My Book About Heat and Light

Name: _____

Insulators

Question: Which material will keep heat in the longest?

Hypothesis: I think _____

Materials: You will need 1 styrofoam container, 1 folded newspaper, 1 towel, 3 small cups, and a thermometer.

Steps:

1. Fill 3 small cups with hot water.
2. Take the temperature of each cup.
3. Wrap each cup with an insulator.
4. Measure the temperature of each cup every minute for 4 minutes.

Conclusion:

_____

_____

_____

_____

	0 minutes	1 minute	2 minutes	3 minutes	4 minutes
Cup in newspaper					
Cup in stryofoam					
Cup in towel minu					

Hot to Cold

Question: Which room is the hottest? Which room is the coldest?

Hypothesis: I think _____

Materials: Thermometers

Steps:
1. Measure the temperature in six rooms.
2. Leave the thermometers for 5-10 minutes.
3. Also observe how much sunlight is in each room.

	Room	Temperature
1.		
2.		
3.		
4.		
5.		
6.		

Solar Cooking

Question: How can I use the sun's heat to cook my food?

Hypothesis: I think _____

Materials:
1 bowl covered in foil (shiny side out)
clear plastic wrap to cover top
marshmallows
1-2 graham cracker squares
chocolate chips

Steps:
1. Place graham cracker in bowl.
2. Place chocolate chips and marshmallows on top or cracker.
3. Cover with plastic wrap.
4. Place in direct sunlight.

Conclusion:

_____

_____

_____

_____

Sprouts!

Question: Do seeds need heat to sprout?

Hypothesis: I think _____

Materials:
2 plastic bags
seeds
4 cotton balls

Steps:
1. Place 2 cotton balls in each bag.
2. Place a few seeds on the cotton and slightly moisten with water.
3. Place 1 seed bag in a cool or cold area.
4. Place 1 seed bag in a warm area.
5. Observe for one week.

Observations:

Conclusion: Which seeds grew better?

_____

_____

_____

_____

_____

Heat From Rubbing!

Question: Which two things rubbed together make the most heat?

Hypothesis: I think _____

Materials:
1 thermometer or heat sensor
Items to test

Steps:
1. Choose items from around the house to rub together (wood, rubber, plastic).
2. Take the temperature before and after rubbing.

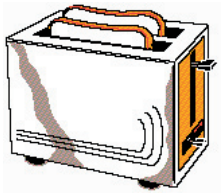
Conclusion:

_____

_____

Item 1	Item 2	Time	Temperature

Heat From Machines



Question: Which machines in your house give off the most heat?

Hypothesis: I think _____

Materials:
Thermometers from the Science Kit

Steps:
1. Take the temperature of the machine.
2. Tape or attach a thermometer to it.
3. Turn the machine on for five minutes.
4. Test the temperature after another 5 minutes.

Conclusion:
_____

_____

Machine	Temp. While Off	5 Minutes	10 Minutes	Difference