



CO₂ and Our Environment

Exploring Global Warming



Name: _____



You will need

- Two 32oz jars with lids
- 8oz of water (4oz per jar)
- Two thermometers
- 3 effervescent tablets
- Heat lamp
- Clock or timer



WARNING: Safety first! Please wear safety glasses to prevent any materials splashing your eyes and handle heat lamps with caution.



What to do

1. Place two 32oz jars side by side.
2. In each jar add 4oz of water
3. In each jar, stick a thermometer above the water level.
4. In jar 1, add 3 effervescent tablets and quickly cover jar with lid.
5. In jar 2, do not add effervescent tablets. Cover jar with lid.
6. Shine a heat lamp equally on both jars.
7. Wait 10 minutes and read the temperature in both jars.



Questions

What will happen? Do you think one will be hotter than the other? Write or draw your prediction here...



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Now check! Were you correct? Write down what happened...



What's happening?

The temperature in jar 1 should be greater than the temperature in jar 2. In this experiment, the jars are like the Earth's atmosphere, and the heat lamp is like the sun. In jar 1, the effervescent tablets mixing with water create a chemical reaction and release CO₂. The CO₂ levels in jar 1 increase, and so jar 1 absorbs more heat, radiating the heat back toward the thermometer.