

Name: _____ Date: _____ Class: _____

Thermal Energy, Temperature and Heat **Answers**

Thermal energy is the energy within a system due to the vibrations and movement of molecules and atoms.

The movement of atoms is an example of what type of energy? **kinetic energy**

Temperature is the measure of the average thermal energy in a system or body.

What are the three most commonly used temperature scales? **Fahrenheit, Celsius and Kelvin.**

Heat is the transfer of thermal energy across systems or within a single system.

What are the three types of heat transfer? **Conduction, convection and radiation**

Conduction is the transfer of heat by atomic movement due to contact from systems of high temperature to systems of lower temperature.

Engineered example? **Pot on a burner** Example in nature? **Animals “cooling off” in a pond**

Convection is the transfer and movement of heat by bulk flow of fluids.

Engineered example? **Boiling water** Example in nature? **An elephant’s ears**

Radiation is the transfer of heat from the absorbance and emission of electromagnetic waves.

Engineered example? **Microwave oven** Example in nature? **Warmth from the sun**

Heat Transfer: No Magic About It—Thermal Energy, Temperature and Heat Guided Notes **Answers**