Weekly assignment 6: Star classification and evolution
Due: November 7, 2005 at 6 p.m.

Draw, as best as you can, a cross-section (cut-away view) of the Sun. In your drawing, you must include (and label): the core, the radiative zone, the convective zone, the photosphere, the chromosphere and the corona.

Why does it take so much time for a photon of light to get out of the radiative zone?

Are sunspots hotter, cooler or the same temperature as the rest of the photosphere? Therefore, are they solid?
What solar phenomenon generates **sunspots**? How does it do that?

Give **two** ways in which sunspots are thought to affect **life** on Earth.

The Voyager probes, launched back in the 1970s, are reaching the “**termination shock**” area of the solar system. What is the significance of this area? How many AUs from the Sun is this?

Mars reaches **opposition** on Monday, November 7. Why does this point in its orbit **necessarily** make this the **brightest** it will be for us on Earth? By the way, good luck with seeing Mars!