



Contents

TEACHER GUIDE

- Assessment Rubric 4
- How Is Our Resource Organized? 5
- Bloom’s Taxonomy for Reading Comprehension 6
- Vocabulary 6

**STUDENT HANDOUTS
READING COMPREHENSION**

- Earth’s Climate 7
- Climate and Human Civilizations 7
- Melting Ice Sheets..... 7
- Sea Level Changes 7
- Extreme Weather 7
- Climate and Human Health..... 7
- Climate and the Economy 7
- Climate and Ecosystems 7
- Hands-on Activities, Writing Tasks 12
- Crossword 16
- Word Search 17
- Comprehension Quiz 18

EASY MARKING™ ANSWER KEY 20

MINI POSTERS 22

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NAME: _____

Climate and Ecosystems

1. Look up the word **ECOSYSTEM**. Write the meaning below.

2. List 5 things found in an ecosystem near your home.

3. Use the words in the box to answer each question. You may use a dictionary to help you.

desert drought vegetation coral reef

- a) What is an underwater habitat where many different animals live?
- b) Which word means an unusually dry period of weather?
- c) What habitat has few plants and animals and is found in dry areas of the world?
- d) What is another word for the plants in an area?

NAME: _____

Climate and Ecosystems

All living things depend on their physical surroundings for survival. This includes plants and animals.

Physical surroundings include the land, water, air, and weather. The living things in an area work together. For example, tree roots break down rock into soil. Plants put oxygen into the air. Animals take oxygen out of the air. Plants and animals live on land or in water. All of the living and nonliving things in an area that work together form a system. This is called an **ecosystem**.



An Ecosystem

The climate in an area affects the type of ecosystems that are found there. Hot, dry areas have desert ecosystems. **Deserts** usually have few plants and animals. **Rainforests** are an example of an ecosystem found in wet, warm areas. Common ecosystems in the United States include deciduous forest and grasslands. As climate changes, the characteristics of ecosystems will change. The types of changes depend on the local conditions.

STOP

Describe the climate conditions where you would most likely find a rainforest ecosystem.

Warmer air temperatures could cause some plants and animals to move farther towards the poles. As new plants and animals move into an area, they may compete with the current inhabitants. Warmer temperatures could cause more evaporation. In some areas, this could lead to the soil drying out. During drought, dry soils that cannot support plant growth are often blown away. Grasslands could become more like deserts. Other areas are likely to become wetter as a result of climate change.

NAME: _____

Climate and Ecosystems

1. Put a checkmark (✓) next to the answer that is most correct.

- a) Which of these ecosystems is found in the Arctic and Antarctic regions?
- A tundra
- B desert
- C coral reefs
- D deciduous forest
- b) Which ecosystem contains the greatest variety of living things?
- A desert
- B tundra
- C grasslands
- D coral reefs
- c) Which animals live in the tundra?
- A Reindeer, foxes and hares.
- B Bison, mice and prairie dogs.
- C Tropical fish, sharks and coral.
- D Scorpions, hawks and rattlesnakes.
- d) Which word describes land that is frozen for most of the year?
- A fungi
- B boggy
- C drought
- D permafrost
- e) Which factor causes the greatest threat to coral reefs?
- A Drought.
- B Infestations.
- C Higher sea level.
- D Rising air temperature.

NAME: _____

Climate and Ecosystems

2. Answer each question with a complete sentence.

- a) Describe the effects of climate change that are already happening in the tundra.
- _____
- _____
- _____
- b) Explain how climate change could cause grasslands to become more like deserts.
- _____
- _____
- _____

Research

3. Choose one ecosystem. Find out how climate change is affecting it.

Work with a small group of students. Choose one ecosystem to study. Use the library or Internet resources. Find out answers to the following questions:

- What are the current conditions in your ecosystem?
- Is your ecosystem already being affected by climate change? If so, how?
- How do scientists predict rising temperatures will change your ecosystem?
- Will your ecosystem be affected by rising sea levels?
- What other factors related to climate change might affect your ecosystem in the future?

Create a presentation for your class. Write a script for each student in your group to follow. Be sure to cover all of the topics you researched. Use posters and other visual aids to help your audience understand the information that you are presenting.

Create an ecosystem globe.

