



EARTH'S CHANGING CLIMATE

Weather and Climate Change

In *Weather and Climate Change*, learn how weather happens and how global warming is changing it—including global warming's effects on extreme weather.

What did you learn?

QUESTIONS

- Which of the following is NOT one of the three main atmospheric traits that make the weather?
 - Temperature
 - Air pressure
 - Humidity
 - Color of the sky
- A ___ collects information about atmospheric conditions from outer space.
 - Computer model
 - Weather balloon
 - Weather satellite
 - Weather station
- The ___ is a circular wind pattern that centers on the North and South poles.
 - El Niño weather pattern
 - Monsoon season
 - Polar vortex
 - Tornado
- Which of the following is something young people can do to help combat the effects of global warming?
 - Reduce their own carbon footprint.
 - Encourage their parents to make choices that are good for the planet.
 - Pressure government leaders to take measures against global warming.
 - All of the above
- Scientists have found fur preserved on the remains of mammoths. Why does this suggest that they lived in the bitter cold?
- What is extreme event attribution?

TRUE OR FALSE?

- | | |
|---|---|
| _____ 1. Life on Earth would not survive without the greenhouse effect. | _____ 4. Heat waves are usually created by areas of high air pressure. |
| _____ 2. The unusual weather pattern that occurs every 2 to 7 years as a result of the connection between Earth's atmosphere and the Pacific Ocean is called La Niña. | _____ 5. Hurricanes form out of large storm systems near the North and South poles. |
| _____ 3. A monsoon is a wind that shifts with the seasons, sometimes producing heavy rains and floods. | _____ 6. Droughts can dry up bodies of water, but they do not affect the groundwater beneath Earth's surface. |

ANSWERS

- 1. d. Color of the sky.** On page 6, we learn that each region of the atmosphere has three traits that make up the weather: temperature, air pressure, and humidity.
- 2. c. Weather satellite.** On page 14, we learn that “Weather satellites collect information on cloud cover and other conditions from space.”
- 3. c. Polar vortex.** On page 24, we learn that “The polar vortex is a circular wind pattern that centers on the North and South poles.”
- 4. d. All of the above.** On page 44, we learn that young people can work to reduce their own carbon footprint; encourage their parents to make choices that are good for the planet; and even pressure government leaders to take measures against global warming.
- 5.** On page 16, we learn that “[The mammoths’] only living relatives—elephants—and most animals their size have no fur. Their huge size is enough to keep them warm. That mammoths had fur suggests they lived in bitterly cold climates.”
- 6.** On page 28, we learn that Extreme Event Attribution is the science of determining what part global warming plays in the formation of extreme weather.

TRUE OR FALSE? ANSWERS

- 1. True.** On page 10, we learn that “Without the greenhouse effect, Earth would be cold and lifeless.” So, the correct answer is True.
- 2. False.** On page 20, we learn that “El Niño is a weather pattern that is part of the connection between Earth’s atmosphere and the tropical waters of the Pacific Ocean.” So, the correct answer is False.
- 3. True.** On page 22, we learn that “A monsoon is a wind that shifts with the seasons, sometimes producing heavy rains and floods.” So, the correct answer is True.
- 4. True.** On page 30, we learn that “Heat waves are usually created by areas of high air pressure.” So, the correct answer is True.
- 5. False.** On page 34, we learn that “Hurricanes form out of large storm systems near the equator.” So, the correct answer is False.
- 6. False.** On page 38, we learn that drought can reduce groundwater levels under Earth’s surface. So, the correct answer is False.