

Name: _____ Date: _____

Answer Key: Feeling the Heat: A 7th Grade Chill-Pill for Climate Change

Imagine explaining the Earth's warming blanket to a younger sibling using concepts like permafrost thaw and the power of volcanic ash.

1. Which of these is a 'natural' contributor to climate change that is not caused by humans?

Answer: B) Volcanic eruptions

While humans are the main drivers of current change, natural events like massive volcanic eruptions release gases and particles that can alter the climate.

2. Scientists often study ice _____ to see what the Earth's atmosphere was like thousands of years ago.

Answer: C) cores

Ice cores are long cylinders of ice drilled from glaciers that trap ancient air bubbles, acting like a time capsule for carbon dioxide levels.

3. True or False: The Greenhouse Effect is a completely bad thing that Earth doesn't need.

Answer: B) False

The natural greenhouse effect is actually vital; without it, Earth would be too cold for life. The problem is the 'enhanced' greenhouse effect caused by too many human-made gases.

4. When permafrost (frozen ground) thaws in places like Siberia, what potent greenhouse gas is released?

Answer: C) Methane

Methane is trapped in frozen soil; as the world warms and the ground thaws, this gas escapes, further speeding up the warming process.

5. Switching a city's buses from diesel to _____ power is an example of a mitigation strategy.

Answer: A) electric

Mitigation means reducing the causes of climate change. Using electricity (especially from green sources) reduces the CO2 emitted by transportation.

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6. What is the main reason sea levels rise when the planet warms up?

Answer: C) Thermal expansion and melting land ice

As water gets warmer, it expands (thermal expansion), and as ice on land (like Greenland) melts, it adds new water to the ocean.

7. True or False: Planting 'urban forests' in hot cities is an example of an adaptation strategy.

Answer: A) True

Adaptation is adjusting to the effects. Planting trees in cities helps lower local temperatures and provide shade during the heatwaves caused by climate change.

8. The _____ Protocol was one of the first major international agreements where countries promised to reduce greenhouse gases.

Answer: B) Kyoto

The Kyoto Protocol, adopted in 1997, was a historical step where nations committed to lowering emissions to fight global warming.

9. Which of these everyday actions helps reduce your individual carbon footprint?

Answer: C) Walking or biking to school

Walking or biking uses your own energy instead of burning fossil fuels in a car, which directly lowers the amount of CO₂ released.

10. True or False: Weather and Climate mean exactly the same thing.

Answer: B) False

Weather is what happens outside today (short-term), while climate is the average weather pattern over a long period (usually 30 years or more).