

LESSON 6 WORKSHEET SURVIVAL SCIENCE

NAME: _____
INITIALS: _____

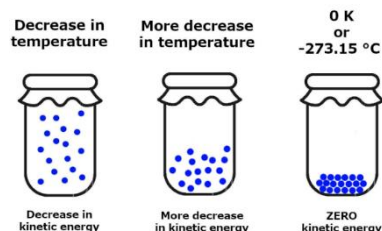
ENERGY TRANSFER

The 3 Laws of Thermodynamics (summarized):

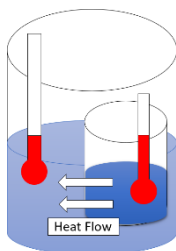
Law 1: Energy can be converted from one form to another.

Law 2: Heat transfer naturally occurs from higher to lower-temperature bodies and from order to disorder in a system.

Law 3: Entropy is zero at absolute 0 K (Kelvin).



1. Heat flows from hot \rightarrow cold or cold \rightarrow hot



2. A change in energy always equals a:
loss in energy conversion of energy loss in one = a gain in another

3. What is the temperature of absolute 0 in Celsius? _____

4. Energy is measured in Joules (J), but the rate energy is used (power) is measured in J/s, also known as _____ or _____.

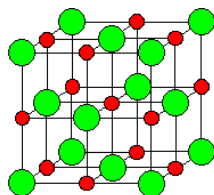
POWER (Electrical/Electron Transfers)

Electron Motion/Transfers: electrochemical, magnetic, electricity/electrical currents, static electricity, batteries, and many others.

(Na⁺ or Cl⁻)

1. In a salt battery positive _____ ions attract electrons, & negative _____ ions repels electrons.

2. Table salt is Sodium (Na) and Chlorine (Cl), i.e., sodium chloride. Label these as either a cation or anion below.



Na⁺ _____
Cl⁻ _____

3. Passing an electric current through wire coils and magnets creates rotational motion. Name three objects that use rotational motion to do work (anything that rotates can do work).

List 3:

4. Moving electrons along electrical wires create a magnetic field. At what angle is the magnetic field to the electric field?

5. What metals are frequently used to make electric wire:

