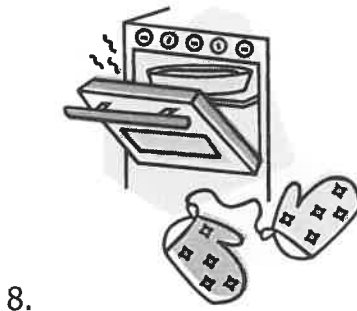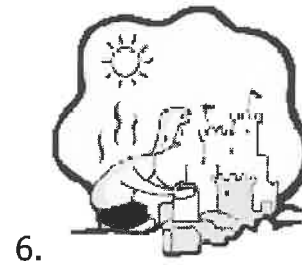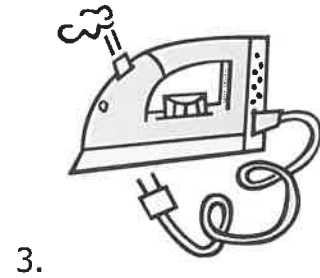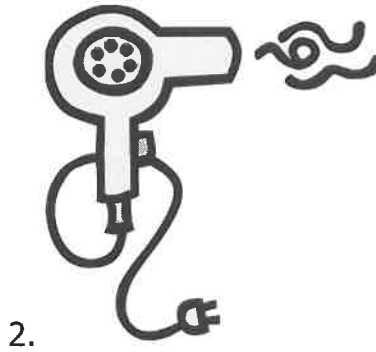# Worksheet: Methods of Heat Transfer
(conduction, convection, and radiation)

Define conduction:

Define convection:

Define radiation:

Identify the method of heat transfer that takes place in each illustration. Some illustrations may show more than one form of heat transfer.

1.

2.

3.

4.

5.

6.

7.

8.

9.

In each of the following situations, identify the method of heat transfer taking place (conduction, convection, radiation). More than one process may be occurring.

1. Hot coffee is stirred with a spoon, the spoon gets hot due to _____.

2. A chair is placed several feet from a fire in a fireplace. The fireplace has a glass screen. The side of the chair facing the fireplace gets warm because of_____.

3. A certain type of decorative lamp contains colored liquids. These liquids form globs that break off and rise to the top of the liquid. The globs rise due to _____.

4. Near the ceiling of a room the air is warmer. The warm air rises because of_____.

5. A college student holds the back of his hand near an iron to see if it is hot. Heat is transferred to his hand by _____.

6. A heater is placed under one corner of a water bed mattress. Warm water moves throughout the mattress because of _____.

7. A certain type of stainless steel cookware has a layer of copper applied to the bottom to help it heat evenly. The copper transfers heat to the pan by _____.

8. In a swimming pool, the water near the surface is slightly   warmer. The warm water rises because of _____.

9. One end of a copper rod is placed in a flame of a Bunsen   burner. Small pieces of wax placed along the rod melt at progressively larger distance from the flame. Heat is transferred through the rod by _____.

10. A house burns down. On the house across the street, all of the vinyl siding is twisted and warped by the heat. The heat was transferred across the street by _____.

11. Warm air over the beach rises while cooler dense air from the ocean rushes in due to _____.

12. The metal skewer gets so hot that you drop your marshmallow in the campfire because of _____.

13. A huge rock at the state park gets so hot during the day that you can't sit on it from