Review Questions
Electromagnetic Waves/ Telescopes and Light Spectrums

1) What are the seven types of electromagnetic radiation in order from highest to lowest energy? Highest to lowest frequency?
2) What color of light has the highest frequency and energy? Lowest?
3) What type(s) of electromagnetic radiation are harmful to life? Why?
4) What is a Doppler Shift?
5) What is meant by Blue shifting and Red shifting? How are stars moving relative to earth in each of these situations?
6) What is the difference between an absorption spectrum and an emission spectrum? In what type of objects will you see an absorption spectrum? Emission spectrum?
7) What telescopes have to be placed above earth's atmosphere? Why?
8) Which telescopes can be placed on earth's surface?
9) What type of telescopes could be used to look at high energy objects such as black holes and supernova?
10) What type of telescopes could be used to look through dust clouds and see the stars behind the dust clouds?
11) What type of telescope could be used to look at stars that are not yet producing visible light in an emission nebula?
12) What can an emission or absorption spectrum tell us about the star?
13) What is the difference between refracting and reflecting telescopes? What are the advantages and disadvantages of each? Which is used for large telescopes?
14) What type of telescope would you need to observe the universe seconds after the Big Bang?
15) What type of telescope would you need to see the heat reflected from a planet's surface?
16) What are sunspots, prominences and solar flares?
17) What is the solar cycle?
18) How does the sun produce energy?
19) How does the solar cycle affect earth?
20) Why are solar storms not dangerous to people on earth's surface but are dangerous to astronauts in space?