

# RADIATION CONDUCTION OR CONVECTION?

NAME \_\_\_\_\_

**RADIATION**- HEAT MOVES THROUGH ELECTROMAGNETIC WAVES (solids, liquids, and gases)

**CONDUCTION**- WIGGLY MOLECULES WIGGLE THEIR NEIGHBORS. HEAT MOVES THROUGH DIRECT TOUCHING (solids, liquids, and gases)

**CONVECTION**- MOLECULES RELOCATE AND TAKE HEAT WITH THEM. COLD SINKS AND HOT RISES (liquids and gases only)

1. A boy is dared to walk outside barefoot on a hot summer day. The heat from the tar road is transferred to his feet, and his feet become hot.
2. A cube of ice is placed onto a table. Over time, heat energy from the table transfers to the ice cube melting it.
3. A pair of pants is placed on an ironing board to be ironed. Heat energy from the iron goes into the pants, making it easy to eliminate wrinkles.
4. Air heated by a space heater rises and is replaced by cool air, creating an air current that circulates hot air throughout the bedroom.
5. An x-ray machine sends energy through my teeth onto a screen that creates an image of my cavities.
6. As I walk out deeper into the lake, my feet sense that the water is colder at the bottom.
7. Cold air from the mountain top sinks down the side of a mountain.
8. Energy from the sun is transferred into your face on a summer day.
9. I can feel the heat from my spaghetti rise up as I put my hands over the plate.
10. I lose heat energy from my hands because I made snowballs with no gloves on.
11. I push a button on my car remote which sends an infrared wave to my car. My button push from inside is transformed into my ignition switch turning on in my car.
12. Infrared waves from the sun hits the sand on the beach causing it to vibrate more and get hotter.
13. Microwaves generated by our kitchen microwave travel into my mac and cheese making it warm up.
14. My bare hands become freezing as the metal from the car door handle steals my heat energy from my hands.
15. Sound energy from a radio station is converted into radio waves which travel 30 miles and then energize my radio with music.
16. The hot soup at the bottom of the pot rises and goes up to the top of the pot.
17. The infrared waves sent up from Earth are absorbed by the atmosphere gases and as a consequence the atmosphere gets hotter.
18. The Sun's electromagnetic waves pass through empty space and make it all the way to Earth.
19. Thermal energy from hot cocoa enters into a mug, now the mug feels warm too.
20. Warm energized air molecules from the heating duct move up to the ceiling of my house, making the top bunk hotter than the bottom bunk.