

Astronomy 100

Name:

Weekly assignment 6: Star classification and evolution

Due: November 14, 2006 at 11 a.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?

Which star in the Big Dipper is a **visual** double star? What’s unusual about this “double star”? Sketch the Big Dipper constellation, and point out which star it is.