

GLOW-IN-THE-DARK Solar System

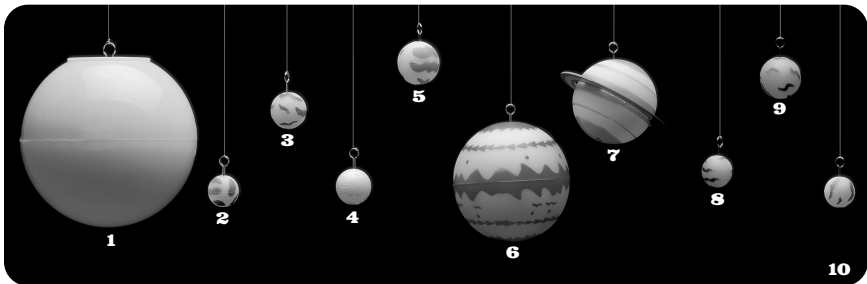
EI-5236

Ages
6+
Grades
1+

Hang your Glow-in-the-Dark Solar System from your bedroom ceiling. Then lie down, look up, and get “lost in space” without leaving your room! Back home, learn more about your virtual solar system in the Exploring the Solar System section of this guide. Ready for lift-off?

Sizing Up the Solar System

The solar system includes the Sun, 8 planets and their moons, dwarf planets, asteroids, and comets. The planets vary greatly in size. The Sun, the star at the center of our solar system, is so large more than a million Earths could fit inside it!



The diameter of the Sun and each planet is given below.

- Sun:** 870,000 miles
- Mercury:** 3,031 miles
- Venus:** 7,521 miles
- Earth:** 7,926 miles
- Mars:** 4,222 miles
- Jupiter:** 88,700 miles
- Saturn:** 75,000 miles
- Uranus:** 31,000 miles
- Neptune:** 30,800 miles
- Pluto:** 1,430 miles
(dwarf planet)



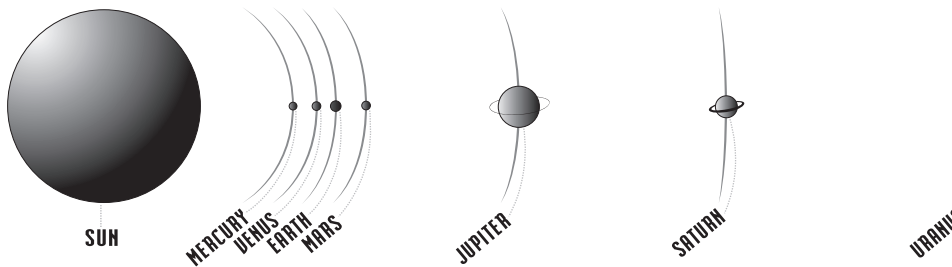
WARNING:

CHOKING HAZARD—Small parts.
Not for children under three (3) years.

Our Solar System

Distance of the Planets from the Sun

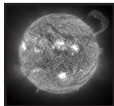
The inner planets (the planets closest to the Sun: Mercury, Venus, Earth, and Mars) are relatively close to the Sun and their order: **My** (Mercury), **Very** (Venus), **Excellent** (Earth), **Mother** (Mars), **Just** (Jupiter).



SUN	MERCURY ♀	VENUS ♀	EARTH ⊕	MARS ♂
Distance from Sun (miles)	35,985,000	67,241,000	92,960,000	141,642,000

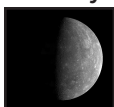
Exploring the Solar System

The Sun



What star can you see during the day? It's our **Sun**—the star closest to Earth. The Sun is huge. More than a million Earths could fit inside it! But compared to other stars, the Sun is only a medium-sized star, called a “yellow dwarf.” Like all stars, the Sun is a ball of hot gases. At its center, the Sun's temperature is more than 15,000,000°C!

Mercury



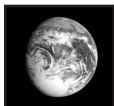
Mercury whizzes around the Sun faster than any other planet. It was named after Mercury, the speedy messenger of the ancient Roman gods. Mercury, the smallest planet in our solar system, is about the size of our Moon. Like the Moon, the planet's surface is covered with craters, holes made when meteorites and asteroids crashed into it.

Venus



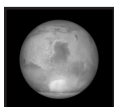
Venus has been called Earth's “twin” or “sister planet” because the two planets are similar in size. But while Earth is covered in oceans, Venus is a dry, desert-like planet covered in thick, poisonous clouds. The clouds trap heat, making temperatures on Venus rise high enough to melt a lead cannonball!

