

CCPS Science Unit Plan

Grade	6	Subject	Science	Unit #	6
Unit Name	Life as Environmentalist		Timeline	5 weeks	
How to use the Framework	<p style="color: red;">This Framework should be used to implement daily science instruction. The resources and instructional strategies reflected in the Framework will provide a foundation for effective implementation and student mastery of standards. Please see the hyperlinked abbreviation document to ensure understanding of all abbreviations used with this framework.</p>				
Unit Overview	<p>This unit addresses the need for 6th grade students to dig deeper into their understanding of renewable and non-renewable energy sources and sustainability. Students will design and evaluate solutions that foster sustainability of natural resources such as water, soil, and air. Students will also analyze and interpret data related to global temperature increases. They will construct arguments using scientific evidence to evaluate contributions to the rise in global temperatures. Students will analyze how energy is transferred within a system, and be able to discuss energy transformations in terms of the law of conservation of energy.</p>				
3Dimensional Instruction	<u>GSE</u>	<u>Science and Engineering Practices</u>	<u>Crosscutting Concepts</u>		
	<p>S6E6. Obtain, evaluate, and communicate information about the uses and conservation of various natural resources and how they impact the Earth.</p> <p>a. Ask questions to determine the differences between renewable/sustainable energy resources (examples: hydro, solar, wind, geothermal, tidal, biomass) and nonrenewable energy resources (examples: nuclear: uranium, fossil fuels: oil, coal, and natural gas), and how they are used in our everyday lives.</p> <p>b. Design and evaluate solutions for sustaining the quality and supply of natural resources such as water, soil, and air.</p>	<ul style="list-style-type: none"> ● Asking questions (for science) and defining problems (for engineering) ● Obtaining, Evaluating, and Communicating Information ● Asking questions ● Planning and Carrying Out Investigations ● Analyzing and Interpreting Data ● Constructing Explanations and Designing Solutions ● Engaging in Argument from Evidence 	<ul style="list-style-type: none"> ● System and system models ● Cause and effect ● Patterns ● Stability and change ● Energy and matter ● Scale, proportion, and quantity 		

	<p>c. Construct an argument evaluating contributions to the rise in global temperatures over the past century. (Clarification statement: Tables, graphs, and maps of global and regional temperatures, and atmospheric levels of greenhouse gasses such as carbon dioxide and methane, should be used as sources of evidence).</p>		
--	--	--	--

NGSS Alignment

[NGSS Alignment to Disciplinary Core Ideas](#)

Weekly Lesson Tasks

[Teacher Notes](#)

Week 1

GSE:

S6E6a. Ask questions to determine the differences between renewable/sustainable energy resources (examples: hydro, solar, wind, geothermal, tidal, biomass) and nonrenewable energy resources (examples: nuclear: uranium, fossil fuels: oil, coal, and natural gas), and how they are used in our everyday lives.

Focused Concept:

The standard S6E6a focuses on differentiating between renewable and nonrenewable energy resources, exploring their uses, and understanding their impacts on our daily lives and the environment. Renewable energy resources, such as hydro, solar, wind, geothermal, tidal, and biomass, are sustainable and can be naturally replenished. In contrast, nonrenewable energy resources, including fossil fuels like oil, coal, and natural gas, as well as nuclear energy from uranium, are finite and cannot be quickly replenished. By examining how these energy sources are utilized and their environmental consequences, students learn the importance of transitioning to renewable energy to ensure long-term sustainability and reduce ecological footprints.

- Renewable Energy
- Nonrenewable Energy
- Sustainability
- Hydropower
- Solar Power
- Wind Energy
- Geothermal Energy
- Biomass
- Fossil Fuels
- Nuclear Energy

*The teacher will access **Module: Distribution of Earth's Resources - Lesson 1: Natural Resources** for online instruction and assign activities used for the instructional week.*

Phenomenon:

How are humans dependent upon Earth's resources?

DQ:

How do people use resources from Earth's land, oceans, atmosphere, and biosphere?

How do geoscience processes result in the uneven distribution of Earth's mineral, energy, and groundwater resources?


