

A SOLAR SYSTEM MODEL

Lesson Summary:

Students examine the distances between the objects in our solar system and demonstrate a smallscale model of the sun, eight planets, and Pluto.

Materials:

- Map of Alaska
- Ball (8 inch diameter)
- 3 pinheads (0.03 inch diameter each)
- 2 peppercorns (0.08 inch diameter each)
- Chestnut or pecan (0.90 inch diameter)
- Hazelnut or acorn (0.70 inch diameter)
- Two peanuts or coffee beans (0.30 inch diameter ea.)
- Names of the planets, Pluto and the sun written on 10 white index cards
- Measuring tape
- Camera (optional)
- Butcher paper (optional)
- STUDENT WORKSHEET: "Scale of the Solar System"

GLEs Addressed:

Science

- [5-8] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.
- [8] SD4.1 The student demonstrates an understanding of the theories regarding the origin and evolution of the universe by creating models of the solar system illustrating size, location/position, composition, moons/rings, and conditions.

Math

- [6] E&C-5 The student accurately solves problems (including real-world situations) by developing or interpreting scale models (scale factors such as 1 in. = 1 ft.) (L) (M3.2.6).
- [7] E&C-6 The student accurately solves problems (including real-world situations) by solving proportions using a given scale (M3.3.6).
- [7] PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as science, humanities, peers, and community (M10.3.1 & M10.3.2).
- [8] PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as science, humanities, peers, community, and careers (M10.3.1 & M10.4.2).

Search Terms:

- solar system
- planets
- scale model
- mathematics
- research