You will need:

- A globe showing the continents and oceans.
- Scrap newsprint paper.
- Art paste.
- Paint brushes.
- Round balloons.
- Plastic table cover.

Create a paper mache globe. Cover your work space with a plastic table cover. Tear the newsprint paper into strips about 1 inch by 4 inches. Water down your paste slightly so that it can be easily painted onto the paper. Blow up your balloon. Paste both sides of a paper strip and lay it flat onto the balloon. Keep repeating until the balloon has an even layer of paper covering it. Let this layer dry completely. Repeat the entire procedure to add 2 more layers, or until a thick shell has formed around your balloon.

Wait until your paper mache globe is completely formed and dry. Use a pencil to outline a sketch of the continents and oceans. Use a geographic globe as a model.

Now, sketch in the names and locations of the major ecosystems found around the globe. Use the library or Internet resources to help you. Include both land and ocean ecosystems.

Decide what color will represent each type of ecosystem on your globe. Begin by outlining the continents in black paint. Then, choose another dark color to outline the ecosystem locations. Wait until the outline paint is dry. Fill in the areas with the colors you chose for each ecosystem. Now wait for this paint is dry. You may go back and label the larger ecosystems with a permanent marker. Create a key showing which color represents which ecosystem. Display your globe in your classroom.

Word Search

Find all of the words in the Word Search. Words are written horizontally, vertically, diagonally, and some are even written backwards.

- | | | | |
|----------|-----------|-------------|-------------|
| bacteria | economy | grassland | sea level |
| cape cod | ecosystem | hurricanes | storms |
| cities | feedback | ice | temperature |
| climate | flood | long island | tundra |
| deposit | forest | malaria | virus |
| desert | fungi | melt | weather |
| disease | gas | mosquito | |
| drought | glaciers | permafrost | |



Comprehension Quiz

Part C

Answer the questions in complete sentences.

- Describe the difference between **weather** and **climate**. 2

- Describe **two** tools scientists use to study melting ice sheets. 4

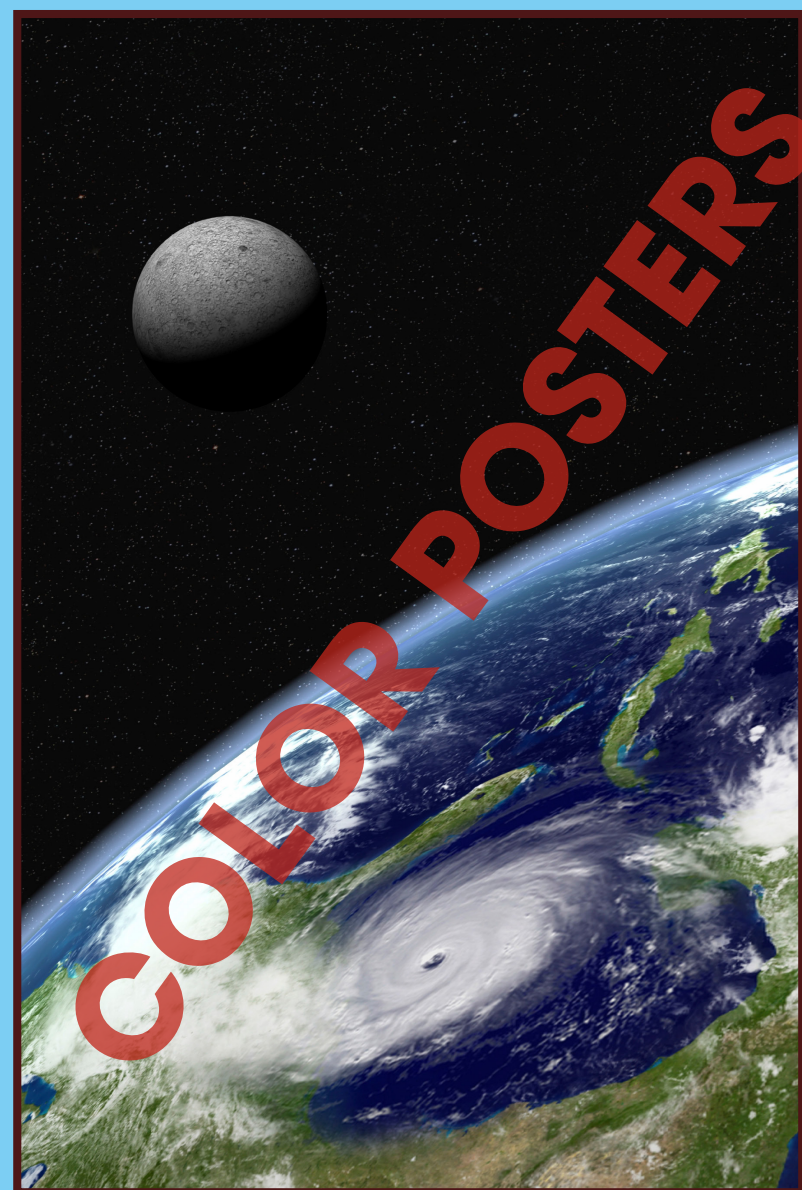
- Explain why small changes in sea level can have a big effect on people. 2