SEP:

Constructing Explanations and Designing Solutions

CCC:

Cause and Effect

	Day 1	Day 2	Day 3	Day 4	Day 5
The student will be able to (SWBAT)	SWABT describes renewable resources.	SWABT describes how people use resources and to classify resources as renewable or	SWBAT collects and organizes evidence on how people use natural resources.	SWBAT asks questions about natural resources and how they are used in our everyday lives.	SWBAT explains how humans depend on air and water resources.

		nonrenewable.			
<p>Opening</p> <p>The Teacher Will (TTW)</p> <p>Student Will (SW)</p> <p>See-Think-Wonder Protocol (STW)</p>	<p>(* Located in textbook)</p> <p>Science Probe: Renewable or Not?</p> <p>TTW use this science probe to assess students' prior knowledge of the lesson content and to identify possible preconceptions.</p> <p>Engage: Encounter the Phenomenon</p> <p><u>Phenomenon: How are humans dependent upon Earth's resources?</u></p> <p>Go Online - Watch Tree-mendous Transformation to see this phenomenon in action.</p> <p>SW records their thoughts on why the phenomenon occurs.</p>	<p>TTW show the  Non-renewable Ene...</p> <p>SW will develop three questions for their peers to answer based on the video.</p>	<p>TTW ask Why is land considered a resource?</p>	<p>Revisit the <u>Phenomenon</u>: How are humans dependent upon Earth's resources?</p> <p>Review the prior day's lesson Investigation: Charted Water</p> <p>SW engage in Think-Pair-Share their graphs.</p>	<p>(* Located in textbook)</p> <p>TTW display: How It Works: Desalination</p> <p>Think/Pair/Share: How would you take salt out of salt water?</p> <p>Preview the Text: Think/Pair/Share</p>

<p>Guided Practice/ Transition</p>	<p>TTW make a word wall about resources in the classroom. Title the word wall “Resources” SW brainstorm their list of resources that come from the Earth.</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Lab: Identify Resources</p> <p>SW understands that all objects are made from natural resources and to develop an understanding of different type of natural resources.</p> <p>SW use the STUDY TOOLS ONLINE Reading Essentials: Natural Resources</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Investigation: It Comes from the Land</p> <p>Worksheet: Investigation: It Comes from the Land (Graphic Organizer Templates)</p> <p>TTW discuss the purpose of a graphic organizer.</p> <p>Create a graphic organizer together on the board and have students add their own examples of items in the appropriate locations.</p> <p>TTW ask: Which do you think is more important- air or water?</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Read About</p> <ol style="list-style-type: none"> How do humans depend on air and water resources? <p>SW complete CER: Collect Evidence (A): Natural Resources.</p> <p>SW refer back to the CER graphic organizer and record their evidence (A).</p>	<p>Read paragraph one aloud</p> <p>Think aloud: Think/Pair/Share: What is the most important information in paragraph one</p> <p>SW share the gist of the last paragraph.</p> <p>SW journal describing what they and their families can do to save water</p>
<p>Independent Practice</p>	<p>CER: Explain the Phenomenon: Natural Resources</p> <p>SW reflect and brainstorm to complete the “Claim” section of the CER-</p> <p>TTW will provide students with Sentence Starters.</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Read About</p> <ol style="list-style-type: none"> What are natural resources? <p>TTW assign a <i>Foldable</i> activity to allow students to take notes throughout the lesson.</p> <p>Lab: Daily Resource Use</p> <p>SW record personal energy</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Read About</p> <ol style="list-style-type: none"> How humans depend on land resources? <p>SW added notes to <i>Foldable</i> throughout the lesson.</p> <p>Investigation: Charted Waters</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Read About</p> <ol style="list-style-type: none"> How long will natural resources be around? <p>SW added notes to <i>Foldable</i> throughout the lesson.</p> <p>SW complete the CER: Natural Resources.</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Lab: Spill the Beans</p> <p><i>Teacher can show a lab video of Spill the Beans</i></p> <p>SW model the availability of renewable energy and of nonrenewable energy</p> <p>SW complete #1-5 and Data and Observation.</p>

