

Worlds in Comparison

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What's this about? This activity demonstrates the different sizes of their nine planets in our solar system. Follow the steps outlined below to see the relative size (volume) of each planet. Start with a three pound ball of playdough, which represents the volume of all the planets combined.

1. Divide the entire ball of playdough into 10 equal parts.

(Hint- to make it easy roll into a hotdog shape)

Combine 6 parts together, roll in to a ball, place in a box marked Jupiter.

Combine 3 parts roll in to a ball, place in a box marked Saturn.

2. Cut the remaining part into 10 equal parts.

Take 5 parts and combine it with the Saturn ball

Combine 2 parts roll into a ball place in a box marked Neptune.

Combine 2 parts roll into a ball place into a box marked Uranus.

3. Cut the remaining part into 4 equal parts.

Take 3 parts and combine it with Saturn.

4. Cut the remaining part into 10 equal parts

Put 2 parts into a box marked Earth.

Put 2 Parts into a box marked Venus.

Combine 4 parts with the ball in the box for Uranus.

5. Combine the remaining to parts and cut into 10 equal parts.

Put 1 part into a box marked mars

Combine 4 parts with Neptune.

Combine 4 parts with Uranus

6. Cut the remaining part into 10 equal parts.

Put 7 parts into a box marked Mercury.

Take 2 parts and combine them with the ball in the Uranus box.

7. Cut the remaining part into 10 equal parts.

Take 9 parts and combine them with the ball in the Uranus box.

Put 1 part in a box marked with Pluto.

And now make sure you have rolled each planet into a ball. Look at the size of each and think back to the all the parts you made and how after the very first time you divided the 3 pounds of dough most went in to Jupiter and Saturn and our Sun is much bigger than both of this planets combined in fact if you combined all the dough again into a ball, it would only be 1% of the volume of the Sun. you would need a 300 pound ball for the Sun.