

Mass Model of the Solar System

By Carolyn Hollis

Materials:

Prepared and labeled bags of rice

Directions:

Each bag represents the mass of one of the planets in the solar system.

- Think about what you know about the planets.
- Decide which bag represents each planet.
- Arrange the planets in order from the Sun.

Required Advance Preparation and Answer Key

Materials:

Rice, Ziploc bags, and measuring cups and spoons to prepare bags
Marker to label bags

Preparation

Use this table to prepare the bags. This also is an answer key.

Planets	Earth mass/ Conversion factor	Amount of rice	Label
Mercury	0.055	8 grains of rice	D
Venus	0.814	2/5 tsp. of rice (a scant 1/2 tsp.)	I
Earth	1	1/2 tsp.	A
Mars	0.107	16 grains of rice	C
Jupiter	318	3 1/2 cups	B
Saturn	95.18	14 1/2 Tablespoons	G
Uranus	14.54	2 1/2 Tablespoons	H
Neptune	17.14	2 Tbs. 2 1/2 tsp.	E
Pluto	0.0021	4/5 of a grain of rice (a large piece of a grain of rice)	F