		use throughout a day, analyze the usage, and identify any instances where energy could have been conserved. SW complete #1-3 and data and observations section.	SW collect and graph data about daily water use.	SW complete CER: Collect Evidence(B): Natural Resources SW refer back to the CER graphic organizer and record their evidence (B). TTW evaluate student responses for accuracy.	SW complete 3D Thinking : How do humans depend on air and water resources? SW model the availability of renewable energy and of nonrenewable energy
Assessment Summary	TOD: What are natural resources? How do humans use natural resources?	TOD: SW complete Lab: Analyze and Conclude Review the Learning Target	TOD: TTW have groups of students make simple yet eye-catching posters that show the importance of air and water to living things. SW research and add ideas about ways to manage air and water resources	TOD: SW make a problem/solution chart about air and water quality TTW review with the students problem/solution chart.	(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation Analyze and Conclude-Lab: Spill the Beans TTW and SW have a class discussion about renewable and nonrenewable resources.
Small Group Tasks (TBA)					

Week 2

GSE:

S6E6a. Ask questions to determine the differences between renewable/sustainable energy resources (examples: hydro, solar, wind, geothermal, tidal, biomass) and nonrenewable energy resources (examples: nuclear: uranium, fossil fuels: oil, coal, and natural gas), and how they are used in our everyday lives.

Focused Concept:

Differentiating between renewable and nonrenewable energy resources, exploring their uses, and understanding their impacts on our daily lives and the environment. Renewable energy resources, such as hydro, solar, wind, geothermal, tidal, and biomass, are sustainable and can be naturally replenished. In contrast, nonrenewable energy resources, including fossil fuels like oil, coal, and natural gas, as well as nuclear energy from uranium, are finite and cannot be quickly replenished. By examining how these energy sources are utilized and their environmental consequences, students learn the importance of transitioning to renewable energy to ensure long-term sustainability and reduce ecological footprints.

Renewable Energy
Nonrenewable Energy
Sustainability
Hydropower

Solar Power
 Wind Energy
 Geothermal Energy
 Biomass
 Fossil Fuels
 Nuclear Energy

*The teacher will access **Module: Distribution of Earth's Resources - Lesson 2: Distribution of Resources** for online instruction and assign activities used for the instructional week.*

Phenomenon:

Why are some areas rich in resources while others have so few?

DQ:



Why are resources distributed unevenly on Earth?

SEP:

Constructing Explanations and Designing Solutions

CCC:

Cause and Effects
 Patterns

	Day 6	Day 7	Day 8	Day 9	Day 10
The student will be able to (SWBAT)	SWBAT compares and contrasts renewable and renewable energy.	SWBAT constructs a scientific explanation based on evidence for the uneven distribution of natural resources.	SWBAT analyzes and interprets maps and other data to recognize patterns in the distribution of resources.	SWBAT analyzes and interprets maps and other data to recognize patterns in the distribution of resources.	SWBAT develop solutions to conserve natural resources.
Opening	<p>TTW open the lesson with the video.  Natural Resources f...</p> <p>SW discuss what they learned from the video.</p>	<p>(* Located in textbook) Science Probe: Resources Location</p> <p>TTW use this science probe to assess students' prior knowledge of the lesson content and to identify possible preconceptions.</p>	<p>TTW remind students to return to the Claim/Evidence/Reasoning graphic organizer on the Explain the Phenomenon pages at the beginning of the lesson to record their evidence about what the locations of minerals are limited on Earth.</p>	<p>TTW find a map of the United States with the state names and labeled mountain ranges to display in the classroom to guide students as they identify the locations of oil deposits.</p> <p>SW predict where they think natural resources are found across the United States.</p>	<p>TTW open the lesson with  Natural resources E...</p> <p>SW discuss how natural resources are not distributed evenly.</p>
Guided Practice/Transition	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Lab: How are renewable</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Encounter the Phenomenon:</p>	<p>(* Located in textbook) Explore and Explain SW complete the 3D Thinking Task.</p> <p>TTW explain the task:</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Read About:</p>	Common Assessment 9 on Illuminate

