**Schoolyard Solar System**

Scientists use astronomical units (AU) when measuring distances in the solar system, simply because distances measured in kilometers can get very large. Look at the following table to get an idea of the vast size of our solar system. As you can see, one astronomical unit is interpreted as the distance of the Earth from the Sun. Making a scale model of the solar system is easy if you remember to use each planet’s distance from the sun, measured in **AU.**

**Directions: Complete the chart below using the following scales:**

**Scale for hallway model: 1 AU= 10 centimeters**

**Scale for Schoolyard model: 1 AU= 2.5 meters**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Planet** | **Distance from planet/Sun (km)** | **Distance from sun (AU)** | **Scale Distance from Sun for hallway solar system (cm)** | **Scale Distance from sun for schoolyard (m)** |
| **Mercury** | **58,000,000** | **.39** |  |  |
| **Venus** | **108,000,000** | **.72** |  |  |
| **Earth** | **150,000,000** | **1** |  |  |
| **Mars** | **228,000,000** | **1.52** |  |  |
| **Jupiter** | **778,000,000** | **5.2** |  |  |
| **Saturn** | **1,430,000,000** | **9.54** |  |  |
| **Uranus** | 2,870,972,200 | **19.2** |  |  |
| **Neptune** | **4,500,000,000** | **30.1** |  |  |

**Did you know? The star system nearest to our solar system is the three star system called Alpha Centauri. Its distance from the solar system compared to our scale model is approximately 4400 km away. That’s about the same distance as from New York to Los Angeles!**

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