

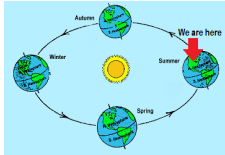
May 13, 2015

## Warm-Up

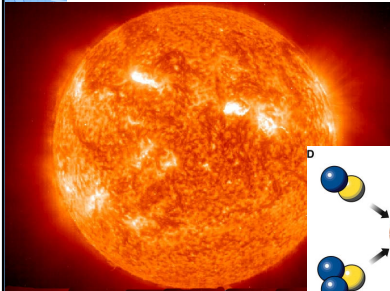
Today you will need your pencil, notebook and countdown folder.  
 Quiz tomorrow on energy.  
 Homework #6 due Friday.  
 Test Corrections & Carrying Capacity Extra Credit due Friday.  
 Honors Project Phase II due Friday.

- Review: Explain why when it is summer in the Northern Hemisphere it is winter in the Southern Hemisphere.

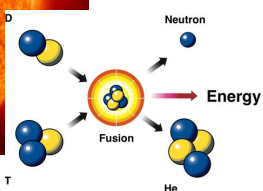
In summer, the Northern is leaning toward the sun. Therefore, the southern is leaning away from the sun and receives less direct sunlight making winter conditions.




## Sunshine!



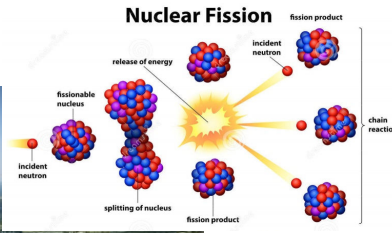
- Nuclear Fusion**



## Nuclear Power Plant



### Nuclear Fission



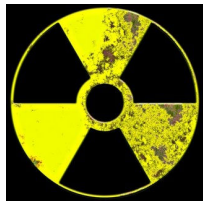
## 2. What is the difference between nuclear fission and nuclear fusion?

Homework

- Both are nuclear reactions that produce energy but...
- fission** is the splitting of a unstable nucleus, and **fusion** is where two light nuclei combine together.

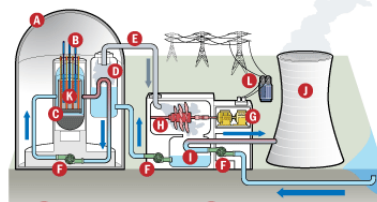
## Video on Nuclear Energy

- <https://www.youtube.com/watch?v=rcOFV4y5z8c>



## Nuclear Power Plant Parts

Homework



**A** Containment Structure  
**B** Control Rods  
**C** Reactor  
**D** Steam Generator  
**E** Steam Line  
**F** Pump

**G** Generator  
**H** Turbine  
**I** Cooling Water Condenser  
**J** Cooling Tower  
**K** Fuel Rods  
**L** Transformer



Water is heated into steam by a nuclear reaction. The steam turns the turbine to generate electricity.

### Pros and Cons on Nuclear Power

Homework

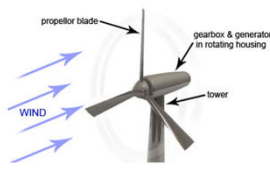

Pro	Con
Does not produce carbon dioxide	Waste is very dangerous
Reliable	A lot of money spent on safety
Not much waste	Weapons?