	<p>energy resources used at your school?</p>	<p>Distribution of Resources</p> <p><u>Phenomenon: Why are some areas rich in resources while others have so few?</u></p> <p>SW reflect and brainstorm to complete the “Claim” section of the CER-</p> <p>TTW will provide students with Sentence Starters.</p>	<p>Where are minerals found on Earth?</p>	<p>1. Which locations have the most soil? Soil Formation</p> <p>SW complete CER: Collect Evidence: (B): Distribution of Resources</p>	
<p>Independent Practice</p>	<p>(* Located in textbook) Evaluate SW complete Go Online Interactive Presentation</p> <p>Lesson Review: Natural Resources</p> <p>Lesson Check: Natural Resources</p> <p>Learn Smart (Homework option)</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Investigation: Location, Location, Location</p> <p>SW identify the relationship between the distribution of copper deposits and geologic processes.</p> <p>Read About:</p> <ol style="list-style-type: none"> Where are minerals found on Earth? Hydrothermal Deposits <p>TTW assign a <i>Foldable</i> activity to allow students to take notes throughout the lesson.</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Read About:</p> <ol style="list-style-type: none"> Where are minerals found on Earth? History Connection <p>SW added notes to <i>Foldable</i> throughout the lesson.</p> <p>SW complete CER: Collect Evidence: (A): Distribution of Resources</p> <p>SW: Why are the locations of minerals limited on Earth? Record your evidence (A) in the chart at the beginning of the lesson</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Read About:</p> <ol style="list-style-type: none"> Why are some regions rich in fossil fuels? Fossil Fuel Formation <p>SW added notes to <i>Foldable</i> throughout the lesson.</p> <p>Investigation: Striking Oil</p> <p>SW identifies oil deposits in the United States and makes inferences about their distribution</p>	<p>Common Assessment 9 on Illuminate</p>
<p>Assessment/Summary</p>	<p>(* Located in textbook) Evaluate Revisit the Science Probe: Renewable or</p>	<p>TOD: TTW guides the investigation: SW review the definition of renewable and nonrenewable</p>	<p>TOD: SW respond to the questions in the form of a Quick-Write</p>	<p>(* Located in textbook) Explore and Explain TOD: SW complete 3D</p>	<p>(* Located in textbook) Evaluate TOD: SW complete Go Online</p>

	<p>Not?</p> <p>CER: Revise Claim and Reasoning: Natural Resources</p> <p>TOD: SW complete a quick-write How did you use renewable and nonrenewable resources when you woke up this morning and got ready for school?</p>	resources		<p>THINKING: Why are some regions rich in fossil fuels?</p>	<p>Interactive Presentation</p> <p>CER: Revise Claim and Reasoning: Distribution of Resources</p>
Small Group Tasks (TBA)					

Week 4

GSE:
S6E6b. Design and evaluate solutions for sustaining the quality and supply of natural resources such as water, soil, and air

Focused Concept:

The standard S6E6b emphasizes the critical need to design and evaluate solutions for sustaining the quality and supply of essential natural resources such as water, soil, and air. These resources are foundational to life on Earth, supporting ecosystems, human health, and economic activities. Sustainable practices, such as water conservation, soil management techniques, and air pollution reduction strategies, are vital to preserving these resources. By understanding the impacts of human activities and implementing effective conservation measures, we can ensure the longevity and health of our natural environment for future generations.

- Natural Resources
- Conservation
- Ecosystems
- Sustainability
- Water Quality
- Soil Degradation
- Air Pollution
- Renewable Energy
- Wetlands
- Emissions

*The teacher will access **Module: Human Impact on the Environment - Lesson 2: impact on Water** for online instruction and assign activities used for the instructional week.*