- Explain how climate change could cause the spread of diseases. 3

- Describe how the economies of countries could be affected by climate change. 3

SUBTOTAL: /14

Extreme Weather



"Satellite image of a Hurricane located in the Gulf of Mexico"

NAME: _____

After You Read 



Climate and Ecosystems

2. Answer each question with a complete sentence.

a) Describe the effects of climate change that are already happening in the tundra.

b) Explain how climate change could cause grasslands to become more like deserts.

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3.

a) The permafrost is melting sooner in the winter and some places are not freezing solid anymore.

b) Warmer temperatures could cause more evaporation. This could lead to the soil drying out and blowing away.

Across:

- 1. fossils
- 3. permafrost
- 6. glacier
- 7. forest
- 9. desert
- 13. satellites
- 14. migrate

Down:

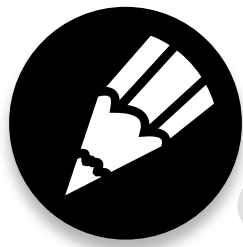
- 2. infrastructure
- 4. economy
- 5. levee
- 8. sea level
- 10. ecosystem
- 11. climate
- 12. tundra



EASY MARKING ANSWER KEY

11

16



Climate and Ecosystems



All living things depend on their physical surroundings for survival.

This includes plants and animals.

Physical surroundings include the land, water, air, and weather. The living things in an area work together. For example, tree roots break down rock into soil. Plants put oxygen into the air. Animals take oxygen out of the air.

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An Ecosystem

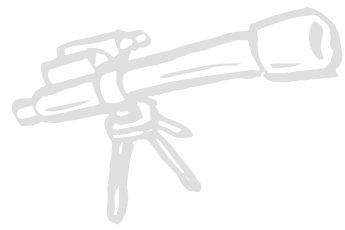
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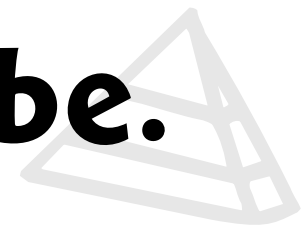


