**KEY**

**Thermal Energy – Pre-Post Test**

Directions: Carefully read each question. Circle the correct answer.

1. Thermal energy always moves from hot to cold.
	1. **True**
	2. False
2. Which has more thermal energy?
	1. Teaspoon of boiling water
	2. Bowl of boiling water
	3. **Bathtub of boiling water**
3. Which has a higher temperature?
	1. Teaspoon of boiling water
	2. Bowl of boiling water
	3. Bathtub of boiling water
	4. **They are all the same temperature**
4. Which is a unit of temperature?
	1. **Celsius**
	2. Joule
	3. Calorie
5. An aluminum plate and a plastic plate have been in the freezer all night. When you remove them the next morning,
	1. **The plates have the same temperature.**
	2. The plastic plate has a higher temperature.
	3. The plastic plate has a lower temperature.
	4. The aluminum plate has a lower temperature.
6. You put a metal spoon and a wooden spoon into a pot of boiling water. One will become too hot to touch. Why?
	1. **Metals conduct heat better than wood.**
	2. Wood conducts heat better than metals.
	3. Metals are insulators.
	4. Wood is more dense than metal.
7. Why do we wear sweaters in cold weather?
8. To keep the cold in.
9. To generate heat.
10. **To keep heat in.**
11. All of the above.
12. Which of the following is NOT a thermal insulator:
13. Carpet
14. Wool
15. Jacket
16. **Metal pan**
17. Draw an arrow to indicate the direction of thermal energy transfer.

House on a Summer Day ![C:\Users\Tenney\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\I6E3S8GI\MC900339080[1].wmf]()

**From the outside air into the house**

1. Draw an arrow to indicate the direction of thermal energy transfer.

Cup of Hot Chocolate ![C:\Users\Tenney\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\I6E3S8GI\MC900250821[1].wmf]()

**From the hot chocolate to the air**