

Name: _____ Date: _____

Wrangle the Heat: A 2nd Grade Thermodynamics Quest

Insulation, temperature change, and energy flow—foundational concepts to help young scientists predict how materials react to heat in their daily lives.

1. Imagine you are wearing a thick, fuzzy coat on a snowy day. What is the coat doing for your body?

- A. It is making new heat out of nothing.
- B. It is trapping your body heat inside.
- C. It is pulling cold air toward you.
- D. It is turning into ice.

2. If you leave a bowl of cold strawberry ice cream on the sunny porch, the heat from the ___ will move into the ice cream.

- A. Freezer
- B. Spoon
- C. Sunlight
- D. Bowl

3. True or False: Heat can move from a piece of hot toast to a cold slab of butter.

- A. True
- B. False

4. Which of these materials would stay the coolest if you left it out in the hot sun for an hour?

- A. A black metal slide
- B. A dark asphalt driveway
- C. A light-colored wooden bench
- D. A silver metal spoon

5. When energy moves from a warm campfire to your hands, we call this the flow of ___.

- A. Water
- B. Heat
- C. Sound
- D. Shadows

6. True or False: If you put a hot potato and a cold potato together, the cold potato will eventually get warmer.

- A. True
- B. False

7. You are making a 'hot cocoa holder' to keep your drink warm. Which material would be the best choice?

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- A. A thin sheet of tinfoil
- B. A thick layer of Styrofoam
- C. A cold metal ring
- D. A wet paper towel

8. Rubbing your hands together very quickly makes them feel warm because of ____.

- A. Gravity
- B. Friction
- C. Magnets
- D. Freezing

9. What happens to the tiny particles (atoms) in a cup of water when the water gets much hotter?

- A. They slow down and stop moving.
- B. They get heavier and sink.
- C. They move around much faster.
- D. They disappear into the air.

10. True or False: An ice cube melts because it is giving its 'coldness' to the warm room.

- A. True
- B. False