natural hazards discussed?
16. Instruct students to write an extended paragraph (half to one page but not a full essay) in response to the supporting question: “How has people’s ability to prepare for natural hazards changed over time?” Encourage students to support their claim with information from the secondary sources read in the instructional task. Use the [Social Studies Extended Response Rubric](#) to grade the paragraph.
17. Post and read aloud the second supporting question: How can people adapt to and modify the environment in order to prepare for natural hazards?
18. Divide students into small groups using an established classroom routine.
19. Provide students access to [Monsoon](#) by National Geographic. Instruct students to read independently to build background knowledge for the following map activity.
20. Provide students access to the [Seasonal Differences](#) map from ESRI Geoinquiries and direct them to complete the [Seasonal Differences](#) lesson. Note: Teachers may project the map to the whole class as you move through the lesson, or provide access to the map in pairs, groups, or individual students as access to devices allow. The lesson contains an answer key and should not be given directly to students to work from.
21. Then, lead a brief discussion on how people adapt to monsoons. Possible guiding questions:
  - a. How do people use the summer monsoon to benefit society?
  - b. What challenges occur in India when the summer monsoon is irregular?
  - c. What benefit does the Asian-Australian monsoon provide for North America?
22. Provide students with [Flood](#) by National Geographic Education. Instruct students to read [Predicting Floods](#) and [Preventing Floods](#) sections of the article independently.
23. Provide students with [Levee](#) by National Geographic Education. Instruct students to read independently.
24. Then, lead a brief discussion on how people adapt to and modify the environment in order to prevent floods. Possible guiding questions:
  - a. How does technology help people predict floods?
  - b. What structures do people build in order to mitigate the effects of floods?
  - c. What are some challenges that engineers address to increase the effectiveness of levees?
25. Provide students access to [Storm Surge](#) by National Geographic Education. Read aloud the first paragraph. Then, instruct students to read the section [Wetlands](#) and answer the following questions in small groups:

- a. What is the natural function of wetlands?
  - b. How can people ensure that wetlands help mitigate the effects of flooding from storm surge?
26. Conduct a whole-class discussion around the second supporting question “How can people adapt to and modify the environment in order to prepare for natural hazards?” Encourage students to use the [conversation stems](#) and assess student participation with a [discussion tracker](#).
27. Post and read aloud the third supporting question: How can communities increase resilience to natural disasters?
28. Write the term *community resilience* on the board, and project the following definition<sup>63</sup>:
- a. the ability to prepare for anticipated hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions
29. Say, “We previously discussed the United Nations Sustainable Development Goals. As you recall, Goal 11 is to ‘Make cities and human settlements inclusive, safe, resilient, and sustainable’”.<sup>64</sup>
30. Provide students access to [Sustainable Development Goal 11: Sustainable Cities and Communities](#) and [Cities and Sustainability](#). Instruct students to read independently and then answer the following questions in small groups:
- a. Why is it important that cities be sustainable and resilient?
  - b. What unique environmental challenges do cities face?
  - c. What role does civic participation and governance play in ensuring that cities are sustainable and resilient?
31. Read aloud the first two paragraphs of [Understanding Drought](#) by National Geographic Education. Say, “People respond to drought by trying to increase their resilience to this natural event. The Environmental Protection Agency (EPA) is a U.S. government agency that works on environmental issues in the country.”
32. Provide access to [Drought Resilience and Water Conservation](#) from the United States Environmental Protection Agency (EPA). Instruct students to read independently and then answer the following questions in small groups:
- a. How can innovation in plumbing and infrastructure decrease the amount of water used by people?
  - b. What methods does the EPA encourage to increase drought resiliency and water conservation in communities?
  - c. What role does the government play in creating resiliency against droughts?
33. Say, “Intergovernmental organizations, like the United Nations, and non-governmental organizations also work to increase resilience in communities affected by natural disasters. In 2010, Port au Prince, Haiti experienced a catastrophic earthquake.”
34. Read aloud the “[Fast Facts](#)” from the article [2010 Haiti earthquake: Facts, FAQs, and how to help](#) from World Vision. Provide students access to [Building a Resilient Haiti](#). Instruct students to read independently and then answer the following questions in small groups:
- a. How is the United Nations working to ensure that schools are resilient to natural hazards in Haiti?
  - b. How might improved access to education improve the social conditions of Haiti?
  - c. How is the United Nations working to improve infrastructure in Haiti and how might these projects increase Haiti’s resilience to natural hazards?
  - d. Why is a functioning hospital important to resilience to future natural hazards?
35. Say, “The Red Cross, an international humanitarian network, worked to help Haiti recover in the aftermath of the 2010 earthquake. The Red Cross raised almost 500 million dollars in private aid for the recovery of Haiti, but in the years since has been criticized for misusing funds.”

