

# Test Yourself: Conduction, Convection, and Radiation

Choose \_\_\_\_\_ of the following situations and write your responses in your journal. Please use at least one of the three types of heat transfer in each response.

1. In the evening, snow falls on a cement sidewalk and on a black top playground. Which surface will melt the snow faster and why?
2. Two identical cups of hot cocoa are sitting on a table. One has a metal spoon in it and one does not. After five minutes, which cup is cooler?
3. When a person steps from a shower on a cold morning, why does the tile floor seem so much colder than the air?
4. On a hot summer day, should you close all of the blinds and curtains in your home or leave them open? Why?
5. Although you do not touch the flames, your chest feels warm while you are sitting in front of a fireplace. Why does your back still feel cold?
6. The outdoor temperature is 85°F, and your friend comes to school in a dark blue outfit. Was this a smart clothing choice for today? Why or why not?
7. Why is your house warmer on the top floor and colder in the basement?
8. Your mom bakes a cake in a glass pan and you use a metal pan. How does heat transfer affect each pan?
9. Explain how the following situation occurs using conduction, convection, and radiation: A pot of water boils on a hot stove.
10. Explain how the following situation occurs using conduction, convection, and radiation: On a hot day, an ice cream cone in your hand falls on the sidewalk and immediately begins melting.