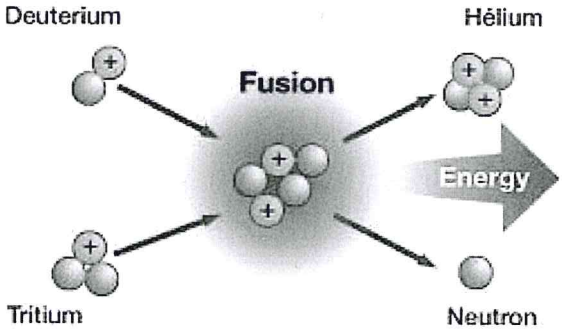
Assignment: 2

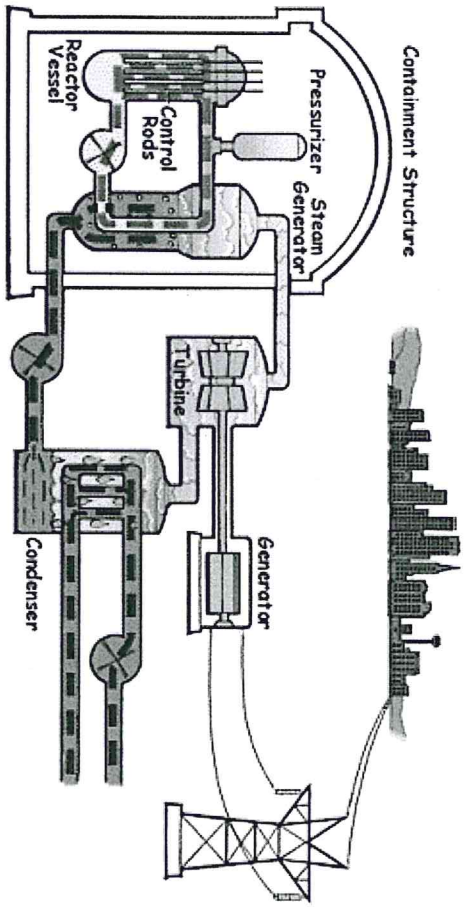
Name: Pilarz Hour:

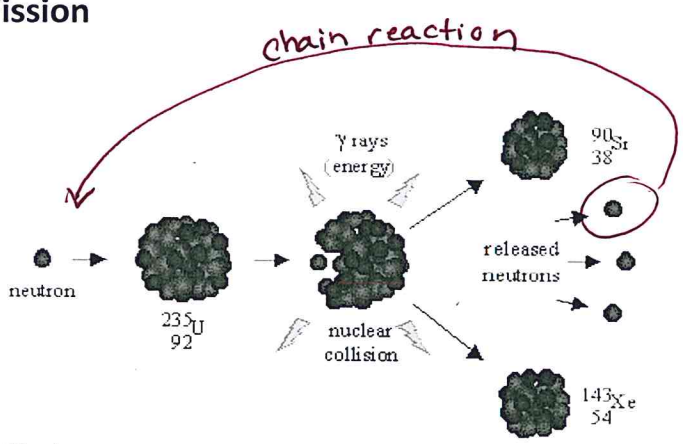
Fusion vs. Fission



Fusion

- Fusing of 2 or more lighter atoms into a larger one, releases energy to become more stable.
- Intense heat and pressure forces nuclei together
- Happens in the sun (stars)





Fission

- Splitting of a large atom into 2 or more smaller ones, releasing energy
- Chain reaction style... one neutron splits an atom, more neutrons break off... split more atoms etc.
  - A single reaction that causes the single reaction to occur over and over
- Doesn't normally happen in nature
- Used in power plants
- Used in nuclear bombs

Nuclear Bombs

- Have been used on humans
  - Used at the end of WWII, Little Boy (Hiroshima) and Fat man (Nagasaki)
- Over 1,000 have been tested by the USA alone

Nuclear Power Plants

- Cadmium Control Rods – used in nuclear power plant to control reaction rate by absorbing particles needed for the chain reaction
  - If they stop working the reactor could meltdown or explore
- Cooling system is essential!!

Nuclear Disasters: 3 Mile Island (US), Chernobyl (USSR), Fukushima (Japan)

Watch the video clips and answer the following questions. You may have to watch several different clips to get all the answers for a particular accident. Use the clips bookmarked on our class website under KH Physical Science – Unit 8. Scroll down through the Unit 8 clips. Class Website: http://pilarz.weebly.com

Follow these directions to answer all questions

1. Describe what caused the accident at 3 Mile Island.

General information about the accident:

a. Date
b. Casualties
c. Damage
d. Public response

2. Describe what caused the accident at Chernobyl.

General information about the accident:

a. Date
b. Casualties
c. Damage
d. Public response

3. Describe what caused the accident at Fukushima.

General information about the accident:

a. Date
b. Casualties
c. Damage
d. Public response