<p>Phenomenon: How can satellites help monitor human impact on Earth's water?</p> <p>Impact on Water</p>	<p>DQ: How can humans monitor and minimize their impact on water?</p>				
	Day 16	Day 17	Day 18	Day 19	Day 20
<p>The student will be able to (SWBAT)</p>	<p>SWBAT explore the impact of human activities on water.</p>	<p>SWBAT construct explanations of human activities on water.</p>	<p>SWBAT use models to explain human impact on Earth's water.</p>	<p>SWBAT use models to explain human impact on Earth's water.</p>	<p>SWBAT can construct an explanation for solutions to monitor and minimize human impact on water</p>
<p>Opening</p>	<p>(* Located in textbook) Science Probes: Warning: No Swimming</p> <p>TTW use this science probe to assess students' prior knowledge of the lesson content and to identify possible preconceptions.</p> <p>SW describe their reasoning for choosing if something was a cause of pollution in the oceans</p>	<p>(* Located in textbook) Engage: Encounter the Phenomenon: Impact on Water</p> <p><u>Phenomenon: How can satellites impact on Earth's water?</u></p> <p>SW watch the video Ocean Color Time Series to see the phenomenon in action.</p> <p>SW records their thoughts on why the phenomenon occurs.</p>	<p>TTW have open the lesson using a video on water pollution Water Pollution and ...</p> <p>SW complete See, Think, and Wonder Activity.</p>	<p>TTW introduce students to the text <i>Down the Drain</i>.</p>	<p>TTW ask: What is one source of water pollution and its impacts?</p> <p>Why would you like to see that impact prevented or reduced?</p>
<p>Guided Practice/Transition</p>	<p>TTW model the how to complete the Gizmo <i>Water Pollution</i> using tool talks.</p> <p>TTW launch the Gizmo and complete the Gizmo warm up.</p> <p>Activity A: Type of Pollution on the Gizmo.</p>	<p>TTW review with students what they learned about pollution in the previous lesson. Ask them to think about how pollution might affect water quality.</p> <p>Guide the Investigation: Ask: How do you use water?</p> <p>How might some of your</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Lab: Pollution in Motion</p> <p><i>Teacher can show a lab video of Pollution in Motion.</i></p> <p>SW model and observe the</p>	<p>SW engage in Think/Pair/Share before reading, preview the text, and during the reading.</p> <p>SW complete a quick-write</p> <ol style="list-style-type: none"> How do chemicals get into freshwater? What impact does estrogen have on fish? 	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Engineering Investigation: Solution for Pollution</p> <p>SW research and evaluate for water pollution.</p>

		activities affect water quality or supply?	flow of groundwater pollution in an aquifer. TTW tell students that they will conduct a lab to explore how pollution affects groundwater.		Have students form groups of 3-4 students. SW select one type of water pollution to research. Brainstorm solutions for their chosen type of pollution.
Independent Practice	SW complete Activity B: Real-world scenarios. TTW and SW discuss information from the Gizmo with the class.	(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation Lab: Drip Drop <i>Teacher can show a lab video of Drip Drop.</i> SW measure and calculate the amount of water lost from leaking faucets, and recommend methods to minimize water waste. Read About: 1. How do humans use water? TTW assign a <i>Foldable</i> activity to allow students to take notes throughout the lesson.	(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation Read About: 1. How do humans pollute Earth's water? Water Pollution SW added notes to <i>Foldable</i> throughout the lesson.	(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation Read About: 1. How do humans pollute Earth's water? Ocean Pollution SW added notes to <i>Foldable</i> throughout the lesson. Complete one of the following: Lab: Waves of Waste SW model the impact of litter in the ocean. Investigation: Ocean Garbage SW describe the cause and effect of the Pacific garbage patch.	SW research and gather information SW present their solutions to water pollution Compare and contrast the solutions SW create a presentation to present to the class.
Assessment/Summary	TOD: SW complete the five question assessment on Gizmo platform.	TOD: What impacts do humans have on water distribution and availability?	TOD: SW write a paragraph identifying what the gravel, water, and salt represent in	TOD: SW work in groups to create a display that shows the type of waste that might pollute the oceans.	(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation

	Review what they learned about water pollution.	Why is freshwater so important to people?	the model they use in the lab.		TOD: Study Tools: Reading Essentials: Impact on Water
Small Group Tasks (TBA)					

Week 5

GSE:

S6E6c. Construct an argument evaluating contributions to the rise in global temperatures over the past century. (Clarification statement: Tables, graphs, and maps of global and regional temperatures, and atmospheric levels of greenhouse gasses such as carbon dioxide and method as sources of evidence).