### Yucca Mountain

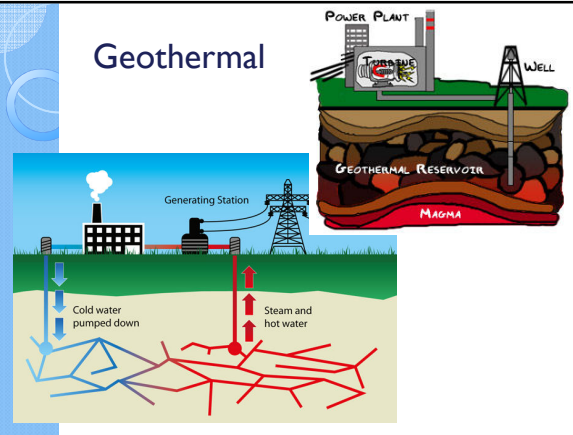



- Some of the USA nuclear waste is buried in Yucca Mountain


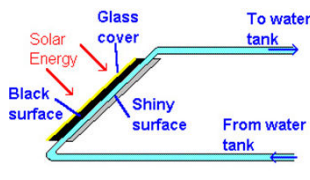

### Wind



### Geothermal

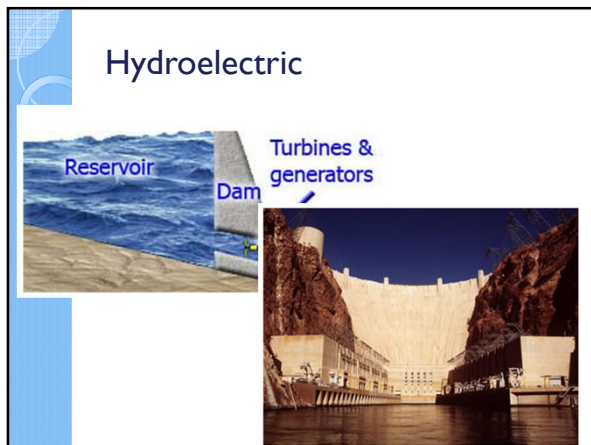
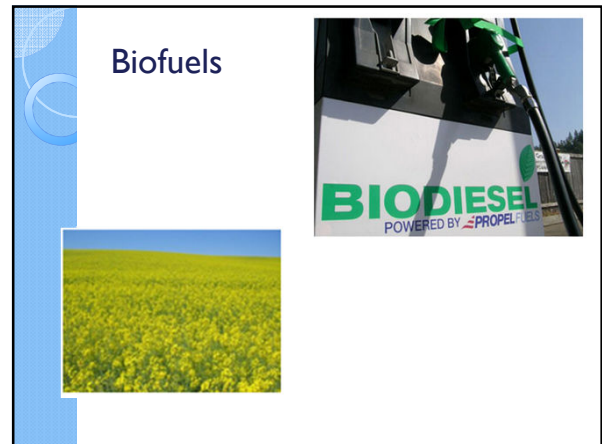
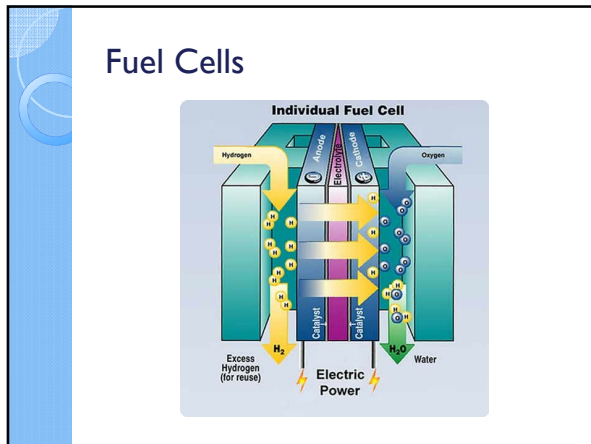


### Solar

### Wave Power



- ### Why?
- Currently – burning fossil fuels increases pollution in the atmosphere such as carbon dioxide. Plus is **non-renewable**.
    - Smog, Acid Rain, etc.
  - Alternative **renewable** energy sources are gaining in popularity because they do not contribute pollution and they are **more sustainable** methods of energy production

- ### Computer Lab: Alternative Energy
- Didn't finish your table yesterday?
    - Pages 690 – 697 in your textbook can help!
  - Back computers are on for those that need to finish their online quizzes.
- Quiz tomorrow on Energy!**  
**Use the study guide to help prepare!**  
**Notice the review items from pollution and fossil fuels ☺**

### Countdown Folder!

11

Days to Go!

Today: Radiation  
Pages 13 and 14