

Developing Data for Solar System Walk (km)

Astronomical Object	Size of object (diameter in km)	Size of scale model (diameter in mm)	Distance from Sol (millions of kilometers)	Distance from previous stop (millions of kilometers)
Starting Point	Sol, Our Sun, The Sun	1391016 <i>(Ball circumference:</i>	185.47 <i>582.67 FIFA Size 4, a little deflated)</i>	
Inner Planets	For more information on the inner planets: http://solarsystem.nasa.gov/planets/charchart.cfm			
Mercury	4879	0.65	58	58
Venus	12104	1.61	108	50
Earth	12742	1.70	150	42
Mars	6779	0.90	228	78
	<i>The Moon</i>	3475	0.46	<i>From Earth to Moon:</i> 0.384
	What's an AU? It's almost exactly Earth's orbit:			149.6
Asteroid Belt	For more information on the asteroid belt: http://solarsystem.nasa.gov/planets/profile.cfm?Object=Asteroids&Display=OverviewLong			
	Inner edge of "core"		308	80
	Queen of the Asteroid Belt: dwarf planet Ceres	1900	0.25	414
	Outer edge of "core"		491	77
Outer Planets	For more information on the outer planets: http://solarsystem.nasa.gov/planets/charchart.cfm			
Jupiter	139822	18.64	778	287
Saturn	116464	15.53	1,427	649
Uranus	50724	6.76	2,871	1,444
Neptune	49244	6.57	4,498	1,627

Developing Data for Solar System Walk (km)

Astronomical Object	Size of object (diameter in km)	Size of scale model (diameter in mm)	Distance from Sol (millions of kilometers)	Distance from previous stop (millions of kilometers)
Kuiper Belt				
For more on Kuiper-belt objects and Pluto: http://solarsystem.nasa.gov/planets/profile.cfm?Object=KBOs and http://solarsystem.nasa.gov/planets/profile.cfm?Object=Dwarf				
<i>Inner edge</i>			4,498	-
King of the Kuiper Belt: dwarf planet Pluto			Mission to Pluto: http://science.nasa.gov/science-news/science-at-nasa/2014/14jan_pluto/	
<i>closest to the sun</i>			4,437	(1,470)
average distance	2390	0.32	5,906	1,408
<i>farthest from the sun</i>			7,311	1,405
<i>Outer edge</i>			8,228	917
Our Robot Explorers				
Read about the Pioneers' adventures here http://www.nasa.gov/centers/ames/news/2013/pioneer11-40-years.html#.UzDJ44WwX_0 http://www.nasa.gov/topics/history/features/Pioneer_10_40th_Anniversary.html#.UzDKb4WwX_0				
Pioneer 11, last contacted in 1995			13,472	5,244
Pioneer 10, last contacted in 1973			15,618	2,146
Voyager 2			16,544	926
Pioneer 10, last contacted in 2003			19,049	2,506
Voyager 1				
Find out where they are right now! http://www.heavens-above.com/SolarEscape.aspx?lat=0&lng=0&loc= Discover more about the Voyager missions at: http://voyager.jpl.nasa.gov/where/index.html				
The Heliopause				
(The Sun's bow wave as it moves through space at 52,000 miles per hour)			19,900	851
The Oort Cloud				
For more on the Oort cloud, see http://solarsystem.nasa.gov/planets/profile.cfm?Object=KBOs				
Inner edge			748,000	728,100
Outer edge			14,960,000	14,212,000
Beyond our Solar System:				
How far is a light-year? At 299,792,458 m/s:			9,460,528	
Proxima Centauri, the nearest star			40,112,640	25,152,640
The black hole at the center of the Milky Way			250,704,002,930	250,663,890,290
Andromeda, the biggest Local Group galaxy			24,010,821,079,200	23,760,117,076,270

Developing Data for Solar System Walk (km)

Astronomical Object	Scale distance at 1 cm = 75000 km (meters)	Number of steps between stops	Total scale distance from Sol, in km	Total scale distance from Sol, in m	
Starting Point	Sol, Our Sun, The Sun	75,000	our scale--this many km per cm		
		0.50	length of one step, in meters		
Inner Planets					
	Mercury	7.73	15	0.008	7.73
	Venus	6.67	13	0.014	14.40
	Earth	5.60	11	0.020	20.00
	Mars	10.40	21	0.030	30.40
	<i>The Moon</i>	5.1	<i>cm from Earth to Moon)</i>		
Asteroid Belt					
	Inner edge of "core"	10.7	21	0.041	41.09
	Queen of the Asteroid Belt: dwarf planet Ceres	14.1	28	0.055	55.19
	Outer edge of "core"	10.2	20	0.065	65.43
Outer Planets					
	Jupiter	38.3	77	0.10	103.73
	Saturn	86.5	173	0.19	190.27
	Uranus	192.5	385	0.38	382.80
	Neptune	216.9	434	0.60	599.73

Developing Data for Solar System Walk (km)

Astronomical Object	Scale distance at 1 cm = 75000 km (meters)	Number of steps between stops	Total scale distance from Sol, in km	Total scale distance from Sol, in m
Kuiper Belt				
<i>Inner edge</i> King of the Kuiper Belt: dwarf planet Pluto	-	-	0.60	599.73
<i>closest to the sun</i>	(196)	(392)	0.59	592
average distance	188	376	0.79	788
<i>farthest from the sun</i>	187	375	1.0	975
<i>Outer edge</i>	122	245	1.1	1,097
Our Robot Explorers				
Pioneer 11, last contacted in 1995	699	1,398	1.8	1,796
Pioneer 10, last contacted in 1977	286	572	2.1	2,082
Voyager 2	123	247	2.2	2,206
Pioneer 10, last contacted in 2003	334	668	2.5	2,540
Voyager 1				
The Heliopause (The Sun's bow wave)				
	113	227	2.7	2,653
The Oort Cloud				
Inner edge	97,080	194,160	100	99,733
Outer edge	1,894,933	3,789,867	1,995	1,994,667
Beyond our Solar System:				
Proxima Centauri, the nearest star	3,353,685	6,707,371	5,348	5,348,352
The black hole at the center of the Milky Way	33,421,852,039	66,843,704,077	33,427,200	33,427,200,391
Andromeda, the biggest Local Group galaxy	3,168,015,610,169	6,336,031,220,339	3,201,442,811	3,201,442,810,560