

Name: _____ Date: _____

Answer Key: Nail the Climate Science Quiz for 6th Grade

Identify heat-trapping gases and recognize how shifting weather patterns affect real-world ecosystems in this foundational comprehension challenge.

1. Which of these is a common greenhouse gas that acts like a blanket, trapping heat in Earth's atmosphere?

Answer: C) Carbon Dioxide

Carbon dioxide (CO₂) is a primary greenhouse gas produced by human activities like burning fuels and natural processes like breathing.

2. True or False: The 'Greenhouse Effect' is a natural process that helps keep Earth warm enough for life to exist.

Answer: A) True

While too much is a problem, some greenhouse effect is necessary to prevent Earth from being a frozen planet.

3. What is the difference between 'weather' and 'climate'?

Answer: B) Weather is what happens today; climate is the average over many years

Weather describes short-term conditions (like a rainstorm), while climate describes long-term patterns over 30 years or more.

4. When oceans get warmer, it can cause _____, which turns colorful sea habitats white and makes them unhealthy.

Answer: B) Coral bleaching

Coral bleaching happens when water is too warm and corals expel the algae living in their tissues, causing them to turn white.

5. Which change is an example of an 'Impact' of a warming planet?

Answer: B) Glaciers and ice sheets melting

Melting ice is a direct physical consequence or 'impact' of rising global temperatures.

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6. The process of cutting down large areas of forests, which prevents trees from sucking up CO₂, is called _____.

Answer: C) Deforestation

Deforestation removes the trees that naturally act as 'carbon sinks' to pull CO₂ out of the air.

7. True or False: Renewable energy sources, like wind and solar, release very little to no greenhouse gases compared to coal.

Answer: A) True

Unlike fossil fuels, wind and solar power generate electricity without burning materials that release carbon dioxide.

8. If a city builds a large wall to stop the ocean from flooding streets as sea levels rise, this is an example of:

Answer: C) Adaptation

Adaptation means changing how we live or build to stay safe from the effects of climate change that are already happening.

9. Scientists study ancient air bubbles trapped in _____ to learn what Earth's atmosphere was like thousands of years ago.

Answer: B) Ice cores

Ice cores are cylinders of ice drilled from glaciers that hold tiny bubbles of ancient atmosphere, acting like a time capsule.

10. True or False: Individual actions, like recycling and saving electricity, have no impact on protecting the environment.

Answer: B) False

When millions of people take small steps to reduce waste and energy use, it significantly lowers the total amount of greenhouse gases produced.