



How Are Light and Heat Related?

Name _____

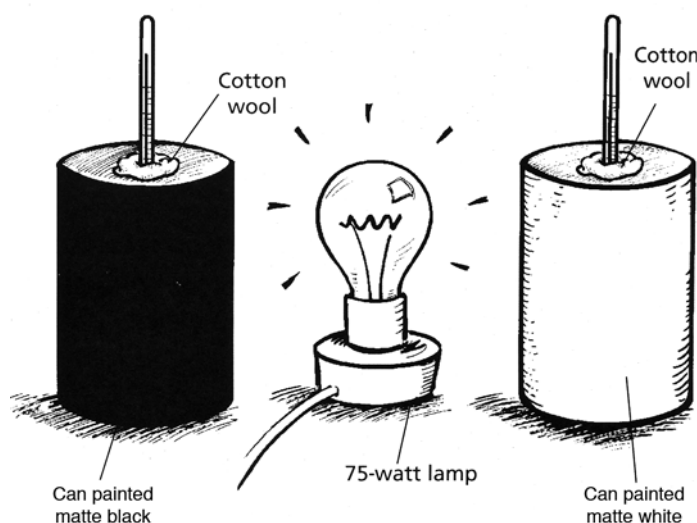


- What You Need:**
- 2 empty metal cans
 - 2 thermometers
 - black and white paint
 - brushes
 - drill or punch
 - cotton wool
 - 75 watt bulb and holder



What To Do:

1. Paint one can matte black and the other can matte white.
2. In the center of the base of each can, punch or drill a hole so that the thermometers can slip through.
3. Pack some cotton wool around each hole, then pass the thermometers through so that the bulb of each thermometer sits at the same height inside the can.





How Are Light and Heat Related? *(cont.)*



What To Do: *(cont.)*

4. Place the light bulb an equal distance between the two cans, on the previous page. Switch on the lamp and record the temperatures over time.

	black can temperature	white can temperature
initial temperature		
after 5 minutes		
after 10 minutes		
after 15 minutes		

5. Do the cans change temperature at the same rate? Which heats up faster? Why do you think that is?

Next Question

Repeat the experiment with glossy paint. Try wrapping a can in shiny aluminum foil. Try using a glass jar with the thermometer through the lid. What changes?

Notebook Reflection

What practical uses could this experiment lead to in your life? What if you were an architect? What if you were a gardener? What if you were a spacecraft engineer?