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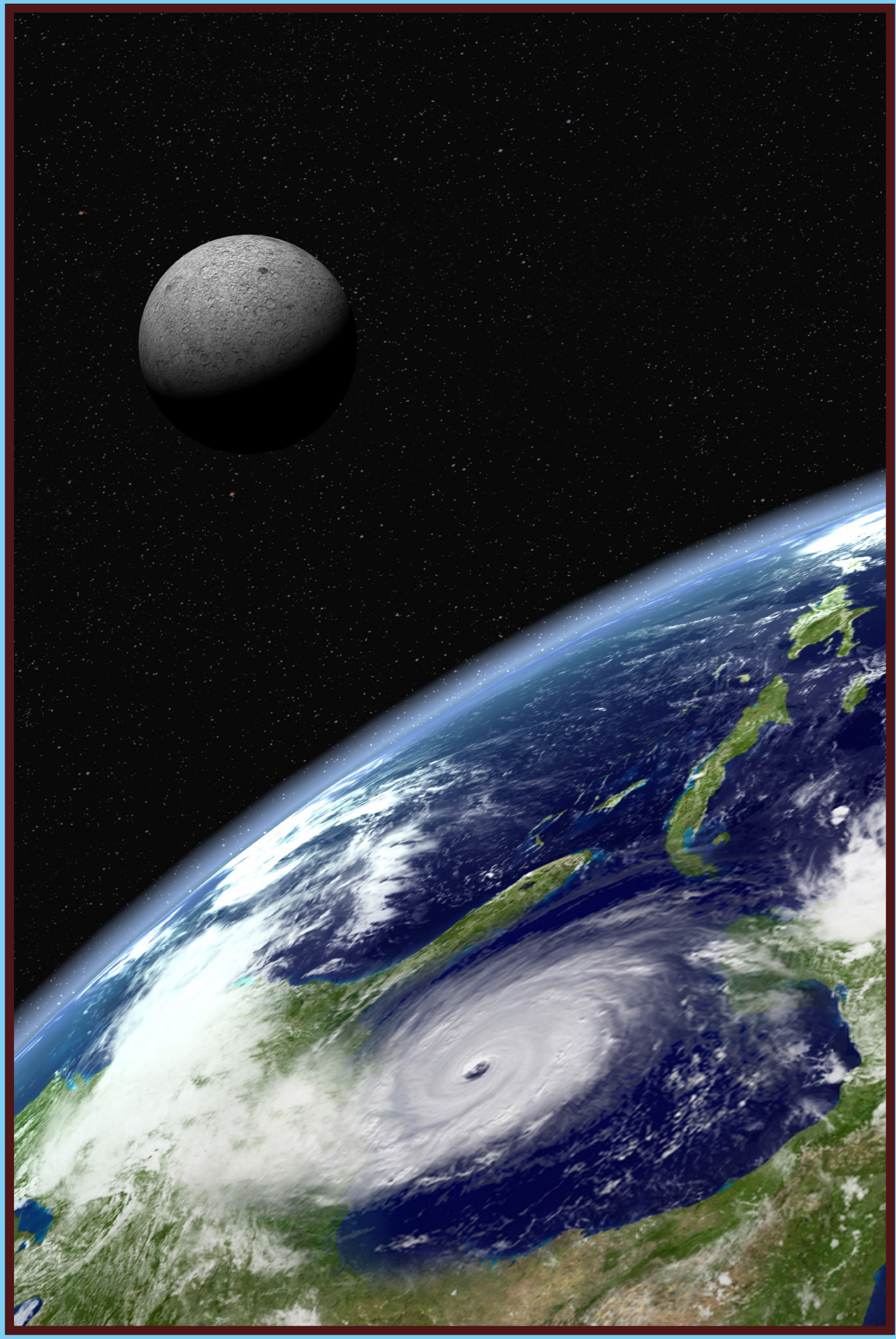
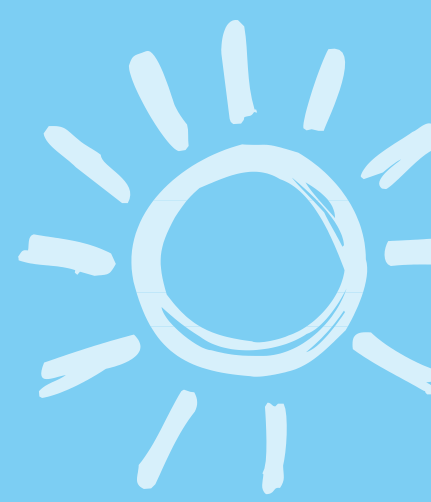
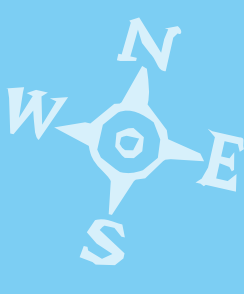
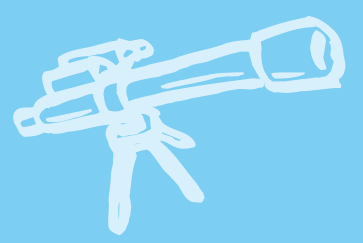
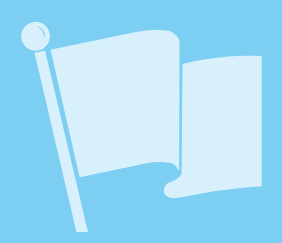
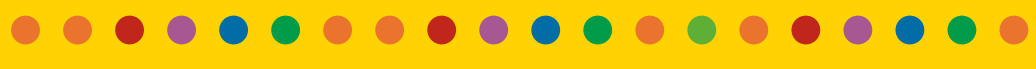
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