

In 2006, the International Astronomical Union (IAU) approved a new classification system for planets and smaller objects in our Solar System and adopted a new category called dwarf planets.

What's the Difference Between Regular Planets and Dwarf Planets?

Both planets and dwarf planets orbit the Sun and must be large enough that their own gravity pulls them into a nearly round shape. Unlike planets, dwarf planets have other objects in their orbits. They are not big enough to move the other objects out of the way. Dwarf planets don't have enough gravity to pull on objects in their path and move them out of the way.

How Many Dwarf Planets Are in the Solar System?

Our Solar System has at least five dwarf planets, and scientists suspect that many more await discovery.

Ceres: Discovered in the Asteroid Belt on January 1, 1801, Ceres was first classified by astronomers as a large asteroid. After discovering that Ceres not only had its own inner core but also gravity and a very thin atmosphere, it was named a dwarf planet in 2006. Ceres has a diameter of about 975 kilometers (605 mi.). Ceres was named after the Roman goddess of plants.



Pluto: Formerly considered the smallest of the nine traditional planets, Pluto was demoted to a dwarf planet by astronomers in 2006. It is several billion miles from the Sun and has a diameter of 2,302 kilometers (1,430 mi.). Pluto was named after the god of the dark underworld in Roman mythology.

Eris: The largest and coldest dwarf planet, Eris was discovered in 2005 beyond the orbit of Pluto. It is a large sphere of ice and rock with a diameter believed to be about 2,400 kilometers (1,491 mi.). Eris was named after the Greek goddess of strife.



Makemake: Discovered in 2005 by a team of astronomers, Makemake officially became a dwarf planet in July 2008. Its diameter is between 1,300 and 1,900 kilometers (808–1,181 mi.). Makemake is named after the god of fertility and the creator of humans in Rapa Nui (Easter Island) mythology.

Haumea: Classified as a dwarf planet in 2008, Haumea is shaped more like an egg than a sphere. It is about 1,960 kilometers (1,218 mi.) across at its longest point and about half that distance along its shortest point. Haumea is named for the Hawaiian goddess of fertility.



- If you weigh 45 kilograms (100 lbs.) on Earth, you would weigh about 3 kilograms (7 lbs.) on Pluto.
- The New Horizons probe launched in 2006 will fly very near Pluto in July 2015. It will be the first spacecraft to study the dwarf planet close up.
- Makemake was first discovered a few days after Easter and was nicknamed Easter Bunny.
- Pluto, Eris, Haumea, and Makemake are also known as *plutoids*, which means they are dwarf planets beyond the orbit of Neptune.

Pronunciation Guide:

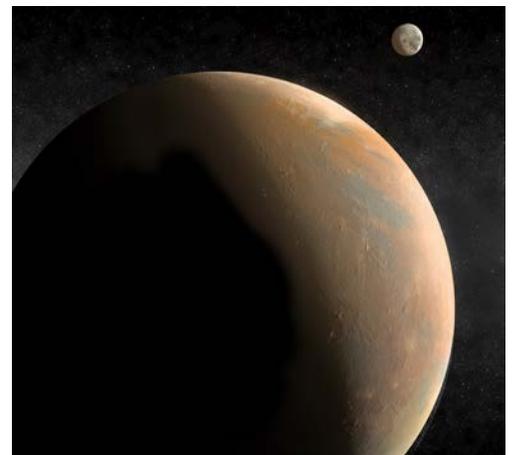
Ceres (SEER-eez)

Pluto (PLOO-toh)

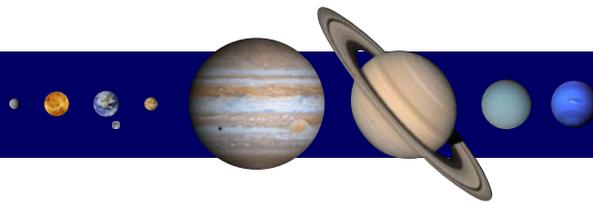
Eris (AIR-iss)

Makemake (MAH-kay-MAH-kay)

Haumea (how-MAY-uh)



Until 2006, Pluto was considered the ninth planet in the Solar System. The dwarf planet actually has three known moons: Charon, the largest (pictured here), Hydra, and Nix.



SEDNA

(SED-nuh)



Three times farther away from Earth than Pluto, Sedna is the most distant known object in the Solar System. It takes around 10,500 Earth years to orbit the Sun once. Although bright red in color, Sedna is named for the Inuit goddess of the ocean.

ERIS



QUAOAR

(KWA-whar)



About one-third the size of Earth's Moon, Quaoar orbits the Sun in the Kuiper Belt. It completes one orbit about every 286 Earth years. The name Quaoar comes from a Native American creator god.

CERES



MAKEMAKE



PLUTO



CHARON

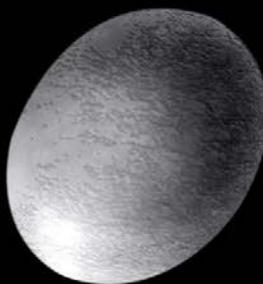
XENA

(ZEE-nuh)

GABRIELLE



HAUMEA



EARTH'S MOON



Xena orbits the Sun in the Kuiper Belt. Slightly larger than Pluto, Xena reflects a lot of light, which is why scientists thought it was bigger than it actually is. One year on Xena is about 560 Earth years. Both Xena and its moon, Gabrielle, are named after characters in a television show.

Astronomers have discovered other large objects in our Solar System, though they are still too small to be considered dwarf planets. These objects are known as *small Solar System bodies*.

The term also includes other objects, such as comets and some asteroids. This image shows a few of these objects and their relative sizes to the known dwarf planets and Earth's Moon.

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