

Some Like It HOT!

The light from the sun produces a lot of heat and we can design products, machines, and materials that can use (or deflect) that heat in many different ways. Here is an activity to explore that idea.

Materials needed

- Craft sticks (or similar)
- Black paint or black marker
- Aluminum foil or white paint
- Infrared (IR) thermometers
- Light sources

Using an IR Thermometer

IR thermometers are a fun and easy way to measure temperature.

You just point the IR thermometer at the object whose temperature you want to measure and pull the trigger. The object's temperature will then appear on the screen.

Before going to the activity, test out the IR thermometer by measuring the temperature of some objects in the room.



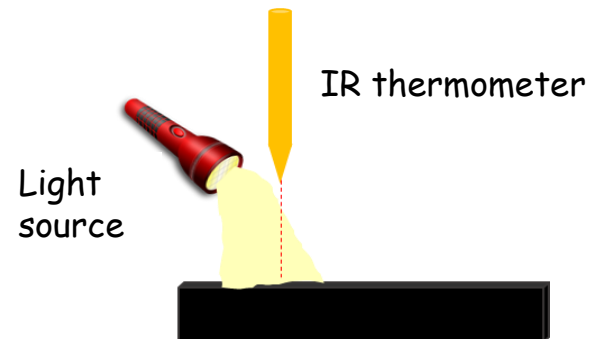
Be careful not to shine it in anyone's eye!

Procedure

1. Make sure you have both dark and light craft sticks.



2. Using one light source at a time, shine the different light sources on the craft sticks and use the IR thermometer to measure the temperature.
3. You may need to wait a few minutes for the temperature to stop changing. You may want to do the dark and light sticks separately.
4. Record your results in the table on the next page. Be sure to include the light source you used.



Observations

Light Source	Temperature of Craft Stick	
	Dark Craft Stick	Light Craft Stick

Notes

Conclusions

Which light sources and materials generated the most heat?

How could this information be used to keep something cool or prevent it from getting hot?

How could this information be used to keep something warm or heat it up?
