

Solar System Model Lab

Objects in space are astonishingly far apart. To appreciate the scale of the solar system, we will construct a scale model of the Sun and planets.

Materials

Streetball, computer with internet access, spherical objects, string, meter stick, ruler, tape measure, calipers, chalk

How big? How far?

Your book has a table of some of the numbers we need on page 9. Our job is to determine the sizes of planets in a model to match the size of the streetball modeling the Sun.

- How can we determine the scale factor?
- How do we calculate the sizes and distances of the objects in the model?

Procedure

We figure that out!

1. Find the formula(s) to calculate the dimensions of the model.
2. Write the formula in your lab notebook.
3. Make a spreadsheet for your calculations. Record the name and location of your spreadsheet in your lab notebook. Share your spreadsheet with your instructor.
4. Enter the actual radii and diameters in your spreadsheet.
5. Set up the spreadsheet to calculate the model diameters and radii.
6. Build the model.
7. Place the model along Long Road.

Lab Report

Write up a report to submit to your instructor.

Introduction

In a sentence or two, explain the purpose of the lab.

Procedure

Explain what you did in enough detail for someone else to repeat your work.

Results

What did you find? Were there any difficulties in following your plan?

Conclusion

Did building the model teach you anything about the Solar system? About spreadsheets?