

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Wrangle the Heat: A Kindergarten Thermodynamics Challenge

Young scientists invent solutions for temperature changes by predicting how thermal energy moves through cozy blankets and icy treats.

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**1. You are building a house for a penguin in the desert. Which material would best keep the heat from the hot sand from reaching the penguin's belly?**

- A. A flat piece of metal
- B. A thick, fuzzy rug
- C. A tray of water
- D. A thin sheet of paper

**2. If you put a warm juice box into a bucket of cold snow, the juice will give some of its warmth to the snow.**

- A. True
- B. False

**3. Imagine you are holding a cold snowball. After a few minutes, the snowball begins to melt because energy is moving \_\_\_\_.**

- A. from your warm hand to the cold snow
- B. from the cold snow into your warm hand
- C. from the ground into the snowball
- D. away from the sun into your pocket

**4. If you want to keep a cup of hot cocoa warm for a long time, which 'suit' should the cup wear?**

- A. A shiny foil jacket
- B. A wet paper towel
- C. A knitted wool sleeve
- D. A cold metal ring

**5. Energy can be completely destroyed and disappear forever if we turn off a heater.**

- A. True
- B. False

**6. You leave a metal spoon and a wooden spoon in the sun. The metal spoon feels hotter because \_\_\_\_.**

- A. metal likes the color yellow
- B. metal moves heat very quickly
- C. wood creates its own cold air
- D. the metal spoon is trying to melt

**7. If you put a hot rock and a cold rock next to each other in a box, what will eventually happen?**

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

- A. The hot rock gets even hotter
- B. Both rocks will stay exactly the same
- C. They will both become the same temperature
- D. The cold rock will turn into water

**8. When steam rises from a boiling pot of soup, the heat is moving \_\_\_\_.**

- A. down toward the floor
- B. upward with the warm air
- C. only to the sides of the pot
- D. in a circle inside the soup

**9. An ice cube will melt faster on a warm sidewalk than inside a refrigerator.**

- A. True
- B. False

**10. Why does a fluffy sleeping bag keep you warm while camping on a cold night?**

- A. It makes your body create more heat
- B. It traps your body's heat so it cannot escape
- C. It pulls heat out of the cold ground
- D. It changes the air into sunshine