

Name: _____ Date: _____

Escape the Frozen Cave: First Grade Thermal Adventure

Prove you are a Heat Hero by predicting how energy moves to save a shivering explorer from the icy chills.

1. You are shivering in the snow! To stay warm, you hug a fuzzy llama. Why does this help you?

- A. The llama's heat moves into your body
- B. The llama makes your toes turn into ice
- C. Cold moves from the llama to you
- D. Nothing happens when you hug a llama

2. True or False: Heat can jump through the air from a campfire to your hands without you touching the flames.

- A. True
- B. False

3. If you leave a ____ on a sunny sidewalk, it will gain thermal energy and eventually disappear into a puddle.

- A. Gold coin
- B. Rock
- C. Snowman
- D. Rubber ball

4. You have a cup of hot cocoa and a cup of cold milk. If you pour them together, what will happen to the temperature?

- A. It becomes boiling hot
- B. It becomes warm
- C. It stays exactly the same
- D. The cocoa stays hot and the milk stays cold

5. True or False: A metal slide on a summer day feels hot because it is good at moving heat into your legs.

- A. True
- B. False

6. A refrigerator is a machine that uses ____ to move heat from the inside of the box to the outside kitchen air.

- A. Magic
- B. Work and energy
- C. Magnets
- D. Ice cubes

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7. Imagine you are an engineer. Which material would you use for a winter coat to stop heat from escaping your body?

- A. Aluminum foil
- B. Flat stones
- C. Thick wool
- D. Cold water

8. True or False: If you put a hot toaster in a giant room, the toaster will eventually get as cool as the air in the room.

- A. True
- B. False

9. When you stir a pot of soup, the hot soup at the bottom rises to the top. This movement of heat in liquids is called ____.

- A. A parade
- B. Freezing
- C. Convection
- D. Melting

10. If you have a very cold popsicle and you put it in a hot oven for one second, what happens to the energy?

- A. Heat flows from the oven into the popsicle
- B. Cold flows from the popsicle into the oven
- C. The popsicle gets colder
- D. The energy disappears forever