

Astrobiology Homework

Due Tuesday, June 28, 2016

Name:

Instructions:

- 1) Go to the Astro-Venture website: <http://astroventure.arc.nasa.gov>
- 2) Click on “Design a Planet”
- 3) Click on “Design a Planet Tutorial” to learn how to use the applet to design your own habitable planet.
- 4) Once you have watched the tutorial, go back and click on “Design a Planet Regular”
- 5) Select your options for each of the seven parameters. Clicking on the words inside the circle will give you additional information to help you make good choices.
- 6) For your first try, use the following choices:
 - A. Star = yellow main sequence (this is the same kind of star as our Sun)
 - B. Orbit = 1 A.U. (this is the size of the Earth's orbit)
 - C. Planet mass = 1 (this is the Earth's mass)
 - D. Volcanoes = Yes
 - E. Plate Movement = Yes
 - F. Liquid water = Yes
 - G. Producers = Yes.
 These choices will produce a planet just like Earth.
- 7) Now try to design a habitable planet that isn't just like the Earth – vary the options. Use different stars, or planet orbits and masses. Be creative!
- 8) Design at least 5 planets, trying to get a habitable one. Record your choices on the table below.

Parameters	Planet 1	Planet 2	Planet 3	Planet 4	Planet 5
Star Type					
Orbit size					
Planet mass					
Volcanoes?					
Plate Tectonics?					
Water?					
Producers?					
Was it habitable?					

For each planet that was habitable, what kind of life could live there? For each one that wasn't habitable, what might you change to make it better for life?
Answer the back of this page.