

# GREENHOUSE EFFECT

## An activity for class 5<sup>th</sup> onwards

Time: about an hour

Divide the class into teams of 4 students each

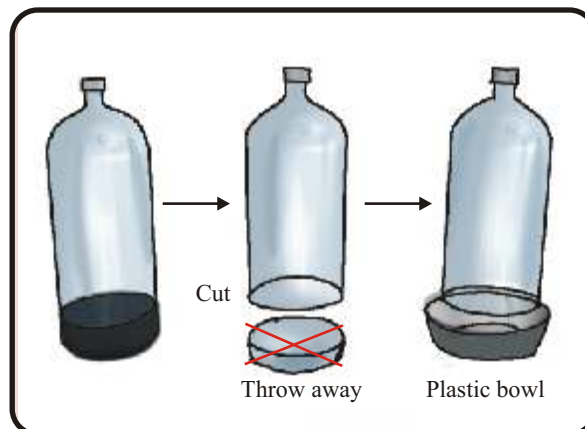
### Materials

For each team:

- Two two-litre plastic bottle
- Scissors
- Tape
- Two thermometers
- One table lamp with high wattage bulb (100)
- Graph paper

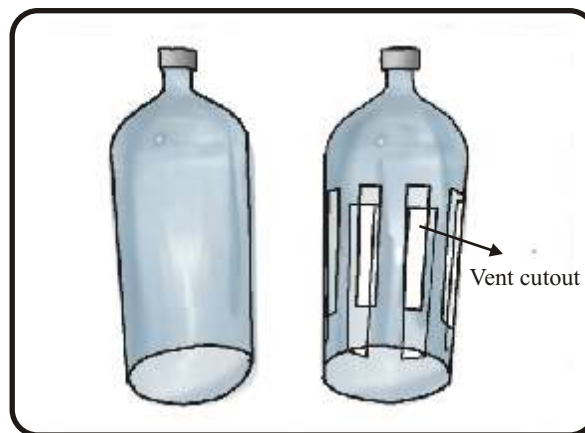
### Experiment

1. Remove the bottle label by soaking it in warm water.



### Method

1. Organize students in teams of four.
2. Each team should use scissors to cut several elongated vents (1 x 4 inches) in the sides of one of the bottles.



3. Leave the second bottle intact.
4. Tape a thermometer (using cellophane tape or light-colored masking tape, not black electrical tape) to the inside of each bottle (facing out). Make sure the bulbs of the thermometers are above the top of the chamber base. (See graphic below.)
5. Place caps on both bottles.
6. Place both bottles approximately six inches away from the lamp with the thermometers facing away from the light.



7. Turn on the light and begin collecting data every minute for 20 minutes.

### **Observations and Questions**

1. Compare and contrast the graphed data from the vented bottle and the intact bottle. What happened? How do you explain your observations?
2. Discuss the results with your class and develop some possible explanations (for example, the vents let cool air in).
3. Compare and contrast your plastic greenhouse to the greenhouse effect on earth.