Energy transformation essay sample

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Conduction, convection, and radiation are things that exist in our life. Thanks to that stuff we have things like electricity and things to cook too. I am going to explain things about energy transformation. Heat transfer is the way heat moves through matter to change the temperature of other objects. There are three types of heat transfers, Conduction, Convection, and Radiation. The first kind of heat transfer, conduction, is heat transferring through direct contact of materials. The next type of heat transfer is convection. Convection is heat transferred by a gas or liquid. The last type of heat transfer is radiation. Radiation is when the heat energy travels in actual waves. Conduction is the transfer of heat between substances that are in direct contact with each other. The better the conductor, the more rapidly heat will be transferred. Metal is a good conduction of heat. Conduction occurs when a substance is heated, particles will gain more energy, and vibrate more. These molecules then bump into nearby particles and transfer some of their energy to them. This then continues and passes the energy from the hot end down to the colder end of the substance.

Thermal energy is transferred from hot places to cold places by convection. Convection occurs when warmer areas of a liquid or gas rise to cooler areas in the liquid or gas. Cooler liquid or gas then takes the place of the warmer areas which have risen higher. This results in a continuous circulation pattern. Water boiling in a pan is a good example of these convection currents. Another good example of convection is in the atmosphere. The earth’s surface is warmed by the sun, the warm air rises and cool air moves in. Hot liquids and gases rise because when they are heated they expand and become less dense. The less dense warm liquid or gas then floats up

through the more dense cold liquids and gases. Cold liquids and gases sink because when cooled they contract and become more dense. The more dense cold liquids and gases sink down through the less dense warm liquids and gases. Radiation is quite different from conduction and convection. It is not a matter of something hot carrying the energy itself, or of atoms handing the energy on from one to the next. Hot things produce electromagnetic waves and so they cool down, unless we keep on supplying them with energy.