<sup>63</sup> <https://www.nist.gov/community-resilience>

<sup>64</sup> <https://sdgs.un.org/goals/goal11>

36. Play the podcast [In Search Of The Red Cross' \\$500 Million In Haiti Relief](#) by NPR. Then, have students answer the following questions in small groups:
- What challenges did the Red Cross face in helping rebuild homes and infrastructure in Haiti after the 2010 earthquake?
  - If you had the opportunity to work at an organization that is helping rebuild a community after a natural disaster, how would you do things differently than described in the news story?
37. Show students the 4 minute video [Kansas Town Rebuilds Green after Disaster](#) by National Geographic Education. Then, have students answer the following questions in small groups:
- What sustainable practices were used in the rebuilding of Greensburg, Kansas?
  - How did the local and federal government support Greensburg during the rebuilding process?
  - How did economic development in Port au Prince and Greensburg differ before each experienced a natural disaster and how does this affect each area's resilience to natural disasters?
38. Conduct a whole group discussion around the third supporting question “How can communities increase resilience to natural disasters?” Encourage students to cite information from the sources explored in class as well as developing their own ideas of ways to increase resilience to natural disasters. Encourage students to use the [conversation stems](#) and assess student participation with a [discussion tracker](#).
39. Post and read aloud the fourth supporting question: How does climate change affect natural hazards?
40. Introduce the terms climate and weather to students by showing the 2 minute video [Weather Versus Climate Change | Cosmos: A Space Time Odyssey](#) from National Geographic. Ask students to summarize the difference between weather and climate in their own words.
41. Provide students access to [What's the difference between global warming and climate change?](#) Instruct students to read independently and then answer the following questions in small groups:
- How are the definitions of climate change and global warming different?
  - How has the climate changed over the last 800,000 years?
  - What are the causes of present global warming?
  - How has the climate changed over the past 1,700 years?
  - How is present global warming different from past instances of global warming?
42. Provide students access to the [Climate Change](#) map from ESRI Geoinquiries and direct them to complete the [Climate Change](#) lesson. Note: Teachers may project the map to the whole class as you move through the lesson, or provide access to the map in pairs, groups, or individual students as access to devices allow. The lesson contains an answer key and should not be given directly to students to work from.
43. Introduce current updates on the state of the climate by reading aloud the first three paragraphs of [Earth Is Barreling Toward 1.5 Degrees Celsius Of Warming, Scientists Warn](#) by NPR. Then, show the 1 minute video [Why is 1.5 degrees such a big deal?](#) from TedEd. Note: Climate reports published by agencies of the United Nations, including the World Meteorological Organization (WMO), can be found on the [United Nations Climate Action](#) website.
44. Provide students access to [The Influence of Climate Change on Extreme Environmental Events](#) by National Geographic Education. Instruct students to read independently and then answer the following questions in small groups:
- How is the increase in greenhouse gases emission related to natural disasters?
  - How do scientists use technology to study the relationship between climate change and extreme weather events?
45. Conduct steps 4 and 6 of the lesson [Natural Disasters and Climate Change](#) by National Geographic Education

with the following adjustments:

