**Thermodynamics WebQuest**

*Directions: Please use the links provided to answer the following questions thoroughly, in your own words. Answer these questions in your composition books. This will serve as your notes for today.*

<http://www.physics4kids.com/files/thermo_laws.html>

1. A thermodynamic system is one that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy with the area around it.
2. What the two ways that exchange and transfer need to happen?
3. What is the first law of thermodynamics?
4. Find a real life example of the first law of thermodynamics.
5. What is the second law of thermodynamics?
6. Use the internet to assist you in finding a real life example of the second law of thermodynamics.

<http://www.physics4kids.com/files/thermo_law1.html>

1. What are the four ways of changing energy?
2. What happens if a system expands adiabatically?
3. What does “iso” usually stand for?
4. What is not produced during the changes of isovolumic?
5. What does the suffic “baric” refer to?
6. Please explain isobaric in your own words.
7. Isothermal changes in every way but their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

<http://www.physics4kids.com/files/thermo_law2.html>

1. What do scientists use the word entropy to describe?
2. How does heat flow?
3. The more disorder you have the more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ you have.
4. What happens when a system is in equilibrium?
5. When you’re at equilibrium, there is no \_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of energy.

<http://www.physics4kids.com/files/thermo_entropy.html>

1. What does the entropy of a system depend on?
2. If you increase \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, you increase entropy.
3. Please list the give factors affecting the amount of entropy in a system in your own words.

<http://hyperphysics.phy-astr.gsu.edu/hbase/thermo/heaeng.html>

1. What is a heat engine?
2. How do the laws of thermodynamics affect heat engines?

<http://hyperphysics.phy-astr.gsu.edu/hbase/thermo/carnot.html#c1>

1. Draw a diagram of the Carnot Cycle and describe what is happening in your own words.
2. What is the Carnot efficiency equation and what does it represent specifically?
3. What unit of temperature must be used in this equation?
4. Why can efficiency never be 100% in theory?