Name - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour - \_\_\_\_\_\_\_\_

Grading Rubric for Space Systems Model

The goal of this project is to have students develop a model to describe the role of gravity within galaxies and the solar system as well as scale properties of objects in the solar system.

Models should explain the following:

1. The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them.
2. The similarities and differences among solar system objects. Examples of scale properties include sizes of the objects and their layers (such as crust, core, and atmosphere), surface features (such as volcanoes, craters, mountains, valleys, etc…), and orbital radius.

\*Use the grading rubric below to make sure that you get as many points as possible on this project! **You need to include this rubric with your project to get a grade!**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **4 – Excellent** | **3 – Good** | **2 – Needs Improvement** | **0-1 – Not done, no effort** |
| **Objects in the Solar System** | **Sun, 8 planets, all major moons, and asteroid belt included in model. Additional objects in our solar system are included such as planets, dwarf planets, additional moons, comets, etc..** | **Sun and 8 planets are included in model. Most major moons (such as jupiter’s 4 brightest) and asteroid belt included.** | **Sun and 8 planets are included in model. Model includes some moons discussed in class.** | **At least one planet is missing from model. Model is missing most moons discussed in class.** |
| **Proportion/Scale** | **All objects are roughly proportional to each other. Size of objects, layers, and features are accurate. A scale for distance is attached to model. More than 2 analogies such as distance (ex: yards on football field), size, features and orbits are made.** | **Size of Most (3/4 of model) objects are proportional and accurate; A scale explaining distance is attached to model. 1 Analogy related to distance, size, features and/or orbits are made.** | **Half of objects in model are proportional and accurate. A scale for distance is included but difficult to understand.** | **Less than half of model is proportional and lacks accuracy.** |
| **Organization** | **All objects are labeled and accurate; Objects are in correct order based on place in solar system and careful thought was put into details, color, scale and proportion. Model is easy to use and interpret.** | **3/4 of objects are labeled and accurate. Model is easy to use and interpret.** | **Half of objects are labeled and accurate.** | **Less than half of objects are labeled and accurate.** |
| **Explanation of Solar System objects-**  **Attached to model- you could display information on index cards, an essay, children’s story, song lyrics, etc..** | **Detailed, accurate explanation of each object in solar system including moons and asteroid belt; explanation includes similarities and differences between solar system objects, size of objects and their layers, description of surface features and orbital radius. All sources are cited!** | **Accurate explanation of all planets, and some moons; explanation includes similarities and differences, size of objects and layers, description of features and orbit.** | **General explanation of all planets; explanation is missing one or two required components.** | **Inaccurate Explanation of some planets. Missing more than two required components.** |

**Did you include the rubric with your project? Yes No - 2pts**

**Total Grade - \_\_\_\_\_\_\_ / 18 A – 17-18 B – 15-16 C – 13-14 D – 11-12 F – 10 and below**