

Scale of the solar system worksheet





Overview

How do students calculate scale distances between planets?

Using spreadsheet software, students will determine the size of and/or distances between planets on a solar system model that fits on a playground. Decide in advance if students will calculate scale distance from the Sun to the planets, scale size of planets or both.

How can we imagine the scale of our Solar System?

The scale of our solar system is difficult to imagine when we are standing on what appears to be a large planet looking at an apparently small Sun. Pictures don't help much. Although we could print the planet sizes to scale, the paper would need to be way too large to show the scaled distances.

How do I make a scale model of our Solar System?

This procedure will give you the measurement of each planet in cm for your model. Use the new distance (in cm) to construct a scale model of our Solar System. Start your model by cutting a 4.5 m piece of string. When you are finished, complete the "Planet Bead Calculation Sheet" and show your model to your teacher.

Why do we need a scale model of the Solar System?

Making and exploring a more accurate scale model Solar System (or at least part of one) can help students and the public better understand the vastness of space and the challenges of space exploration. These are classic activities/displays for use by all: in classrooms, planetariums, museums, libraries, etc.

How do I scale a distance model of the Solar System?

You will construct a distance model of the Solar System to scale, using colored beads as planets. The chart on the next page shows the planets and asteroid belt in order along with their distance from the Sun in astronomical units.



Complete the chart by multiplying each AU distance by our scale factor of 10 cm per AU.

How do students create a solar system model?

Students can work with local government to create a scale solar system model with correct sizes and distances that spans some or all of their city, town or region. In this activity, students use spreadsheet software and their knowledge of scale, proportion and ratios to develop a solar system model that fits on a playground.



Scale of the solar system worksheet



Toilet Paper Solar System

Have students answer the questions on the worksheet to make connection about the sun's role in temperature throughout the solar system and in the temperature of planets. Notes for teachers 100 sheets of toilet paper stretch out to nearly 42 feet.

Create a Solar System Scale Model With Spreadsheets

In this activity, students use scale, proportion and/or ratios to develop a scale solar system calculator. Using spreadsheet software, students will determine the size of and/or distances ...



[Toilet Paper Solar System - A Scale Model](#)

Directions- Activity #1- Build your scale solar system model o Provide each student or student group with a worksheet. o Place something to designate the sun. You will always be starting at the sun. o Instruct students to use their worksheet table and toilet



Solar System Scale & Size

Ask them to predict the size of each planet in the solar system using these materials and the (D) Farmer's Market Solar System Worksheet. They may use some fruits, nuts, and peppercorns more than once. Ask them to work collaboratively to discuss B.



Scale in the Solar System

Activity Five: Examine the Scale of Solar System
on a Meter Stick
Activity Six: Construct an Outdoor Scale Model of the Solar System: 3 Different Versions: Meters, Paces, or Toilet Paper Squares
Activity Seven: Investigate the Apparent Sizes of Objects in

[6th Grade Solar System Worksheets](#)

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Label the Solar System Worksheet , Teaching Resources

Very simple worksheet I made including the sun and the 8 planets (roughly) to scale. Pupils can label and colour in the planets and sun. Can be easily differentiated by either writing the names of the planets on the board, adding the first letter of the planet to the text boxes, leaving it as is, or just having the sun and asking pupils to draw the planets and label them.



[The Solar System to Scale , Worksheet](#)

Designed for middle school learners, The Solar System to Scale asks students to analyze data tables to compare and contrast properties of planets and discover correlations in data. At the end of this two-page worksheet, students will draw ...



VOS40

VOS 4 O offers a simple solution to scale our solar system. From a reference (diameter, distance, or scale), VOS 4 O lists the diameters and distances scaled for all planets, the eccentricity of their orbit, and their respective positions around the sun at a given date (heliocentric longitude).



[Scale Solar System Planets Model](#)

This solar system cut-out resource is a great, hands-on activity that will support teaching on the solar system and our place in it. The resource includes size-comparable pictures of the sun and each planet from our solar system which your children can easily cut out and attach string to create a solar system planets model. When your children have put together their solar system ...



Scale of the Solar System Worksheet by The Science ...

Analyze and interpret data to determine scale properties of objects in the solar system. Emphasis is on the analysis of data from Earth-based instruments, space-based telescopes, and spacecraft to determine similarities and ...



[Our Solar System Worksheets](#)

Our members helped us give away millions of worksheets last year. We provide free educational materials to parents and teachers in over 100 countries. If you can, please consider purchasing a membership (\$24/year) to support our efforts. Members skip ads and



[How Big is Our Solar System? 1](#)

- Suppose you wanted to build a scale model of our solar system so that the orbit of Neptune was located 10 feet from the yellow ball that represents the sun. How far from the yellow ball, in inches, would you place the orbit of Jupiter?
Answer: The proportion 30.

Solar-System Scale Lab

solar system can be easily constructed on school grounds. In this outdoor lab, students walk between planets answering a series of questions from a worksheet. The solar system is scaled ...



Student Project: Make a Scale Solar System , NASA/JPL Edu

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)
- 10.



Solar System Scale Model

Although we could print the planet sizes to scale, the paper would need to be way too large to show the scaled distances. Instead, to help you understand the sizes and distances of our ...



[Scale model of the Solar System](#)

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. While they often showed relative sizes, these models were usually not built to scale.

