

The Solar System: A Graphical Model

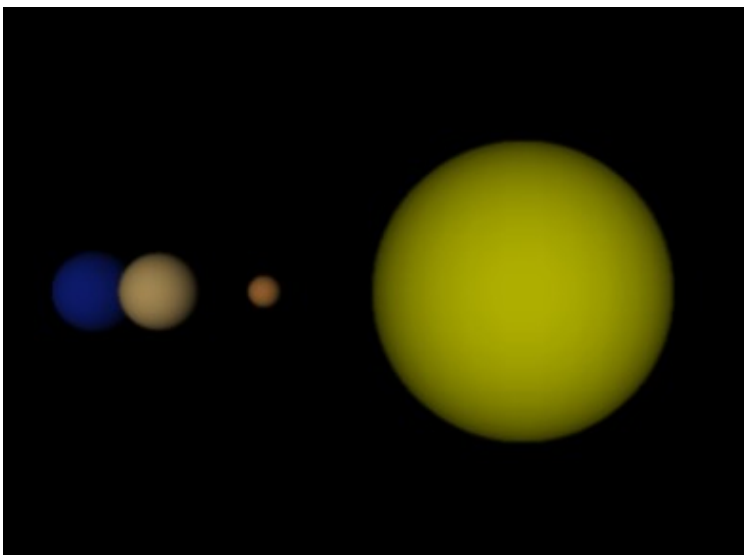
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Abstract

Earth is just a single planet in a large, complex system. Since the 1600s, we as a race have sought to expand our understanding of this system. How many planets are there? How is each planet different from ours, and why do these differences exist. Since the advent of space travel, research has expanded, until we know a great deal about our solar system. Yet, at the same time that our knowledge is actively expanding, the lack of viable models prevents much of this knowledge from being shared with any but the most interested.

Introduction

Studies have shown that even at the college level, students have minimal accurate knowledge about the solar system. It is vital that this problem be corrected at an early level by teaching elementary school children about our solar system. As the current mechanical models of the solar system are obsolete, I propose to create a model of the solar system using the technology of computer graphics in order to teach students the fundamentals of their solar system. This model will be more or less to scale, and will assist in teaching children the basics they should know about space.



Results

When complete, the model will be a dynamic and educational representation of the solar system. It will consist of all nine planets orbiting the Sun in a relatively physically accurate manner. It will contain the options of looking at the solar system from space or “riding” a planet. Students will also be able to view the planets up close to study their geography and topographical texture. They will know the order of the planets in the solar system and will be able to obtain information about each planet's composition, size, moons, and atmosphere simply by clicking on it. Most importantly, they will be able to compare the revolution periods, inclinations, and eccentricities of the planet's firsthand as they watch the planets orbiting the Sun.

<-- Mercury, Venus,
and Earth orbiting the
Sun.