Name: Date: Block/Period:

**Design a Planet Simulation**

<http://astroventure.arc.nasa.gov/DAP/DAP.html>

**Goal**: Design a Planet that is Habitable to humans that is not exactly like earth. You will choose your star type and 6 characteristics of your planet.

Directions:

* Click on the to learn how this simulation works. Adjust the volume so only you can hear it.
* Select your Star type and the 6 characteristics to accomplish your goal.
* For each of the 6 characteristics, record key facts next to the category heading, as well as the characteristic you selected

**√**Check out the “Star Type” circle to learn more about the types of stars. Record a fact about each of the following types of stars:

* Yellow Star-
* Red Giant-
* Blue Star-
* Red Dwarf-

What kinds of star will your planet orbit? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Orbit:

What distance, in AU, will your planet orbit its star? \_\_\_\_\_\_\_\_\_ AU

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1. Orbit:

What distance, in AU, will your planet orbit its star? \_\_\_\_\_\_\_\_\_ AU

1. Planet Mass:

What is the mass of your planet compared to Earth? \_\_\_\_\_\_\_\_\_\_\_\_\_

1. Volcanoes: Carbon Dioxide in a Planet’s atmosphere

Does your planet have active volcanoes? Yes\_\_\_\_\_\_\_, No\_\_\_\_\_\_\_

1. Plate Movement

Does your planet have active plate movement? Yes\_\_\_\_\_\_\_, No\_\_\_\_\_\_\_

1. Liquid Water

Does your planet start out with a supply of water? Yes\_\_\_\_\_\_\_, No\_\_\_\_\_\_\_

1. Producers

Are there producers on your planet? Yes\_\_\_\_\_\_\_, No\_\_\_\_\_\_\_

Select “Continue ⮚” Draw a picture, or print out the picture of your planet

Select “Continue ⮚” Were you able to design a planet that can be habitable? Yes\_\_\_\_\_, No\_\_\_\_\_. Could things other than humans live on your planet?

Why was or wasn’t it habitable?

With this information, what can you do differently to create a habitable planet?

Build one more planet: Try and alter the characteristics, or star type, to make a habitable planet:

Orbit-\_\_\_\_\_\_\_\_AU; Planet Mass-\_\_\_\_\_\_\_\_; Volcanoes-\_\_\_\_\_\_\_\_; Plate Movement-\_\_\_\_\_\_\_\_; Liquid Water-\_\_\_\_\_\_\_\_; Producers-\_\_\_\_\_\_\_\_. Was your planet habitable? Why or why not?

1. Planet Mass:

What is the mass of your planet compared to Earth? \_\_\_\_\_\_\_\_\_\_\_\_\_

1. Volcanoes: Carbon Dioxide in a Planet’s atmosphere

Does your planet have active volcanoes? Yes\_\_\_\_\_\_\_, No\_\_\_\_\_\_\_

1. Plate Movement

Does your planet have active plate movement? Yes\_\_\_\_\_\_\_, No\_\_\_\_\_\_\_

1. Liquid Water

Does your planet start out with a supply of water? Yes\_\_\_\_\_\_\_, No\_\_\_\_\_\_\_

1. Producers

Are there producers on your planet? Yes\_\_\_\_\_\_\_, No\_\_\_\_\_\_\_

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