[Size and Scale of the Universe](#)

2. Solar System: o Show Slide #9: The Solar System-Discuss talking points on the side. Ask the students to now imagine that the Solar System out to the boundary between the Solar Wind and interstellar space (200 AU diameter) is the size of the classroom.



Make a Model of the Solar System , Lesson Plan

Overview This hands-on science lesson will help your students get a more accurate view of the solar system by making a scale model. They will do the calculations, make model planets, and find out where to place them so their model reflects reality. Seeing the



Scaled Solar System Model

The solar system is my favorite part of astronomy to teach. I enjoy getting past the big bang and stars portion of the unit, and discussing things closer to home. Since I teach high school, students generally already know some basics: the order of the planets, which ones are made of gas, and where the asteroid belt is found.



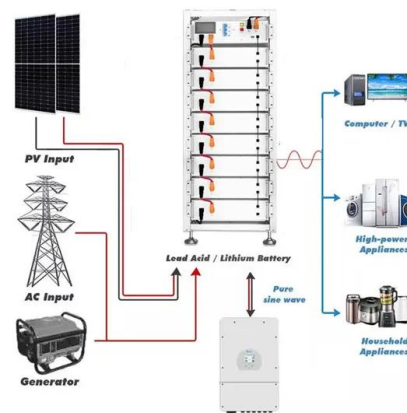
[Make a model of the Solar Name: System](#)

On a separate sheet of paper, make a sketch of what a scale model of the solar system might look like. Include: . The Sun. The planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, ...



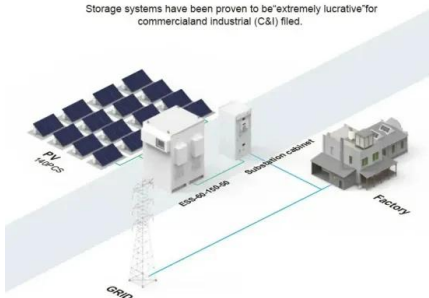
[Solar System Scale Model Lab](#)

Solar System Lab Problem: Create a model of the solar system to scale. Materials: Chalk Meter stick Calculator Lab Worksheet Question: Why is it necessary to use scale distances when dealing with large distances like those between the planets in the



BASIC APPLICATION

Storage systems have been proven to be "extremely lucrative" for commercial and industrial (C&I) fields.



Scale Model Solar System Resources for Informal Educators ...

oTo Scale: The Solar System by Wylie Overstreet and Alex Gorosh, is a 7 minute artistic video about creating a truly scale model Solar System. It's also downloadable for offline viewing. Also consider their video about the 2017 Eclipse scale model. o Drone Solar System Model is a 9 minute video about an approximate scale model Solar



The Solar System to Scale

This poster beautifully displays information and visuals about the planets' order, scale and diameter in our solar system. With this poster, you can marvel at the incredible diversity of the planets in our solar system, from the small and rocky ...



Solar System Worksheets

Below you will find a ton of worksheets for students that are focused on all different areas of our solar system. You will find a lot of work on planets, the sun and our moon (Luna). Moon Phases 1 As the moon orbits around the Earth, ...

[Activity 1: Solar System Model \(Distance\)](#)

2 30 Day 2: The Solar System Activity 1: Solar System Model (Distance) Step 2: Decide on the scale for your model Toilet paper sheets are going to represent the distances of planets from the Sun in this model. What's fun about making this model is deciding the



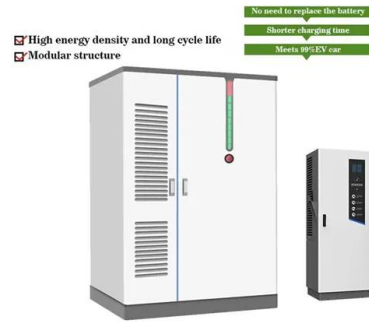
Scale model of the solar system , Teaching Resources

Using this document you can create a scale model of the solar system (you will also need a way to measure out the distances up to 45m). Included are the images of each planet and a comment describing how big they would be on this scale (between 2cm and 0.01mm).



Scale of the Solar System

Scale of the Solar System [671KB PDF file] This document is part of the Year of the Solar System -- Real-World Math guide. National Aeronautics and Space Administration NASA explores the unknown in air and space, innovates for the benefit of humanity



Lithium battery parameters

Product capacity: 100Ah

Product size: 135*197*35mm

Product weight: 1.82kg 197mm / 7.7in

Product voltage: 3.2V

internal resistance: within 0.5



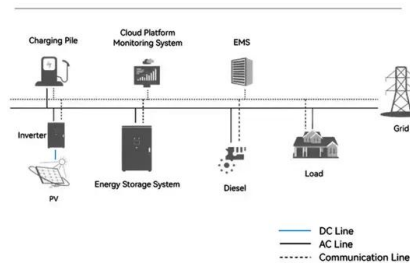
Scale of the Solar System Worksheet by The Science Mouse

Analyze and interpret data to determine scale properties of objects in the solar system. Emphasis is on the analysis of data from Earth-based instruments, space-based telescopes, and spacecraft to determine similarities and differences among solar system

Student Project: Make a Scale Solar System , NASA/JPL Edu

In this project, you will create your own scale model of the solar system by learning how to calculate scale distances, the relative sizes of planets, or both. Then, use beads and string, ...

System Topology



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