Questions to email me:
1. We know that asteroid and comet impacts on the Earth are possible because:
   a. We see the record of impact craters on the Moon.
   b. There are still some impact craters left on Earth.
   c. We have seen flashes in the sky, fireballs, meteors, and other near-misses.
   d. All of the above.
   e. None of the above.

2. Meteor showers are:
   a. Bits of dust that are evaporated off of comets.
   b. Chunks of comets.
   c. Pieces of asteroids traveling on elliptical orbits.
   d. Small amounts of cyanogen gas from comet tails.
   e. None of the above.

3. We first suspected the surface of Venus is very hot, because:
   a. Being newly formed from inside Jupiter it is still young and hot.
   b. Extreme heat would evaporate oceans creating the thick clouds we see.
   c. Spacecraft landers imaged large shallow (partly melted) craters.
   d. It radiates an enormous amount of energy as radio waves.
   e. None of the above.

4. What is the common theme between this chapter and Tyson’s Episode #12? Given how much time has passed since Sagan’s Cosmos, how does Tyson expand upon the theme Sagan raised in this chapter?

Discussion Questions for class:
2. On page 87, when talking about the impact a meteor from the Asteroid Belt may have on a planet, Carl says "...no scientist on Earth knows how a planet might blow itself up, which is probably just as well". In recent years Hollywood has expanded on this topic, creating movies such as Armageddon, Deep Impact, The Day After Tomorrow, and other death-of-the-Earth scenarios. How likely do you think it is that someday there will be no Earth (or an Earth radically different than one we have today)? Support your opinion with ideas presented in the chapter and episode.

3. Why does Sagan spend so much time explaining what Venus is not? We see this in two places, first with Velikovsky (pg 90) and then with the chain of reasoning on page 92.
How does Sagan treat these two examples (are they similar or different?) and why does he give them both so much "air-time?"

4. At the end of the chapter, Carl asks, "Is there any danger of driving the environment of the Earth toward the planetary Hell of Venus or the global ice age of Mars?" Tyson expands on this. Given the descriptions of conditions on Venus and Mars, discuss how either of these fates fit into the cost/benefit analysis of changing our current societal lifestyle.