

Paper Plate Education

"Serving the Universe on a Paper Plate"

Activity: Plateful of Planets



Plates courtesy of April Whitt.

Color the entire bottom side of the plate to represent the sun and label it so. Decorate the fluted edges of the plate to resemble solar flares ("flames").

On the top side, write the names of the planets. You can write them in order from the sun, if you want the students to practice that skill, or you can write the names scattered around, the way the real planets are in different places around the sun. Next to each planet's name, glue the seed that represents its size:

Mercury - sesame seed

Mars - barley seed

Uranus - dried garbanzo bean

Venus - small dried pea

Jupiter - walnut

Neptune - dried garbanzo bean

Earth - large dried pea

Saturn - filbert (hazelnut)

Pluto - radish seed

Contributed by April Whitt.

GLPA Proceedings, 1999, p. 36.



Paper Plate Ed says...

Multiple websites that offer scale models of the solar system are listed at <http://www.vendian.org/mncharity/dir3/solarsystem>. One website that allows you to establish your own reference size for a scale model of the Solar System can be found at http://www.exploratorium.edu/ronh/solar_system/.

For example, if the earth were a paper plate (about 9 inches, or 228 mm) the rest of the system would be scaled as shown on the sample table below. The diameter of the sun would be equivalent

to 983 inches, or about 109 paper plates placed end to end. A standard-sized package of paper plates contains 100 pieces. From that large sun, the plate-sized earth would be in orbit over 8,802 feet away. Some values on the table below have been rounded off for simplicity.

Body	Actual Body Diameter (km)	Scaled Body Diameter (in)	Scaled Body Diameter (mm)	Actual Orbit Radius (km)	Scaled Orbit Radius (ft)	Scaled Orbit Radius (meters)
Sun	1391900	983	25000			
Mercury	4866	3.4	87	57950000	3410	1040
Venus	12106	8.5	217	108110000	6360	1940
Earth	12742	9	230	149570000	8800	2680
Mars	6760	5	120	227840000	13410	4090
Jupiter	139516	98	2500	778140000	4580	13960
Saturn	116438	82	2088	1427000000	84000	25600
Uranus	46940	33	842	2870300000	168900	51490
Neptune	45432	32	815	4499900000	264830	80720
Pluto	2274	1.6	41	5913000000	348000	106070

[Note: The table above is adapted from Ron Hipschman's page with permission. To alter input values on the table and recalculate the distances, connect directly to [http://www.exploratorium.edu/ronh/solar_system/.](http://www.exploratorium.edu/ronh/solar_system/)]

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