

# Sense(s) of Scale

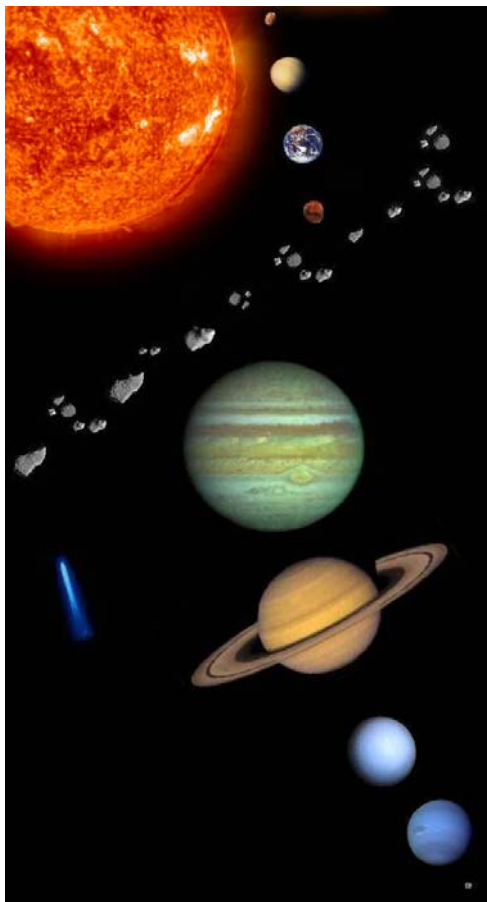


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## 100 Yard Solar System



“Honey, I shrunk the solar system!” Imagine shrinking our sun down to the size of a nickel. If the sun were a nickel, the planets would be specks of dust with Jupiter being about the size of a BB. The following average distances would then apply...

Planet	Distance (ft)	Distance (m)
Mercury	3	1.0
Venus	5	1.5
Earth	7.5	2.3
Mars	11	3.4
Jupiter	39	11.9
Saturn	71	21.6
Uranus	144	43.9
Neptune	226	68.9
Pluto	300	91.4

Usually, I do this activity outside and have students “march” off the distances with me using a roller tape. Selected students are posted at each planet, or a stake is placed in the ground to represent each planet. This activity can easily be done on a football field and really highlights the vast distances between the outer planets and the close proximity of the inner planets. I always highlight that it took 7 months for Mars Exploration Rovers to reach Mars and 7 years for Cassini to reach Saturn. When you are standing right there at Saturn and/or Mars, you begin to see the obvious reasons for the time frames.

For students who are blind or visually impaired, a twist of this activity is to have them assigned a number (Sun = 0, Mercury = 1, Venus = 2, Earth = 3...) and then have them sound off their respective planet when their number is called. In this way, they are hearing audibly the varying distances in our solar system. Calling off the numbers randomly really helps them understand the distances.