



MAKING A MODEL OF THE GREENHOUSE EFFECT

with a Glass Jar

Name: _____

Date: _____

Science Topic:
Earth & Space Science

? QUESTION

How does a greenhouse effect cause temperatures to rise?

💡 HYPOTHESIS

If _____

then _____

because _____

📋 MATERIALS

- 2 identical glass jars (with lids)
- 2 thermometers
- Lamp with a bright bulb (desk lamp works well)
- Black construction paper or dark-colored paper
- Tape
- Timer or clock



🧪 PROCEDURE

1. Place the black construction paper on a flat surface.
2. Put the two jars on the paper, side by side.
3. Place one thermometer inside each jar.
4. Label the jars:
 - CONTROL (No Lid)
 - GREENHOUSE (With Lid)
5. Put the lid on the GREENHOUSE jar. Leave the CONTROL jar open.
6. Place the lamp so it shines directly on the jars. Keep the distance the same for both.
7. Turn on the lamp and start the timer.
8. Record the temperature in each jar every 2 minutes for 20 minutes.
9. Keep the setup the same the entire time.

★ TIP

The lamp represents the Sun.
The glass jar with the lid represents Earth's atmosphere trapping heat.

📊 DATA TABLE

Time (minutes)	CONTROL (No Lid) Temperature (°F or °C)	GREENHOUSE (With Lid) Temperature (°F or °C)	Difference (Greenhouse - Control)
0 (start)			
2			
4			
6			
8			
10			
12			
14			
16			
18			
20			

🔍 OBSERVATIONS

✅ CONCLUSION

What did you find out?

How does this model relate to
the greenhouse effect on Earth?



THINK FURTHER: What are some real-world ways we can reduce the greenhouse effect and help our planet?