

Name: _____ Date: _____

Feeling the Flow? 6th Grade Heat Transfer Quiz

Moving beyond simple temperature readings, students identify how thermal energy shifts through pizza stones, puffy jackets, and coastal breezes.

1. Why does a blacksmith heat a horseshoe in a forge before shaping it on an anvil?

- A. To decrease the internal energy of the metal
- B. To make the particles move faster and soften the metal
- C. To stop all molecular motion in the iron
- D. To remove all the thermal energy from the hammer

2. True or False: Thermal energy always moves from a cooler object to a warmer object naturally.

- A. True
- B. False

3. When you use a wooden spoon to stir hot chocolate, the handle stays cool because wood is a good _____.

- A. Conductor
- B. Radiator
- C. Insulator
- D. Generator

4. Which method of heat transfer explains why the top bunk of a bunk bed is usually warmer than the bottom bunk?

- A. Conduction
- B. Radiation
- C. Evaporation
- D. Convection

5. The sun warms your face on a cold winter day through a process called _____.

- A. Radiation
- B. Convection
- C. Conduction
- D. Friction

6. True or False: Energy cannot be created or destroyed, only changed from one form to another.

- A. True
- B. False

7. If you place a room-temperature ceramic tile on a hot pizza stone, what happens to the energy?

- A. Cold moves from the tile to the stone

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- B. Heat moves from the stone to the tile
- C. Energy is destroyed as the stone cools
- D. No energy moves because they are both solids

8. A puffy down jacket keeps you warm by trapping air. In this scenario, the trapped air acts as an _____.

- A. Energy source
- B. Insulator
- C. Conductor
- D. Radiator

9. Which of these is the best example of conduction?

- A. Feeling the warmth of a campfire from five feet away
- B. Hot water circulating in a boiling pot of pasta
- C. Touching a hot car seat after it sat in the sun
- D. Smoke rising from a chimney

10. True or False: Temperature is a measurement of the average kinetic energy of the particles in an object.

- A. True
- B. False