

Name: _____ Date: _____

Beat the Heat: Second Grade Thermal Energy Challenge

Temperature patterns, friction-based warmth, and material insulation—the fundamental cognitive building blocks for recognizing how heat energy moves through our daily world.

1. If you rub your hands together very fast on a cold day, what will happen?

- A. Your hands will stay cold
- B. Your hands will feel warmer
- C. Your hands will turn blue
- D. Your hands will get wet

2. True or False: A metal slide on a sunny playground usually feels hotter than a wooden bench.

- A. True
- B. False

3. Which of these is a tool we use to see exactly how hot or cold something is?

- A. A ruler
- B. A scale
- C. A thermometer
- D. A clock

4. Heat always likes to travel from a _____ place to a colder place.

- A. dark
- B. warm
- C. wet
- D. quiet

5. True or False: Putting on a thick sweater creates its own heat like a tiny heater.

- A. True
- B. False

6. What happens to a solid piece of chocolate if it gets too much heat energy from your pocket?

- A. It stays hard
- B. It turns into a liquid (melts)
- C. It turns into ice
- D. It disappears

7. To keep your hot cocoa warm for a long time, you should put it in a cup made of _____.

- A. aluminum foil
- B. thin metal
- C. thick plastic or foam

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D. ice cubes

8. Which of these is the Earth's biggest source of heat energy?

- A. A campfire
- B. The Moon
- C. A toaster
- D. The Sun

9. When water gets very cold and loses its heat energy, it turns into ____.

- A. steam
- B. solid ice
- C. juice
- D. bubbles

10. True or False: If you touch a piece of ice, heat moves from your warm finger into the cold ice.

- A. True
- B. False