- a. Show the video without advertisements at [Climate change is part of California’s perfect recipe for intense wildfire](#).
  - b. Parts of steps 4 and 6 that include analysis of Hurricane Harvey can be omitted. Students will answer questions 2 and 5 in step 6 only. If including Hurricane Harvey in the conversation of natural disasters and climate change, students may complete step 5 and all of steps 4 and 6. This will extend the task by half a class period.
46. Conduct step 3 the lesson [Climate Change and Rising Seas](#) by National Geographic Education to introduce one effect of global warming: rising sea levels.
47. Provide students access to the [Waterworld](#) map from ESRI Geoinquiries and direct them to complete the [Waterworld](#) lesson. Note: Teachers may project the map to the whole class as you move through the lesson, or provide access to the map in pairs, groups, or individual students as access to devices allow. The lesson contains an answer key and should not be given directly to students to work from.
48. Provide students access to [Who's Still Fighting Climate Change? The U.S. Military](#) by National Geographic Education. Instruct students to read independently and then answer the following questions in small groups:
- a. Why is sea-level rise an issue for the U.S. Defense Department?
  - b. Why does the U.S. Department of Defense avoid discussions on climate change?
  - c. What actions has the U.S. Department of Defense taken to deal with natural hazards and sea-level rise threatening their facilities?
49. Conduct a whole group discussion around the fourth supporting question “How does climate change affect natural hazards?” Encourage students to cite information from the sources explored in class and to use the [conversation stems](#). Assess student participation with a [discussion tracker](#).
50. To culminate the task, direct students to write an essay in response to the task’s compelling question: “How can people mitigate the effects of natural hazards?” Use the [Social Studies Extended Response Rubric](#) to grade the essay.

### Cities and Sustainability<sup>65</sup>

While there are numerous definitions of sustainable development, many start with the definition provided in the 1987 Brundtland report: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The goals for sustainable cities are grounded on a similar understanding – urban development, which strives to meet the essential needs of all, without overstepping the limitations of the natural environment. A sustainable city has to achieve a dynamic balance among economic, environmental, and socio-cultural development goals, framed within a local governance system characterized by deep citizen involvement and inclusiveness.

A core component of sustainable cities is sustainable infrastructure – the interconnected physical and organizational structure, set of services and systems that support the daily functioning of a society and its economy. Sustainable infrastructure is that which is designed, developed, maintained, reused, and operated in a way that ensures minimal strain on resources, the environment, and the economy. It contributes to enhanced public health and welfare, social equity, and diversity. Investment in sustainable infrastructure is pivotal in planning for the sustainable development of cities. Despite the importance of urban infrastructure, there is a clear under-investment as characterized by the backlog and state of deficient infrastructure. Globally, \$57 trillion is needed for infrastructure investment between 2013 and 2030 to support economic growth and urbanization. This is of particular concern about developing countries, where many large cities experience severe congestion, and to developing countries, where improved primary socioeconomic conditions have been long overdue.

If the world is to achieve its sustainable development goals, and reach targets that range from eradicating poverty and social inequity, to combating climate change and ensuring a healthy and livable environment, global efforts in the transition to sustainable energy are pivotal. As cities represent more than 70 percent of global energy demand, they have been playing a central role in moving the sustainable energy agenda forward. The current global share of renewable energy supply is 11 percent. The diversity of renewable energy resources is vast, and research indicates a potential contribution of renewable energy reaching 60 percent of total world energy supply.

While many renewable energy technologies remain more costly than conventional sources and are often site-specific, investment in renewable cleaner energy can reduce health impacts from environmental pollution and climate change. Increasing renewable energy sources, maximizing conservation, and lessening dependence on non-renewable sources of energy, mainly those most damaging and contributing to global warming, are critical steps to sustainable cities.

Cities are harnessing local capabilities to develop green technologies and renewable energy sources that enhance their ability to withstand climate-related shocks as well as boosting local economies. Governments are investing in green technologies, presenting an excellent opportunity for cities to channel their innovation capabilities into a new sector of

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<sup>65</sup> [Introduction to Human Geography](https://humangeography.pressbooks.com/chapter/7-4/#:~:text=Cities%20and%20Sustainability) by R. Adam Dastrup, MA, GISP is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/). The original work is available at <https://humangeography.pressbooks.com/chapter/7-4/#:~:text=Cities%20and%20Sustainability>.

the economy. The economies of scale and concentration of enterprises and innovation in cities make it cheaper and easier to take actions to minimize both emissions and climate hazards.

