Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Stepping into the Solar System

The solar system is extremely spread out! Sometimes we forget about the most important thing in our models of the solar system: SPACE! Now it is your turn to come up with a model that will show the distance and space between the planets.

For this particular activity, we will use the conversion **1 AU = 5 steps**

Use the chart below to make a model on the pavement of the solar system. Make sure each one of your planets or objects depicts it accurately (size, shape needs to be relatively accurate). When you are done, answer the questions below

|  |  |  |
| --- | --- | --- |
| **Planet** | **AUs** | **Steps** |
| Mercury | 0.39 |  |
| Venus | 0.72 |  |
| Earth | 1 | 1 x 5 = 5 steps |
| Mars | 1.52 |  |
| Asteroid Belt | 2.5 |  |
| Jupiter | 5.2 |  |
| Saturn | 9.58 |  |
| Uranus | 19.2 |  |
| Neptune | 30.1 |  |
| For Fun: Pluto | 39.5 |  |

1. What did your group have trouble with the most? Discuss this with your group before deciding on an answer.
2. What did your group do well with? Discuss this with your group before deciding on an answer.
3. What surprised you during this activity?
4. List three things you notice about the difference between the inner and outer planets:
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. How many AUs is Saturn away from Jupiter?
9. How many AUs is Earth away from Venus?
10. Look at your answers from 5 and 6. Which planets are closer to each other? What can you conclude from this statement?
11. Is Jupiter closer to the asteroid belt or Saturn? How do you know?
12. The Kuiper Belt is about 50 AUs away from the Sun. How many steps would you need to take to represent this?
13. The Oort Cloud is about 5,000 AUs away from the Sun. How many steps would you need to take to represent this?
14. Draw below a small version of what your group came up with for your scale model. It doesn’t have to be exactly accurate, but it does need to show what you learned.