

## Thermodynamics Worksheet

### Matching

A. Absolute Zero  
B. Celsius  
C. Conduction  
D. Convection  
E. Entropy  
F. Fahrenheit

G. Heat  
H. Heat Engine  
I. Internal Energy  
J. 0<sup>th</sup> Law of Thermodynamics  
K. 1<sup>st</sup> Law of Thermodynamics  
L. 2<sup>nd</sup> Law of Thermodynamics  
M. 3<sup>rd</sup> Law of Thermodynamics

N. Radiation  
O. Refrigerator  
P. Temperature  
Q. Thermal Energy  
R. Thermodynamics  
S. Thermometer

- \_\_\_\_\_ The total amount of energy contained in an object.
- \_\_\_\_\_ This states that when two objects are in contact, heat will flow until they are in thermal equilibrium.
- \_\_\_\_\_ Heat that is transferred by movement of a fluid.
- \_\_\_\_\_ The energy transferred between objects in contact as a result of temperature difference.
- \_\_\_\_\_ A device that uses heat to do work and but is 100% efficient and expels excess heat.
- \_\_\_\_\_ A measure of the average molecular kinetic energy.
- \_\_\_\_\_ Thermal energy in motion.
- \_\_\_\_\_ This states that it is impossible to achieve a temperature of absolute zero.
- \_\_\_\_\_ A device that uses work to move heat from a cold place to a hotter one.
- \_\_\_\_\_ The amount of disorder in a system.
- \_\_\_\_\_ A transfer of heat energy through space by means of electromagnetic waves.
- \_\_\_\_\_ The study of the flow of heat energy.
- \_\_\_\_\_ This states that heat will always flow from hot objects to cold objects, efficiency is always less than 100%, and total disorder can never decrease.
- \_\_\_\_\_ The lowest possible temperature on the Kelvin scale where all molecules would stop.
- \_\_\_\_\_ This states that energy is never created or destroyed: heat lost by an object is gained by another.
- \_\_\_\_\_ A unit of measurement that was once called Centigrade because there are 100 degrees between the freezing and boiling points of water in this scale.
- \_\_\_\_\_ A unit of temperature in which the freezing point of water is 32 degrees.
- \_\_\_\_\_ A capillary tube with a liquid that is calibrated to measure temperature.
- \_\_\_\_\_ The total energy of motion of the molecules in an object.

### Multiple Choice.

- Which of the following things has the most thermal energy?  
A) The ocean      B) A camp fire      C) A hot oven      D) A hot water bottle
- What is the causes heat to flow?  
A) Temperature    B) Thermal Energy    C) Temperature Difference    D) Coldness
- Two objects in thermal equilibrium have  
A) the same energy    B) the same temperature    C) different temperatures    D) the same heat
- Which of the following is the best conductor of heat?  
A) Wood      B) Water      C) Aluminum      D) Plastic