



Going Green Experiment

Name: _____

Teacher: _____

Class: _____

Aim:

1. To demonstrate the cause and effects of the greenhouse effect.
2. To determine if different materials have different affects on temperature changes.

Background information

The Earth's atmosphere allows most of the Sun's rays to pass through it to heat the Earth's surface. Much of the Sun's heat energy is reflected back into the atmosphere where a small amount escapes back into space. Most of the heat is trapped because of the carbon dioxide in the atmosphere that acts like a blanket. It is this phenomenon, called the greenhouse effect, which keeps the Earth warm.

Scientists think that if the amount of carbon dioxide in the atmosphere increases, the Earth will eventually get warmer causing the polar ice caps to melt and the sea to rise.

What you will need

- § A large glass container or aquarium
- § Thermometer
- § Clear plastic lunch wrap
- § Perspex





Lunch wrap		Perspex	
Temperature		Temperature	
Before	After	Before	After

What to do:

1. Prepare a table as shown in figure1. Use this to record results.
2. Using the thermometer make a record of the room temperature.
3. Place the thermometer inside the glass container or aquarium.
4. Seal the container with the plastic lunch wrap.
5. Place the container in the sun for 15 minutes.
6. After 15 minutes take a reading of the temperature.
7. Repeat this procedure using the perspex to seal the container. Remember to allow the container to return to room temperature before repeating the exercise.

Questions

1. By how much did the temperature change for a) the lunch wrap and b) the perspex?
2. Why do you think the temperature increased inside the sealed container?
3. If you left the container out in the sun longer do you think it would get hotter?
4. Do you think the temperature would keep rising forever?
5. How does the temperature change compare for the lunch wrap and perspex?
6. How do you think this relates to the Earth's atmosphere?

