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Science Experiment

Taku ingoa (name):

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The Greenhouse Effect

Materials:

- ☐ Tall plastic bottle with lid – label removed
- ☐ 2 x glass jars the same size – small enough to fit one inside the bottle
- ☐ Labels: Jar 1 and Jar 2
- ☐ Scissors
- ☐ 2 x thermometers

Procedure:

1. Use the scissors to cut the bottom of the plastic bottle. Leave the lid on.
2. Stand the thermometer inside Jar 1 and place in a sunny spot.
3. Stand the other thermometer in Jar 2 and put under the plastic bottle. Place in the same sunny spot.
4. Check the thermometers after an hour and compare the temperatures.

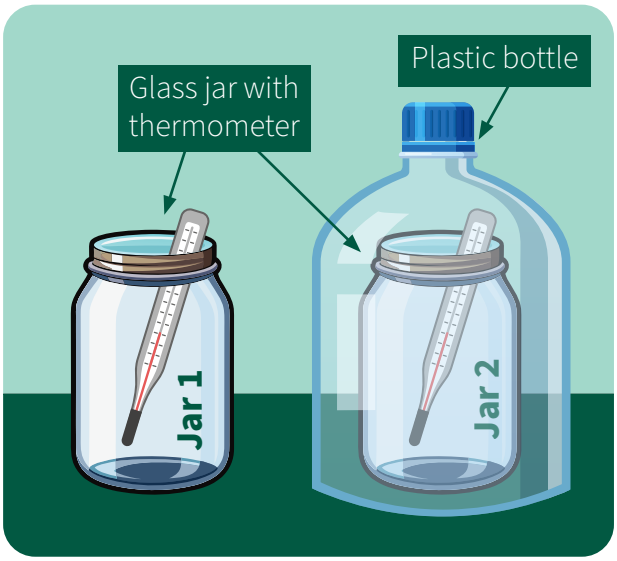
Variations to try:

- Repeat the experiment 5 times to see if the results are the same each time.
- Do the experiment for different lengths of time, eg, compare after 10, 20, 30, 40, 50, 60, 70, 80, 90 minutes.
- Graph and see if there are any trends.

Note: Monitor as you do the experiment to check the thermometer does not overheat and break.

Conclusion

The temperature in jar 2 is warmer than jar 1. This is because the Sun's solar energy passing into the plastic bottle has been turned into heat energy and can't escape. The Earth's atmosphere serves a similar function as the bottle. It allows the Sun's solar energy to pass through, then keeps the heat energy from escaping into space.



Results	Temperature ° C	
Time	Jar 1	Jar 2
10 min		
20 min		
30 min		
40 min		
50 min		
60 min		
70 min		
80 min		
90 min		
Other?		