The risks that cities are now facing as a result of climate change and natural disasters, the pressing short-falls in urban water, sanitation and waste management services, and the deteriorating quality of air and water, are being experienced in the context of their rapid growth. A growing international focus on resilience is a core agenda item for cities today. The increase in severe weather and natural disasters has highlighted the need for cities to respond better, mitigate, and adapt to such events. This includes being able to respond to such risks in ways that minimize the impact on the social, environmental, and economic infrastructure of the cities. Consequently, city leaders have been making significant transformative changes and investments in the resilience of their cities.

Any city's resilience to external shock relies primarily on effective institutions, governance, urban planning, and infrastructure. In this respect, the U.N. Office for Disaster Reduction (UNISDR) has set out several general practical recommendations for urban authorities.

A critical aspect of the creation of resilient cities is the construction of physical infrastructure that can absorb the shocks and stresses created by extreme weather events. Climate change is putting pressure on infrastructure that is already overtaxed from deferred maintenance, population growth, and development. As municipalities plan, design, and implement sustainable infrastructure projects; they need to consider the impact of extreme weather and natural disasters on the city's physical infrastructure to build resilience.

There is a growing consensus that good governance is crucial to developing, maintaining, and restoring sustainable and resilient services and social, institutional, and economic activity in cities. Many city governments are weakened due to limited power and responsibility for essential public services, including planning, housing, roads and transit, water, land-use, drainage, waste management, and building standards. City governments also often lack the power to raise revenues to finance infrastructure and build more sustainable and resilient cities. When governance capacity is weak and constrained, cities are limited in their abilities to take programmatic action on climate change mitigation and adaptation. The multiple forms of risk and vulnerability in cities call for more integrated approaches, combining established policies (urban governance, planning, and management) with additional policy leverage, powers, and responsibilities for local government.

Including stakeholders in the urban planning process is critical to creating livable, sustainable cities, where citizens are active players in determining their quality of life. Including stakeholders in the design of infrastructure, urban space, and services legitimizes the urban planning process and allows cities to leverage their stakeholders' expertise. Finance, however, can be a significant impediment to effective governance. Municipal governments around the world are increasingly looking for new and innovative ways to finance sustainable projects. Consequently, partnership with the private sector is increasing since the private sector has capital not available to the public sector.

## Unit Four Assessment

**Description:** Students write a well-developed essay addressing the unit question: “How do people affect and how are people affected by the natural environment?”

**Suggested Time:** 1 class periods

### **Student Directions:**

Based on your knowledge of World Geography, analyze how people affect the natural environment and how people are affected by the natural environment.

As you respond to the prompt, follow the directions below.

- Address all parts of the prompt.
- Include accurate information and examples from your knowledge of World Geography.
- Use relevant evidence from the sources to support your response.

**Teacher Notes:** In successfully completing this culminating writing task, students meet the expectations for the following social studies GLEs: WG.1.1, WG.1.4, WG.2.4, WG.4.2, WG.6.1, WG.6.2, WG.6.3, WG.6.4.

Use the [LEAP assessment social studies extended response rubric](#) to grade this assessment. Note: Customize the Content portion of the rubric for this assessment. Use the Claims portion of the rubric as written.