Focused Concept:

The standard S6E6c involves constructing arguments to evaluate the contributions to the rise in global temperatures over the past century. This requires analyzing data from various sources, including tables, graphs, and maps of global and regional temperatures, as well as atmospheric levels of greenhouse gases like carbon dioxide and methane.

- Global Temperature
- Greenhouse Gases
- Carbon Dioxide
- Methane
- Greenhouse Effect
- Climate Change
- Fossil Fuels
- Deforestation
- Emissions
- Data Analysis

The teacher will access **Module: Human Impact on the Environment - Lesson 3: impact on the Atmosphere** for online instruction and assign activities used for the instructional week.

Phenomenon:

Why are solutions, like vertical forests, important for the health of the atmosphere?

What is happening to Earth’s climate and what is the impact?

DQ:

Why must humans minimize their impact on the atmosphere?



How have human activities caused the rise in global temperatures and what is the environmental impact of global warming?

SEP:

Constructing Explanations and Designing Solutions ; Analyze and Interpret Data ; Asking Questions and Defining Problems

CCC:

Cause and Effect ;Stability and Change Systems and System Models ; Patterns

	Day 21	Day 22	Day 23	Day 24	Day 25
The student will be able to (SWBAT):	SWBAT explore the impact of human activities on the atmosphere.	SWBAT ask questions and construct explanations to enhance their understanding of how humans cause changes to Earth’s climate.	SWBAT use temperature data to see how Earth’s climate is changing.	SWBAT analyze and interpret data about atmospheric carbon dioxide and global temperature.	SWBAT construct an argument evaluating contributions to the rise of global temperature and climate change.
Opening	<p>(* Located in textbook) Science Probe: What is air pollution?</p> <p>TTW use this science probe to assess students' prior knowledge of the lesson content and to identify possible preconceptions.</p> <p>Encounter the Phenomenon: <i>Impact on the Atmosphere</i></p> <p><u>Phenomenon: Why are solutions, like vertical forests, important for the health of the atmosphere?</u></p> <p>SW watch the video <i>Above It All</i> to see the</p>	<p>(* Located in textbook) Science Probe: <i>Is Earth getting warmer?</i></p> <p>TTW use this science probe to assess students' prior knowledge of the lesson content and to identify possible preconceptions.</p>	<p>TTW show the image for the Investigation.</p> <p>Ask: What do temperature records show?</p> <p>Discuss students’ prior knowledge of atmospheric temperature.</p>	<p>TTW review Unit 6 Assessment Prep Presentation.</p> <p> Unit 6 Assessm...</p>	<p>TTW open up with a video.  Climate Change and...</p> <p>SW discuss what they observed from the video</p> <p>"Climate Change and the Greenhouse Effect Educational Videos for Kids" explains the basics of climate change and the greenhouse effect.</p> <p>Here are some questions for students to answer after watching the video on climate change and the greenhouse effect:</p> <p>TTW ask students the</p>

	<p>phenomenon.</p> <p>SW records their thoughts on why the phenomenon occurs.</p>				<p>following questions;</p> <p>What is the greenhouse effect?</p> <p>Name three greenhouse gases mentioned in the video.</p> <p>How do greenhouse gases contribute to global warming?</p> <p>What human activities increase the amount of greenhouse gases in the atmosphere?</p>
<p>Guided Practice/ Transition</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>CER: Explain the Phenomenon: Impact on the Atmosphere</p> <p>SW write a claim that takes a clear stance on why solutions are important for Earth's atmosphere.</p> <p>SW discuss activities that result in air pollution</p>	<p>(* Located in textbook) Engage: Encounter the Phenomenon</p> <p><u>Phenomenon: What is happening to Earth's climate and what is the impact?</u></p> <p>SW watch the video <i>Seeing Red</i> to see this phenomenon in action.</p> <p>TTW help students analyze and interpret the data on the maps.</p> <p>Review the concepts of temperature and what causes temperature to change</p> <p>Have volunteers read the</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Investigation: For the Record</p> <p>SW analyze and interpret temperature data.</p> <p>Read About:</p> <ol style="list-style-type: none"> 1. What do temperature records show? 2. What are greenhouse gases and how do they affect climate? <p>TTW assign a Foldable activity to take notes.</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Investigation: On the Rise</p> <p>SW analyze and interpret data about atmospheric CO2 and global temperature.</p>	<p>TTW ask students to develop an argument for the factors that may have increased the global temperature.</p> <p>SW work with a partner to review what they have learned so far in the lesson and construct an explanation.</p>

