

AY 101-002 - Extra Credit Assignment #1, Spring 2009

(up to 5 points)

Write a brief essay (2-1/2 pages typed, typically) in which you speculate on how any **one** of the following changes would impact the Universe and our interaction with it (remembering that there are many connections with such fields as physics and geography). There are obviously no right answers - I am most interested in how well thought-out your scenario is, and how cogently you argue for it based on astronomical principles. Clarity of thought and expression are important; literary quality is secondary. These must be turned in no later than Tuesday, March 31.

1. What would be different about our world and its situation if the Sun were a red dwarf (and we were still in existence)?
2. How might the Earth (and life on Earth) have been different if the Sun had been part of a wide double-star system (for example, with a similarly luminous companion star at about the distance of Pluto)?
3. If we lived during a period when the Earth's atmosphere was totally cloudy - what would clue us in that there was a universe outside?
4. How would our environment differ if the Moon were so close that both the Earth and moon had tidally locked rotation? In this circumstance, the day and month would be equal.
5. Describe how the history of science might have been different had the telescope been invented in Greek or Roman times rather than the European Renaissance.
6. How might life on Earth be different if we had a system of several giant moons (like Jupiter's) rather than our single Moon?

A few hints to improve your score:

- Don't waste a page restating the question. I know what the question was.
- Please answer the question you picked, not some other question!