

Optional Inquiry Lesson 2: Where Can Heat Come From?

Activity Instructions for Student eBook pgs. 179-180

1 Engage/Explore

2 Explain

3 Extend/Evaluate

Where Can Heat Come From?

Warm up those hands! In this activity, you and your classmates will explore a way to produce heat. As you do each step, record how warm each material feels.

Materials

1 sheet of paper 1 block of wood
2 pieces of cloth soapy water

1 Rub your hands quickly together for 30 seconds. Record your results.

2 Rub the two cloths together for 30 seconds. Record your observations.

3 Rub the paper against the wood for 30 seconds. Record your observations.

4 Put 5 drops of soapy water between the paper and the wood. Rub for 30 seconds. Record your observations.

A Word for the Wise

Heat is energy that moves between two objects of different temperatures. Temperature is the measure of how hot or cold something is.

Optional Inquiry Lesson 4: How Can We Keep Objects Warm or Cool?

Activity Instructions for Student eBook pgs. 193-194

1 Engage/Explore

2 Explain

3 Extend/Evaluate

How Can We Keep Objects Warm or Cool?

You have learned that sunlight has a warming effect on objects. Can you design and construct a device or structure that will increase or decrease the warming effect of sunlight?

Materials

aluminum foil	stopwatch
cardboard box	tape
colored paper	2 thermometers
scissors	
plastic wrap	

1

Choose whether your device will increase or decrease the warming effect of sunlight.

2

Examine the materials. Design your device or structure. Include this constraint: your design must let you easily measure and record the temperature in your device.

3

Using the materials, construct your device.
Caution! Be careful when using scissors.

4

Place one thermometer inside your device. Record the temperatures on both thermometers.



5

Put your device in a sunny spot. Lay the other thermometer next to the device. Record both temperatures every 5 minutes. Compare the numbers.