		introductory paragraphs aloud			
Independent Practice	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Investigation: In a Haze</p> <p>SW infer the cause of photochemical smog.</p> <p>SW interpret data and infer human impact on the ozone .</p> <p>SW work together on write a script about different kinds of pollution.</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Read About:</p> <ol style="list-style-type: none"> What is climate change? <p>SW add to <i>Foldable</i> notes.</p>	<p>(* Located in textbook) Explore and Explain SW complete Go Online Interactive Presentation</p> <p>Investigation: Greenhouse Gasses</p> <p>SW analyze and interpret data about greenhouse gas levels.</p> <p>TTW have students watch the animation <i>The Greenhouse Effect</i>, then answer the questions.</p> <p>or</p> <p>Gizmo Greenhouse Effect Metric</p>	<p>SW complete review activities</p> <p>Unit 1 Study Guide</p>	<p>(* Located in textbook) Evaluate</p> <p>Lesson Review: Impact on Climate</p> <p>SW work on research regarding temperature rising and climate changes. SW discuss their findings with their classmates.</p>
Assessment Summary	<p>TOD: Describe three ways pollution is caused by humans.</p>	<p>(* Located in textbook) Explore and Explain TOD: Complete 3D Thinking: What is climate change?</p>	<p>(* Located in textbook) Explore and Explain TOD: Complete 3D Thinking: What are greenhouse gasses and how do they affect climate?</p>	<p>TOD: Students work together to create a week-long series of public service announcements about the greenhouse effect and human impact on climate.</p>	<p>Unit 6 Assessment on Illuminate</p>
Small Group Tasks (TBA)					

Assessment Prep

Prepare students for assessment by reviewing the following Assessment Prep Presentation.

Unit 6 Assessment Prep

Provide the following guidance:

Ask the students to use what they know about the tasks completed to answer the provided assessment prep question.

- What is the question asking you?
- What do you know about the vocabulary or concept in the question?
- Is this question similar to any investigations or tasks we've completed?
- How can what you've done help you answer this question?
- Just view the assessment question: What is the question asking you?

Guide students to think about how their experience connects to the question.

Using the answer choices provided, ask the students the following:

- Identify a wrong answer: How do I know this answer is incorrect?
- Identify the right answer: How do we know this answer is correct?

Allow the students time to discuss in collaborative groups.

TEACHER NOTE: If students struggle with the question, review it the next day. Do not rush to the next question; instructional time is the only time they have to prepare for the end-of-year assessment.

Labs / Investigations

Mandatory Labs

Explore Learning Gizmo

Pivot Interactives/Phet

Water Pollution
Greenhouse Effect Metric

Additional Resources/Tasks

Supplemental Resources

[Department of Science Guidance Document](#)

NASA Climate Kids: This website offers interactive games, activities, and articles aimed at teaching kids about climate change and its effects in a fun and engaging way. [Link](#)

National Geographic Kids: National Geographic Kids provides informative articles, videos, and quizzes about environmental issues, including global warming and natural resources conservation. [Link](#)

Environmental Protection Agency (EPA) - Students: The EPA's website for students offers educational resources on a variety of environmental topics, including climate change and ways to protect natural resources. [Link](#)

The Nature Conservancy - Nature Works Everywhere: Nature Works Everywhere provides educational videos and activities focused on conservation and environmental science, including topics related to climate change and natural resources. [Link](#)