# Flipped Notes- Packet 14, Page 4

# Sorting Words (page 4): Classify the following

| I know a lot about this | I've heard of this before | I have no idea what this is |
|---|---|---|
| | | |

Greenhouse gases

Fission

Thermal energy

Potential energy

Geothermal power

Wind energy

Hydroelectric energy

Global warming

Ozone layer (hole)

Solar energy

Nuclear energy

Ocean power

Renewable resource

Biomass

Hydrogen fuel cell

Kinetic energy

Photovoltaic cell

Fusion

Fossil fuels ex. oil, coal, gas, petroleum

Non-renewable resource

# *7.14- TSW DISTINGUISH BETWEEN RENEWABLE AND NONRENEWABLE SOURCES OF ENERGY.*

- **Renewable resource**- natural resource that is used at a rate slower than the rate at which it regenerates

- **Non-renewable resource**- natural resource that cannot be replaced if used up

# Sources of Energy- Pkt 14, Pg 4

- ***7.13- TSW IDENTIFY TYPES AND SOURCES OF ENERGY.***

- ✓ **Solar energy**- renewable; energy from the sun in the form of heat and light, converted by parabolic dishes and photovoltaic cells

- ✓ **Wind energy**- renewable; conversion of wind energy into a useful form of energy, such as using wind turbines to make electricity

- ✓ **Geothermal power**- renewable; (from the Greek roots *geo*, meaning earth, and *thermos*, meaning heat) is power extracted from heat stored in the earth

# Sources of Energy

- ✓ **Biomass/biofuel**- renewable; biological material derived from living, or recently living plant matter, such as wood, solid waste, landfill gas, biogas, and ethanol fuels; burned to generate electricity
- ✓ **"Clean" coal (fossil fuel) technology**- non-renewable; technology that may reduce emissions of carbon dioxide ($CO_2$) (and greenhouse gases) that arise from the burning of coal for electrical power; typically in reference to carbon capture and storage, which pumps and stores $CO_2$ emissions underground
- ✓ **Nuclear power**- non-renewable; produced from controlled (i.e., non-explosive) nuclear reactions; released by the splitting (fission) or merging together (fusion) of the nuclei of atom(s)

# Sources of Energy

- ✓ **Hydroelectricity**- renewable; (Hoover Dam!) the production of electrical power through the use of the gravitational force of falling or flowing water (hydropower)
- ✓ **Tidal/wave/ocean power**- renewable; a form of hydropower that converts the energy of tides or ocean surface waves into electricity or other useful forms of power
- ✓ **Hydrogen fuel cell**- renewable; an alternative fuel vehicle that uses hydrogen as its onboard fuel for motive power; uses hydrogen as its fuel and oxygen (usually from air) as its oxidant