Grades 9-12 Conversation Stems<sup>66</sup>

Purpose: Clearly express your ideas.	
Listener Prompt	Speaker Response
<ul style="list-style-type: none"> <li>• What do you think about ____?</li> <li>• How did you answer __[the question]__?</li> </ul>	
<ul style="list-style-type: none"> <li>• What is the most important idea you are communicating?</li> <li>• What is your main point?</li> </ul>	<ul style="list-style-type: none"> <li>• Overall what I'm trying to say is ____.</li> <li>• My whole point in one sentence is ____.</li> </ul>
Purpose: Make sure you are listening carefully and clearly understand the ideas presented.	
Listener Prompt	Speaker Response
<ul style="list-style-type: none"> <li>• Let me see if I heard you correctly. Did you say ____?</li> <li>• I heard you say _____. Is that correct?</li> <li>• Put another way, are you saying ____?</li> </ul>	<ul style="list-style-type: none"> <li>• Yes/no. I said _____.</li> </ul>
<ul style="list-style-type: none"> <li>• Tell me more about ____ or Say more about _____.</li> <li>• I'm confused when you say _____. Say more about that.</li> <li>• Give me an example.</li> </ul>	<ul style="list-style-type: none"> <li>• Sure. I said __[restate what was said and add further explanation or examples]__.</li> <li>• An example is ____ because __[explain why]__.</li> </ul>
<ul style="list-style-type: none"> <li>• Who can rephrase what X said?</li> </ul>	<ul style="list-style-type: none"> <li>• _____ said _____.</li> </ul>

66 Adapted from Michaels, S., & O'Connor, C. (2012). Talk Science Primer [PDF]. Cambridge, MA: TERC. Retrieved from [https://inquiryproject.terc.edu/shared/pd/TalkScience\\_Primer.pdf](https://inquiryproject.terc.edu/shared/pd/TalkScience_Primer.pdf)

**Purpose: Dig deeper and provide evidence to support your claims.**

Listener Prompt	Speaker Response
<ul style="list-style-type: none"> <li>• What in the text makes you think so?</li> <li>• How do you know? Why do you think that?</li> <li>• Explain how you came to your idea.</li> </ul>	<ul style="list-style-type: none"> <li>• According to the text ____. This means ____.</li> <li>• If you look at ____, it says ____. This means ____.</li> <li>• I think ____ because ____.</li> </ul>

**Purpose: Establish new ways of thinking by elaborating on or challenging the thinking of others.**

Listener Prompt	Speaker Response
<ul style="list-style-type: none"> <li>• Who can add to what X said?</li> </ul>	<ul style="list-style-type: none"> <li>• Adding to what X said, ____.</li> <li>• I agree, and I want to add ____.</li> </ul>
<ul style="list-style-type: none"> <li>• Who agrees/disagrees with X?</li> <li>• Who wants to challenge what X said? Why?</li> </ul>	<ul style="list-style-type: none"> <li>• What X said supports what I am saying because ____.</li> <li>• I agree/disagree with X because ____.</li> <li>• I see it similarly/differently because ____.</li> <li>• I agree/disagree with X's view that ____ because in the text, ____.</li> <li>• I agree that ____, but we also have to consider ____.</li> <li>• Although I grant that ____, I still maintain that ____.</li> <li>• While it is true that ____, it does not necessarily follow that ____.</li> <li>• On one hand I agree with X that ____. But on the other hand, I insist that ____.</li> <li>• I agree/disagree with X's view that ____ because in the text, ____.</li> <li>• Certainly ____, but ____.</li> <li>• Perhaps ____, yet ____.</li> </ul>

<ul style="list-style-type: none"> <li>● How does that idea compare with X's idea?</li> <li>● What do you think about X's idea?</li> </ul>	<ul style="list-style-type: none"> <li>● X's point ____ is important/flawed because ____.</li> </ul>
<ul style="list-style-type: none"> <li>● Whose thinking has changed as a result of this conversation? How and why has it changed?</li> </ul>	<ul style="list-style-type: none"> <li>● Before I thought ____, but now I think ____ because ____.</li> <li>● My new thinking is ____ because ____.</li> </ul>
<ul style="list-style-type: none"> <li>● Now that you've heard __[summarize the conversation so far]__, what are you thinking? What are you still wondering about?</li> </ul>	<ul style="list-style-type: none"> <li>● I still think ____, but now I wonder ____.</li> </ul>





**LEAP Assessment Social Studies Extended Response Rubric**

The response should be scored **holistically** on its adherence to two dimensions: Content and Claims. Each response should be given the score that corresponds to the set of bulleted descriptors that **best** describes the response.

<b>Dimension: Claims</b>	
<b>Score</b>	<b>Description</b>
<b>4</b>	<p>The student's response:</p> <ul style="list-style-type: none"> <li>● Develops a valid claim that effectively expresses a solid understanding of the topic;</li> <li>● Thoroughly supports the claim with well-chosen evidence from the sources;</li> <li>● Provides a logically organized, cohesive, and in-depth explanation of the connections, patterns, and trends among ideas, people, events, and/or contexts within or across time and place.</li> </ul>
<b>3</b>	<p>The student's response:</p> <ul style="list-style-type: none"> <li>● Develops a relevant claim that expresses a general understanding of the topic;</li> <li>● Supports the claim with sufficient evidence from the sources;</li> <li>● Provides an organized explanation of the connections, patterns, and trends among ideas, people, events, and/or contexts within or across time and place.</li> </ul>
<b>2</b>	<p>The student's response:</p> <ul style="list-style-type: none"> <li>● Presents a claim that expresses a basic understanding of the topic;</li> <li>● Includes limited support for the claim by using some evidence from the sources;</li> <li>● Provides a weak explanation of the connections, patterns, and trends among ideas, people, events, and/or contexts within or across time and place.</li> </ul>
<b>1</b>	<p>The student's response:</p> <ul style="list-style-type: none"> <li>● Presents a claim with little or no evidence from the sources;</li> <li>● Provides a vague, unclear, or illogical explanation of the connections among ideas, people, events, and/or contexts within or across time and place.</li> </ul>
<b>0</b>	<p>The student's response is blank, incorrect, too brief to evaluate, or lacks a claim that addresses the prompt.</p>

<b>Dimension: Content</b>	
<b>Score</b>	<b>Description</b>
<b>4</b>	<p>The student’s response:</p> <ul style="list-style-type: none"> <li>● Reflects <b>thorough</b> knowledge of [CONTENT] by incorporating ample, focused factual information from prior knowledge and the sources;</li> <li>● Contains accurate understandings with no errors significant enough to detract from the overall content of the response;</li> <li>● Fully addresses all parts of the prompt.</li> </ul>
<b>3</b>	<p>The student’s response:</p> <ul style="list-style-type: none"> <li>● Reflects <b>general</b> knowledge of [CONTENT] by incorporating adequate factual information from prior knowledge and the sources;</li> <li>● Contains mostly accurate understandings with minimal errors that do not substantially detract from the overall content of the response;</li> <li>● Addresses all parts of the prompt.</li> </ul>
<b>2</b>	<p>The student’s response:</p> <ul style="list-style-type: none"> <li>● Reflects <b>limited</b> knowledge of [CONTENT] by incorporating some factual information from prior knowledge and the sources;</li> <li>● Contains some accurate understandings with a few errors that detract from the overall content of the response;</li> <li>● Addresses part of the prompt.</li> </ul>
<b>1</b>	<p>The student’s response:</p> <ul style="list-style-type: none"> <li>● Reflects <b>minimal</b> knowledge of [CONTENT] by incorporating little or no factual information from prior knowledge and the sources;</li> <li>● Contains few accurate understandings with several errors that detract from the overall content of the response;</li> <li>● Minimally addresses part of the prompt.</li> </ul>
<b>0</b>	<p>The student’s response is blank, incorrect, or does not address the prompt.</p>

## How to use this document

In World Geography, students should have multiple opportunities to use geographic representations to locate human and physical characteristics of the world and solve geographic problems. The 2015 Sample World Geography Scope and Sequence organized the World Geography course as a survey of regional studies. This updated Sample World Geography Scope and Sequence addresses the [Louisiana Social Studies Standards for World Geography](#) using a thematic approach. Teachers may choose to combine this document with regional world geography resources to create a full course in one of the two following ways:

- Teaching a regional survey of human and physical geography prior to completing the instructional tasks in this document, devoting approximately one week to each of the following six regions: Africa - South of the Sahara, North Africa and the Middle East, Asia, Europe, the Americas, and Australia and Oceania.
- Focusing on one or two regions at the beginning of each unit for approximately one to two weeks. Suggested regions, sample resources and suggested relevant GLEs are provided in the table below.

