

EXPLORE THE GREENHOUSE EFFECT

Sunlight warms the earth's atmosphere and surface. As the earth's surface, waters, and air get warmer, they release heat energy. Gases in the atmosphere absorb and radiate some of this heat back to Earth's surface. This process allows Earth to remain at a livable temperature. In this activity, we'll explore how the greenhouse effect works.

- **Create two identical environments.** Pour 2 cups of cold water and 4 ice cubes into each jar. Measure the temperature of the water in each jar. Record the data in your science notebook.
- **Place one of the jars in a sealed plastic bag.** Put both jars in a sunny spot. Make sure that both jars are receiving equal amounts of sunlight.
- **After an hour, measure the temperature of the water in each jar.** Record your results. How do the temperatures of the jars compare to each other? How do the temperatures compare to the earlier temperatures? How do your results demonstrate the greenhouse effect? How does what you learned relate to global warming and climate change?

To investigate more, repeat this activity with more jars and different types of coverings. Try putting jars in colored plastic bags, cloth bags, or paper bags. Try punching holes in the plastic bag. What if you repeat the activity in a non-sunny area? How do these changes impact your results?



Inquire & Investigate

Ideas for Supplies ▼

- 2 identical glass jars
- cold water
- ice cubes
- large plastic bag with seal
- thermometer