

Climates Global Warming

Climates can change a lot over centuries. Sometimes a region will be warmer than average for 100 years! Until recently, warmer temperatures have occurred for natural reasons. Today, humans may be changing the climate and making it warmer.

Human activity can have a negative **impact**¹ on the **environment**². Humans destroy the habitats of animals and plants when they build cities and cut down forests. When people burn oil, coal, and natural gas, they can also change the climate. How does this happen?

Pollution³ from factories and cars adds **toxic**⁴ gases to the air. These gases rise to the Earth's **atmosphere**.⁵ As the sun's rays warm the Earth, the gases work much like the glass in a greenhouse. They help trap the heat in the atmosphere, which makes the Earth grow warmer. That's why they are nicknamed "greenhouse gases."

If the Earth continues to warm up, all of the ice on the North and South Poles could melt. Global warming would cause the oceans to rise and cover more land. Many places along the coasts of every continent, including the city of New York, would be underwater.

Many people do not believe that global warming is a real problem. But in the last 100 years, average temperatures have risen 0.7 degrees Celsius, or about 2 degrees Fahrenheit. This may not sound like a lot. Yet, this change is more than twice as much as previous temperature increases. The average temperature rose only 5 degrees Celsius over the last 5,000 years. Scientists think the average temperature could rise another five degrees in the next 100 years.

¹ **impact**: a forceful or dramatic effect

² **environment**: surroundings that influence the growth of living things

³ **pollution**: harmful ingredients that make air, water or soil dirty or unhealthy

⁴ **toxic**: poisonous

⁵ **atmosphere**: the air that surrounds the earth

Name: _____ Date: _____

1. What could happen if the Earth continues to get warmer?
 - a. The North and South Poles could get colder.
 - b. The North and South Poles could dry up.
 - c. The North and South Poles could melt.
 - d. The oceans could dry up.

2. If a lot of Earth's ice melts, an effect could be that
 - a. pollution would be added to the atmosphere.
 - b. more of the sun's rays reach the earth.
 - c. the average temperature of Earth would go down.
 - d. many places on coasts would be underwater.

3. Based on the passage, which of these could help stop global warming?
 - a. melting the ice at the North and South Poles
 - b. people creating less pollution from factories and cars
 - c. using air conditioners in cars more
 - d. trapping the sun's rays in the Earth's atmosphere

4. Read the following sentences: "Until recently, warmer temperatures have occurred for natural reasons. Today, humans may be changing the climate and making it warmer."

In this passage, the word **natural** means

- a. done to help something
 - b. very obvious
 - c. mysterious or secret
 - d. not changed by people
5. What is the main idea of this passage?
 - a. Global warming could cause huge problems for Earth.
 - b. Cars are the biggest source of pollution.
 - c. The North and South Poles are in serious danger.
 - d. Earth's temperature changes for many reasons.

6. What are some activities people in a community could do that would help protect the environment and the atmosphere?

7. The author writes that some people believe that global warming is not a problem. Why might people think that?

8. The question below is an incomplete sentence. Choose the answer that best completes the sentence.

Toxic gases trap the sun's heat in the atmosphere, and _____ the Earth gets warmer.

- a. previously
- b. yet
- c. as a result
- d. in contrast

9. Read the following sentence.

Human activity might be changing the climate due to pollution.

Answer the questions below based on the information provided in the sentence you just read. One of the questions has already been answered for you.

1. What? Human activity
2. What might human activity be doing? _____
3. Why? _____

10. **Vocabulary Word:** impact: a forceful or dramatic effect.

Use the vocabulary word in a sentence: _____

Teacher Guide and Answers

Passage Reading Level: Lexile 840

Featured Text Structure: Descriptive – the writer explains, defines or illustrates a concept or topic

Passage Summary: The passage describes human activities that lead to global warming. Potential effects of global warming are discussed and data about the increasing average temperature rates are given.

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6. What are some activities people in a community could do that would help protect the environment and the atmosphere?

Suggested answer: Answers will vary, but may include burning less coal, oil, and natural gas; not using their cars as much; not cutting down trees unnecessarily and planting new trees when possible.

7. The author writes that some people believe that global warming is not a problem. Why might people think that?

Suggested answer: In the first paragraph, the author says that climates can change a lot over time and that sometimes a region will be warmer than average for 100 years, which might explain why the average temperatures have risen in the last century. Also, there may be people that do not have enough information about global warming, so they do not think it is a problem.

8. The question below is an incomplete sentence. Choose the answer that best completes the sentence.

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1. What? Human activity
2. What might human activity be doing? **changing the climate**
3. Why? **due to pollution**

10. **Vocabulary Word:** impact: a forceful or dramatic effect.

Use the vocabulary word in a sentence: answers may vary.