In addition to this Sample World Geography Scope and Sequence, free open educational resources (OER) are available for world geography online:

- [World Regional Geography](#)<sup>67</sup> by University of Minnesota .
- [National Geographic Education Resource Library](#)<sup>68</sup> has extensive resources to support regional world geography studies, including encyclopedic entries on the human and physical geography of regions (for example [Europe: Human Geography](#) and [Europe: Physical Geography](#)) and regional collections (see [Collection: Europe](#)). These resources are copyrighted.
- [The World Factbook](#)<sup>69</sup> is another source of information for world regional studies.

Samples of these resources are included in the table below:

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<sup>67</sup> This resource is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](#).

<sup>68</sup> These resources are subject to [Terms of Use](#).

<sup>69</sup> This resource is in the public domain. See [FAQ](#).

Unit	Focus on this Region:	Using these Sample Resources and others:	In order to address these GLEs:
Unit 1: Geography and Culture  Example of connection to focus region: Sudanese Lost Boys	Africa - South of the Sahara (1 week)	<a href="#">Africa: Physical Geography</a> from National Geographic Education <a href="#">Africa: Human Geography</a> from National Geographic Education <a href="#">The World Factbook - Africa</a>	WG.1.4 Use geographic representations to locate the world’s continents, major landforms, major bodies of water and major countries and to solve geographic problems WG.3.2 Determine the unifying characteristics that regions possess and explain changes that they have experienced over time WG.4.1 Determine the physical and human characteristics that comprise the identity of a given place WG.4.4 Evaluate the impact of historical events on culture and relationships among groups
Unit 2: Population and Migration  Example of connection to focus region: One Child Policy of China; Migration Patterns and Population Pyramid of Qatar	North Africa, Middle East, and Asia (2 weeks)	<a href="#">Africa: Physical Geography</a> from National Geographic Education <a href="#">Africa: Human Geography</a> from National Geographic Education <a href="#">The World Factbook - Africa</a> <a href="#">Asia: Physical Geography</a> from National Geographic Education <a href="#">Asia: Human Geography</a> from National Geographic Education <a href="#">The World Factbook - South Asia</a> <a href="#">The World Factbook - Southeast Asia</a> <a href="#">The World Factbook - Middle East</a> <a href="#">The World Factbook - South Asia</a>	WG.1.4 Use geographic representations to locate the world’s continents, major landforms, major bodies of water and major countries and to solve geographic problems WG.4.2 Analyze the distinguishing physical characteristics of a given place to determine their impact on human activities
Unit 3: Political and Economic Geography	Europe (1 week)	<a href="#">Europe: Physical Geography</a> from National Geographic Education	WG.1.4 Use geographic representations to locate the world’s continents, major

<p>Example of connection to focus region:          Effects of Nationalism on the political boundaries of Europe</p>		<p><a href="#">Europe: Human Geography</a> from National Geographic Education  <a href="#">The World Factbook - Europe</a></p>	<p>landforms, major bodies of water and major countries and to solve geographic problems          WG.3.1 Analyze how cooperation, conflict, and self-interest impact the cultural, political, and economic regions of the world and relations between nations          WG.4.5 Examine the relationship between social, economic, and government systems and describe how each system has changed a given place over time</p>
<p>Unit 4:          Human-Environment Interaction</p> <p>Example of connection to focus region:          Natural Disasters that affect the Americas</p>	<p>The Americas, Australia, and Oceania (2 weeks)</p>	<p><a href="#">North America: Physical Geography</a> from National Geographic Education  <a href="#">North America: Human Geography</a> from National Geographic Education  <a href="#">South America: Physical Geography</a> from National Geographic Education  <a href="#">South America: Human Geography</a> from National Geographic Education  <a href="#">The World Factbook - Central America</a>  <a href="#">The World Factbook - North America</a>  <a href="#">The World Factbook - South America</a>  <a href="#">Australia and Oceania: Physical Geography</a> from National Geographic Education  <a href="#">Australia and Oceania: Human Geography</a> from National Geographic Education  <a href="#">The World Factbook - Australia and Oceania</a></p>	<p>WG.1.4 Use geographic representations to locate the world’s continents, major landforms, major bodies of water and major countries and to solve geographic problems          WG.4.2 Analyze the distinguishing physical characteristics of a given place to determine their impact on human activities          WG.6.2 Identify challenges posed by the physical environment and evaluate strategies that will allow humans to more effectively deal with these challenges</p>

