**Heat Transfer Scenarios**

**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. In a swimming pool, the water near the surface is slightly warmer. The warm water rises because of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
8. 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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. Warm air over the beach rises while cooler dense air from the ocean rushes in due to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. The cause of weather systems on earth is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Heat Transfer Scenario Answer Key**

1. Conduction
2. Radiation
3. Convection
4. Convection
5. Radiation
6. Convection
7. Convection
8. Radiation
9. Convection
10. Convection