

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Dare to Lead the Change: 5th Grade Climate Action Challenge

Solve 10 analytical problems about the greenhouse effect and ocean acidification to prove your expertise in environmental science.

---

**1. Imagine you are building a miniature greenhouse. Which gas should you increase inside the glass to best simulate how Earth traps heat?**

- A. Oxygen
- B. Nitrogen
- C. Carbon Dioxide
- D. Helium

**2. When oceans absorb too much CO<sub>2</sub>, the water becomes more \_\_\_\_\_, which makes it harder for shellfish to build their shells.**

- A. Salty
- B. Acidic
- C. Basic
- D. Frozen

**3. True or False: The 'Albedo Effect' means that white Arctic ice reflects more sunlight back into space than dark ocean water does.**

- A. True
- B. False

**4. Which of these is an example of an 'adaptation strategy' for a coastal city facing rising tides?**

- A. Switching to electric buses
- B. Installing solar panels on schools
- C. Building houses on stilts
- D. Planting a community vegetable garden

**5. Scientists look at \_\_\_\_\_ trapped in ancient ice cores to see what Earth's atmosphere was like thousands of years ago.**

- A. Dust particles
- B. Air bubbles
- C. Frozen fish
- D. Volcanic ash

**6. True or False: 'Weather' and 'Climate' mean the exact same thing when describing a specific region.**

- A. True
- B. False

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**7. If a town replaces a coal power plant with a wind farm, which part of the climate equation are they addressing?**

- A. Mitigation (reducing the cause)
- B. Adaptation (adjusting to change)
- C. Pollination (nature's cycle)
- D. Urbanization (growing cities)

**8. Permafrost is ground that stays frozen all year; when it melts, it releases \_\_\_\_\_, a very potent greenhouse gas.**

- A. Argon
- B. Methane
- C. Hydrogen
- D. Neon

**9. Which of the following is a 'carbon sink,' meaning it naturally absorbs more carbon than it releases?**

- A. A limestone quarry
- B. An asphalt parking lot
- C. A seagrass meadow
- D. An active volcano

**10. True or False: Climate change can cause some areas to get much wetter while other areas become much drier.**

- A. True
- B. False