## **Standard 1 – World in Spatial Terms and Uses of Geography**

*Students organize information and solve geographic problems using geographical tools, representations, and technologies.*

WG.1.1 Describe the impact of technology on the study of geography and gather geographic information using technological tools

WG.1.2 Explain Earth’s grid system, using latitude and longitude to locate key places and to answer geographic questions about that place

WG.1.3 Compare and contrast various types of maps and map projections and evaluate distortions associated with each map projection

WG.1.4 Use geographic representations to locate the world’s continents, major landforms, major bodies of water and major countries and to solve geographic problems

## **Standard 2 – Physical Systems**

*Students answer geographic questions about Earth’s physical systems to explain ecosystems and natural processes.*

WG.2.1 Describe and categorize elements of the natural environment as belonging to one of the four components of Earth’s physical systems: atmosphere, lithosphere, biosphere, or hydrosphere

WG.2.2 Identify and locate world climate regions and evaluate the impact of the Earth/Sun relationship, ocean currents, wind currents, and elevation on each climate region

WG.2.3 Compare and contrast regions of the world by analyzing the plant and animal life indigenous to the region (ecosystems)

WG.2.4 Explain and give examples of natural and human processes that shape Earth’s surface and identify specific locations where these processes occur

## **Standard 3 – Region**

*Students examine the unifying characteristics of a given region and determine the challenges and opportunities created by the development of that region.*

WG.3.1 Analyze how cooperation, conflict, and self-interest impact the cultural, political, and economic regions of the world and relations between nations

WG.3.2 Determine the unifying characteristics that regions possess and explain changes that they have experienced over time

WG.3.3 Explain how human and physical characteristics facilitate or hinder regional interactions

## **Standard 4 – Place**

*Students will identify the physical and cultural characteristics of a particular location and investigate changes to it over time.*

WG.4.1 Determine the physical and human characteristics that comprise the identity of a given place

WG.4.2 Analyze the distinguishing physical characteristics of a given place to determine their impact on human activities

WG.4.3 Identify and analyze distinguishing human characteristics of a given place to determine their influence on historical events

WG.4.4 Evaluate the impact of historical events on culture and relationships among groups

WG.4.5 Examine the relationship between social, economic, and government systems and describe how each system has changed a given place over time

## **Standard 5 – Human Systems**

*Students examine the movement of human populations, information, ideas, and goods throughout history and its impact on human settlement and the economies of various countries.*

WG.5.1 Describe and classify reasons for human migration in terms of push or pull factors to determine the changes and similarities in these factors over time

WG.5.2 Use population pyramids, geographic data and maps to analyze the current impact of population growth and to predict future population trends

WG.5.3 Describe and illustrate specific examples of economic interdependence in various regions

WG.5.4 Determine the factors that contribute to a country's standard of living

WG.5.5 Explain how changes in technology have contributed to the spread of ideas and information throughout the world

## **Standard 6 – Environment and Society**

*Students analyze ways in which humans adapt to, modify, and depend upon Earth's physical environment.*

WG.6.1 Describe technological advances that have allowed humans to modify the environment and analyze the impact of these advances on the environment

WG.6.2 Identify challenges posed by the physical environment and evaluate strategies that will allow humans to more effectively deal with these challenges

WG.6.3 Analyze the distribution of resources and describe their impact on human systems (past, present, and future)

WG.6.4 Assess the role of government and business in preserving or consuming natural resources and protecting or destroying the physical environment