

**Unit 3B: Thermal Energy**  
**PowerPoint Review 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

1. \_\_\_\_\_ The total amount of energy contained in an object.
2. \_\_\_\_\_ This states that when two objects are in contact, heat will flow until they are in thermal equilibrium.
3. \_\_\_\_\_ Heat that is transferred by movement of a fluid.
4. \_\_\_\_\_ The energy transferred between objects in contact as a result of temperature difference.
5. \_\_\_\_\_ A device that uses heat to do work and but is not 100% efficient & expels excess heat.
6. \_\_\_\_\_ A measure of the average molecular kinetic energy.
7. \_\_\_\_\_ Thermal energy in motion.
8. \_\_\_\_\_ This states that it is impossible to achieve a temperature of absolute zero.
9. \_\_\_\_\_ A device that uses work to move heat from a cold place to a hotter one.
10. \_\_\_\_\_ The amount of disorder in a system.
11. \_\_\_\_\_ A transfer of heat energy through space by means of electromagnetic waves.
12. \_\_\_\_\_ The study of the flow of heat energy.
13. \_\_\_\_\_ 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.
14. \_\_\_\_\_ The lowest possible temperature on the Kelvin scale where all molecules would stop.
15. \_\_\_\_\_ This states that energy is never created or destroyed: heat lost by an object is gained by another.
16. \_\_\_\_\_ 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.
17. \_\_\_\_\_ A unit of temperature in which the freezing point of water is 32 degrees.
18. \_\_\_\_\_ A capillary tube with a liquid that is calibrated to measure temperature.
19. \_\_\_\_\_ The total energy of motion of the molecules in an object.

**Multiple Choice.**

20. 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
21. What causes heat to flow?  
A) Temperature    B) Thermal Energy    C) Temperature Difference    D) Coldness
22. Two objects in thermal equilibrium have  
A) the same energy    B) the same temperature    C) different temperatures    D) the same heat
23. Which of the following is the best conductor of heat?  
A) Wood    B) Water    C) Aluminum    D) Plastic