

ANSWER KEY

After reading “Space Race: The Game”, answer the questions below:

- List the planets in order, starting with the planet closest to the sun.

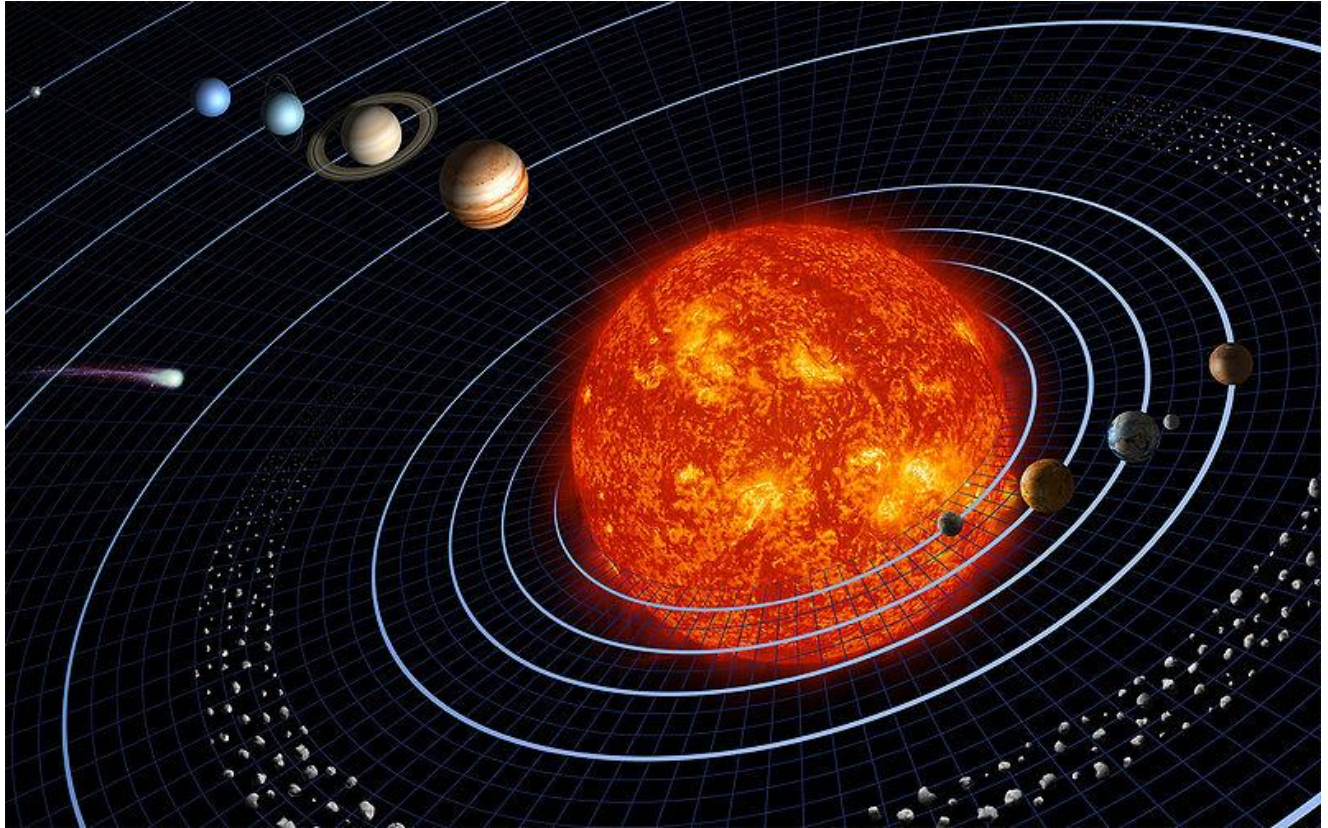
1 st	Mercury
2 nd	Venus
3 rd	Earth
4 th	Mars
5 th	Jupiter
6 th	Saturn
7 th	Uranus
8 th	Neptune

- Once you have the planets in the correct order calculate the actual diameters of the planets in feet, and if you can, in miles with the given unseen diameters and scale.

Unseen Diameter (feet)	Multiply By	Actual Diameter (feet)	Actual Diameter (miles)
4	4,002,240	16,008,960	3,032
10	3,971,088	39,710,880	7,521
11	3,804,480	41,849,280	7,926
6	3,715,360	22,292,160	4,222
12	39,092,240	469,106,880	88,846
10	39,545,616	395,456,160	74,897
5	33,541,728	167,708,640	31,763
4	40,623,000	162,492,000	30,775

3. What is the object that separates the 4 inner planets from the 4 outer planets?

Asteroid Belt



Steps to play “Space Race: The Game”.

1. Start at the Sun with your partner.
2. Place the tape measure at the “sun spot” on the edge of the Sun.
3. While one person holds the tape measure very carefully, the other person will pull the tape measure to the center of each planet.
4. Read the distance from the tape measure in feet and record it in the table on the last page.
5. Repeat these steps, always measuring from the Sun, until you are done with the 8th planet.

4. Fill out the table with your partner to complete "Space Race: The Game".

Planet	Measured Distance (feet) (approx.)	Multiply By:	Actual Distance (feet)	Actual Distance (miles)
Mercury	13.86	2.21×10^{10}	3.06×10^{11}	57,909,000
Venus	25.92	2.20×10^{10}	5.71×10^{11}	108,200,000
Earth	37.20	2.12×10^{10}	7.90×10^{11}	149,600,000
Mars	54.72	2.16×10^{10}	1.18×10^{12}	224,940,000
Jupiter	110.59	3.71×10^{10}	4.11×10^{12}	778,400,000
Saturn	123.63	6.08×10^{10}	7.52×10^{12}	1,423,600,000
Uranus	152.59	9.90×10^{10}	1.51×10^{13}	2,867,000,000
Neptune	185.00	1.28×10^{11}	2.37×10^{13}	4,488,400,000