Earth



Because nearly three-quarters of Earth's surface is covered by water, **Earth** looks like a big blue marble floating in space. Water and Earth's amazing atmosphere, mostly made up of the gases nitrogen and oxygen, make life on the planet possible. In fact, Earth is the only planet on which life is known to exist.

Mars



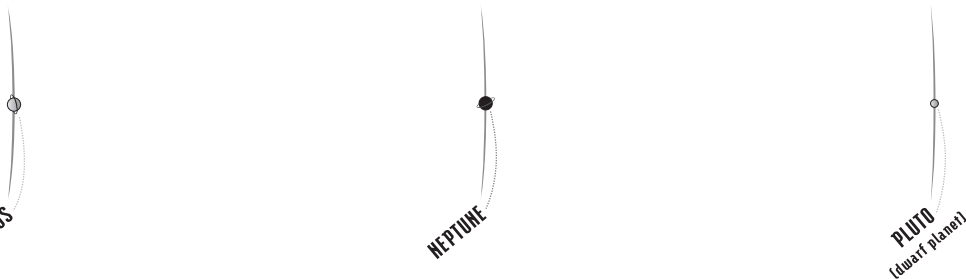
Missions to **Mars** have found amazing features: a canyon twice as long as the United States, the largest known volcano in the solar system, frozen polar ice caps like those on Earth, and a surface covered with the rusty iron-rich red dirt that gives Mars its nickname—“the red planet.”

*Solar System images courtesy of NASA.

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Planets from the Sun

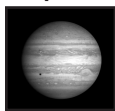
lose together. The rest of the planets are far apart. Use this silly sentence to remember the planets (Jupiter), **Served** (Saturn), **Us** (Uranus), **Noodles** (Neptune).



JUPITER ♃	SATURN ♄	URANUS ♅	NEPTUNE ♆	PLUTO (dwarf planet) ♇
483,631,000	888,210,000	1,786,521,000	2,798,800,000	3,666,200,000

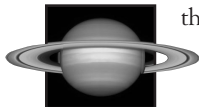
Solar System

Jupiter



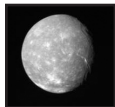
Giant **Jupiter** is the largest planet in the solar system. Jupiter is so big that all of the other planets in the solar system could fit inside of it! Its Great Red Spot, which scientists think is a huge hurricane-like storm, is more than twice as big as our whole Earth. Jupiter has at least 63 known moons—more than any other planet in the solar system.

Saturn



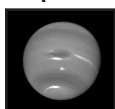
If you could find an ocean big enough, **Saturn** would float in it! Saturn, the second largest planet in the solar system, is mostly a huge ball of gas. Saturn is called the “ringed planet.” Saturn’s rings are made up of pieces of ice, rock, and dust. Some of the pieces are as big as a house!

Uranus



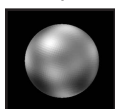
Uranus is sometimes called the “sideways planet” because, unlike the rest of the planets, it rotates on its side. Uranus and Neptune are sometimes called “the icy planets.” These cold, frozen places are far from the warmth of the Sun. Uranus has a system of rings and at least 27 known moons.

Neptune



Neptune is a lot like Uranus—a large gas planet that looks like a big blue-green ball in space. Like Uranus, Neptune also has a ring system. Neptune is the furthest planet from the Sun. The planet has 13 known moons. One of its moons, Triton, orbits Neptune in a direction opposite that of the others.

Pluto (dwarf planet)



Pluto was discovered in 1930, and for 76 years it was considered a planet. Then, in 2006, it was reclassified as a dwarf planet. Why? Scientists realized that Pluto was less like a planet and more like some of the smaller objects in the solar system. (Pluto is less than half the size of the planet Mercury. It is smaller even than Eris, another object recently discovered in the same region as Pluto.) Pluto is so far away that it takes 248 years to orbit the Sun. Pluto has a natural satellite, Charon, which is more than half the size of Pluto.

Directions

1. Cut the clear plastic line into 10 equal pieces—about 3 feet each.
2. Thread the end of the line through the hanger attachment on one of the planets and tie a knot.
3. Take the other end of the line and tie it around a tack or pushpin.
4. Repeat steps two and three for each of the planets and the Sun.
Note: For Saturn, fit the ring over the planet and carefully snap the three tabs into the groove in the center of the planet.
5. If desired, apply some adhesive putty to the head of each tack for extra holding strength.
6. Push the tacks into the ceiling, using the chart showing the planetary symbols and the order of the planets on the inside of this guide.
7. Turn on the lights in your room and expose your solar system to the light for a few minutes.
8. Turn off the lights, and see your solar system glow.



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