Name: _____ **Date:** _____

Feeling the Heat: 3rd Grade Thermal Energy & Insulation Quiz

Students distinguish between thermal conductors and insulators while predicting energy flow through hands-on scenarios like packing a picnic or wearing winter gear.

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1. Imagine you are building a doghouse for a puppy. Which material would be the BEST insulator to keep the puppy warm during a cold night?

A. A sheet of thin aluminum foil
B. Thick pieces of dry wood
C. Flat iron bars
D. Cold river stones

2. A metal slide feels much hotter than a wooden bench on a sunny day because metal is a great _____.

A. Insulator
B. Conductor
C. Radiator
D. Vapor

3. Heat energy always moves spontaneously from a colder object to a warmer object.

A. True
B. False

4. Why do people wear thick wool mittens in the winter instead of thin plastic gloves?

A. Wool produces its own heat to warm the hands.
B. Wool acts as an insulator to trap body heat inside.
C. Wool is a conductor that pulls heat from the air.
D. Wool makes the snow melt faster.

5. When you put an ice cube in a cup of warm cocoa, the heat energy moves from the _____ to the _____.

A. Ice to the cocoa
B. Cup to the table
C. Cocoa to the ice
D. Air to the spoon

6. A puffy winter coat works by trapping tiny pockets of air, which are poor conductors of heat.

A. True
B. False

7. If you leave a metal spoon and a plastic spoon in a bowl of hot oatmeal, which one will feel uncomfortable to touch after two minutes?

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A. The plastic spoon, because it is an insulator.
B. The metal spoon, because it is a conductor.
C. Both will feel exactly the same.
D. Neither spoon will change temperature.

8. When a liquid like water is heated up and turns into an invisible gas, the process is called _____.

A. Freezing
B. Insulation
C. Evaporation
D. Friction

9. Dark-colored t-shirts usually feel cooler in the bright sun than white t-shirts.

A. True
B. False

10. You want to keep your juice box cold at the beach. Which container would work like a thermos to keep it chilled?

A. A foam cooler box
B. A clear glass jar
C. A thin paper bag
D. A flat iron tray