



# Creating a scale model of the solar system

To create a scale model of the solar system, select a manageable scale, gather representative materials, plan the layout for adequate distance, and assemble the model in a spacious area while labeling each component. This method helps visualize the vast distances and sizes of celestial bodies. Remember to scale down both sizes and distances ...

help you understand the sizes and distances of our solar system, we've created a scale model. Our Solar System, real imagery but not to scale . Stanford Solar Center Scale Model 2 Process: 1. Ask your audience if they know what a scale model is. A scale model is a representation or copy of something that is larger or smaller than ...

The five of us worked together to create the Colorado Scale Model Solar System, which was dedicated in May 1987 to the memory of the Challenger astronauts. We chose to use a scale of one to ten-billion for three important reasons: (1) although the planets are tiny on this scale, with Earth is only about the size of the ball point in a pen, it ...

In this activity, you will make two scale models of the solar system. A scale model uses the same measurement ratios as the real object does. The first model will compare the distances between the planets and the Sun. The second model will compare the sizes of the planets. You probably won't be able to display either of these models, but you ...

Purpose: Construct a scale model of the solar system to familiarize the student with the relative sizes and positions of the planets in the solar system and the vast distances between them and between the Sun and other stars. A convenient scale has 1 foot representing 1 million miles. This same scale has 1000 miles representing 1 light-year.

Create a human sized scale model of the solar system with your students. Learning Objectives: For students to develop an understanding of the positions of the planets in the solar system, both relative to each other, and also their position and distance from the sun.

Astronomy is a subject that often fascinates students of every age. The solar system is very spread out, which makes accurate scale models difficult to draw. Planets such as Jupiter are 1/10 the size of the sun, but Earth is 1/100 the size of the sun. With the right materials it is possible to draw a fairly accurate scale model of the solar system.

To create a scale model in a room or school yard that could include all the planets, the scale would have to be much bigger, making the planets much smaller - sometimes the size of sand grains Skills. Creating a scale



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model Estimating and Measuring distances Reading a map Understanding the scale of the solar system and the sequence of the ...

Scale Model Solar System Purpose: Today you will make a scale model solar system. Every step you take in our model is like walking 10 billion steps in the real solar system. Our scale factor for the model solar system is then 1 to 10 billion (like the scale on a map). The positions of the model planets are based on

our solar system is and how far apart the planets are from the sun and each other. In order to achieve this goal, we will need to create a scale model. A scale model is "a model that is proportional in all respects to the object being modeled." Pre-Activity Task Using only your current knowledge of the solar system, label the line to the

Calculate the scaled planet diameters and planet-sun distances for a solar system model. Enter scale or diameter or distance, select to show table and/or map below, select options, then press Calculate. Examples: Scale 1 : 100000000 or Sun Diameter ...

Examine pre and post drawings to evaluate learning. Students should be able to identify the major parts of the solar system. Extensions. Have students predict solar system scale using this activity. Have students make a scale model of the solar system using string and beads. Have students investigate planetary features using art.

But, in reality, the Earth and moon are that far apart. That is the Earth and the moon to scale. Taking the same concept but for the solar system, every single picture of the solar system that we ever encounter is not to scale. If you put the orbits to scale on a piece of paper, the planets become microscopic, and you won't be able to see them.

Using this scale, we can calculate that Mercury is (on average) 57,909,400 km from the Sun. In our scale model of the solar system, this is almost 10 yards! Clearly, we will have to leave this room to get a visual picture of the size of the solar system! As we go on a tour of our scale-model, fill in the remaining column of the Table above.

Using receipt paper, participants make a scale model of the distances between objects in the solar system. They learn that the distance between planets is vast. A training video is included, and materials for this activity are also available in Spanish.

Select an outdoor (or very large indoor) location where a large-scale model of the solar system will fit. Determine the scale of your model based on the longest distance available in the space. For best results, create a scale model that is at least as large as 1 au = 150 cm. A larger model is better for visualizing the planets in the sky.

us make a scale model of the Solar System. This means that we will be making a mini version of the eight planets, where each one is the right size compared to the others. 3. Use the ruler and mark out 10 equal



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portions on your Play-Doh (each one will be 3cm wide.) 4. Cut 6 of these sections away and roll them all together. This is Jupiter.

Students predict the scale of our solar system and the distance between planets, then check their answers using fractions. Skip Navigation. JPL Education. Intern. Learn. Teach. News. Events. ... Students create a scale model of the solar system using beads and string. Grades 1-6. Time 30 mins - 1 hr. Activity Details.

3. Choose where your model solar system will go. 4. Calculate scale distances. 5. Calculate scale planet sizes. 6. Calculate combined scale distance and planet size. 7. Create and display your model. 8. Make a Solar System on a String (scale distance model) 9. Solar System on the Sidewalk (scale distance and/or size model) 10.

UAMN Virtual Early Explorers: Solar System Make a Model Solar System Build your own model and discover our Solar System! Materials: Planets: Play dough, clay, small toy balls, or aluminum foil. Sun: A balloon or larger ball. Asteroid Belt and Kuiper Belt: Small rocks, clay, aluminum foil.

This 2D visual model illustrates the scale of the sun and planets in our solar system, and their current distance from each other. [Name] in. ... Calculating... pixels. The Solar System to Scale in which every pixel on the screen represents 1,000 kilometers. Scroll down. The Sun (Yellow Dwarf Star) Diameter: 1,391 pixels. Mercury (Terrestrial ...

Scale Model of the Solar System. Do you need a dramatic way to help your community understand the true scale of the solar system, both size and distance? We have designed a scale model that centers on an 8" diameter Sun and extends through the local area. If your space is not large enough, you can use a satellite image with the planet orbits ...

Solar System models, especially mechanical models, called orreries, that illustrate the relative positions and motions of the planets and moons in the Solar System have been built for centuries. ... The enormous ratio of interplanetary distances to planetary diameters makes constructing a scale model of the Solar System a challenging task. As ...

Solar System Scale After Activity D-5 in Solar Project Astro Resource Notebook Grades: 6-12 Subject: Space Science Purpose: Students create a scale model of planetary distances in the solar system. It is a good way to demonstrate the vast distances among the outer planets and to apply math skills in proportion. Sizes and distances in the Solar ...

If you build your solar system on a roll of toilet paper, you can make the Sun about .4 inches (10 mm) across and still fit the entire solar system on the roll. A standard roll of toilet paper has about 450 sheets that are about 4.375 inches long, hence the roll is about 164 feet long. You should check your toilet paper for length. Some are longer.



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Students construct -- and where appropriate, calculate -- a scale model of the solar system using beads and string. Students will observe the relative distances of the planets, asteroid belt and dwarf planet Pluto from one another and from the sun; and gain a better understanding of the vast distances between planets in the outer solar system compared with those in the inner solar ...

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