Solar System Launch

One astronomical unit is about 92,960,000 miles, the average distance between the Sun and Earth. Because this is hard to imagine, any standard unit of measure, such as centimeters, inches, feet or meters may be used to represent astronomical units in order to show relative scale of the Solar System.

Planet #	Solar System Lineup	Units	# of Centimeters
1	Mercury	0.4	
2	Venus	0.7	
3	Earth	1.0	
4	Mars	1.5	
	Asteroid Belt	in between	
5	Jupiter	5.2	
6	Saturn	9.5	
7	Uranus	19.2	
8	Neptune	30.1	
9	Pluto	39.4	
10	Eris	Beyond Pluto	

In this activity, 0.1 units = 1 centimeter

Each team of 2 students will need:

* measuring tools - centimeter cubes, base ten blocks, rulers in centimeters, etc
* several black construction paper strips (1' wide X 18" length)
* 1 set of Solar System stickers (use stars or glitter to represent the asteroid belt)
* scotch tape
* 2 paper straw rockets (previously made)

Directions for Solar System Launch

1 Fill in the chart above with the # of centimeters needed to measure distances.
2 Tape 2 black strips end-to-end. (Add more as needed)
3 Beginning with the top of one of the taped strips, attach a Sun sticker.
4 Measure from the **center** of the Sun to the **center** of Planet #1. Add sticker.
5 Measure from the **center** of the Sun to the **center** of Planet #2. Add sticker.
6 Continue this process until all distances are measured and stickers attached.
7 Line up your Solar System strip with the others created by your classmates.
8 Check your team's measurements with your classmates. Were you close?
9 Stand on a mark chosen by your teacher and launch your rocket.
10 Using the computer and the Solar System Launch Bar Graph, record where your rocket landed by placing a "1" in the row with your name and in the "Planet Column" closest to your rocket.