

NEPTUNE

Neptune is the eighth planet from the Sun in our Solar System. It is about 4.5 billion kilometers (2.8 billion miles) from the Sun—more than 30 times farther than Earth. Neptune receives very little energy from the Sun. The average temperature on Neptune is -225°C (-373°F). Neptune appears blue because of its atmosphere, which is made up of hydrogen, helium, and methane. Because of its extreme distance from Earth, Neptune is invisible to the naked eye.

How Big Is Neptune?

Neptune is the fourth-largest planet in the Solar System. Neptune's diameter is 49,532 kilometers (30,759 mi.) at its widest point. The planet is about three times larger than Earth.

How Long Are a Day and Year on Neptune?

Since it takes Neptune about 16 Earth hours to spin around once, a day on Neptune is 16 Earth hours long. It takes Neptune about 165 Earth years to orbit the Sun. Since its discovery in 1846, Neptune completed its first orbit in 2011.

What Is Neptune Made Of?

Neptune is a giant gas planet, made up mostly of very cold gases. It has wispy bluish-white clouds that scientists think are made up of methane crystals.

How Many Moons and Rings Does Neptune Have?

Neptune has six known rings made up of small, dark clumps of rock. Some parts of these rings are brighter than others and appear as arcs orbiting the planet.

Neptune has thirteen moons that we know of, the largest being Triton. It orbits Neptune in the opposite direction of the planet's rotation—the only large moon in the Solar System to do so. Triton is extremely cold yet has geysers that spew icy material upward more than 8 kilometers (5 mi.). Triton's atmosphere is growing warmer, but scientists don't know why.

Neptune's gravity slows down Triton, drawing it closer and closer to the planet. Millions of years from now, Triton will come close enough for Neptune's gravity to break it apart. The result may be a new, bright ring around Neptune.

Can You Go to Neptune?

Neptune is so far away that it took twelve years for the space probe *Voyager 2* to reach it. In 1989, *Voyager 2* passed about 4,800 kilometers (2,983 mi.) above the planet's north pole. It taught us most of what we know about the bright blue planet. *Voyager 2* discovered six of Neptune's moons and four of its rings. It also tracked a large, dark, oval-shaped storm in Neptune's southern hemisphere. This Great Dark Spot, which was about this size of Earth, moved at almost 1,200 kilometers (750 mi.) per hour. By the time the Hubble Space Telescope studied Neptune five years later, the spot had vanished.

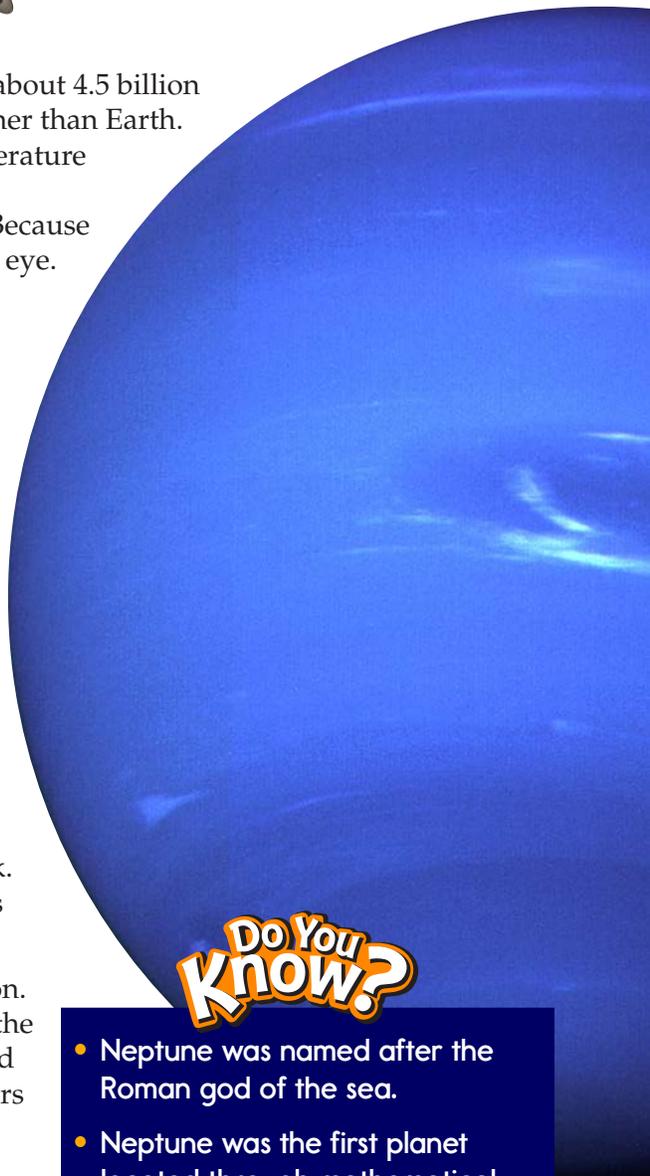
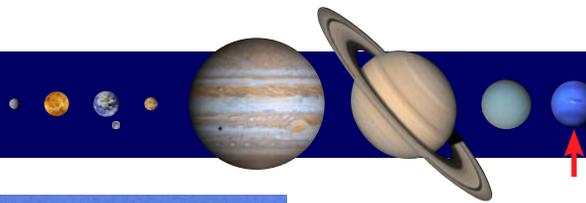
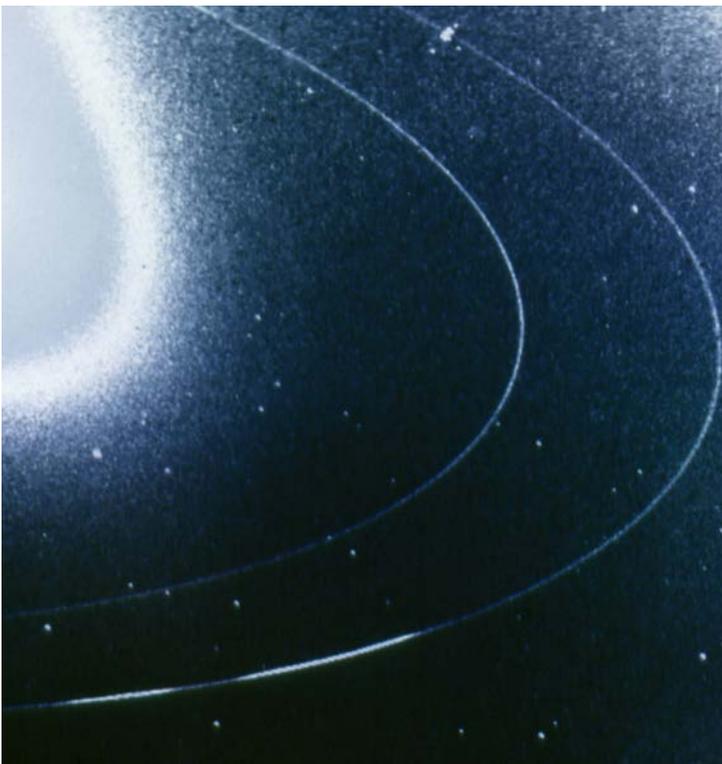
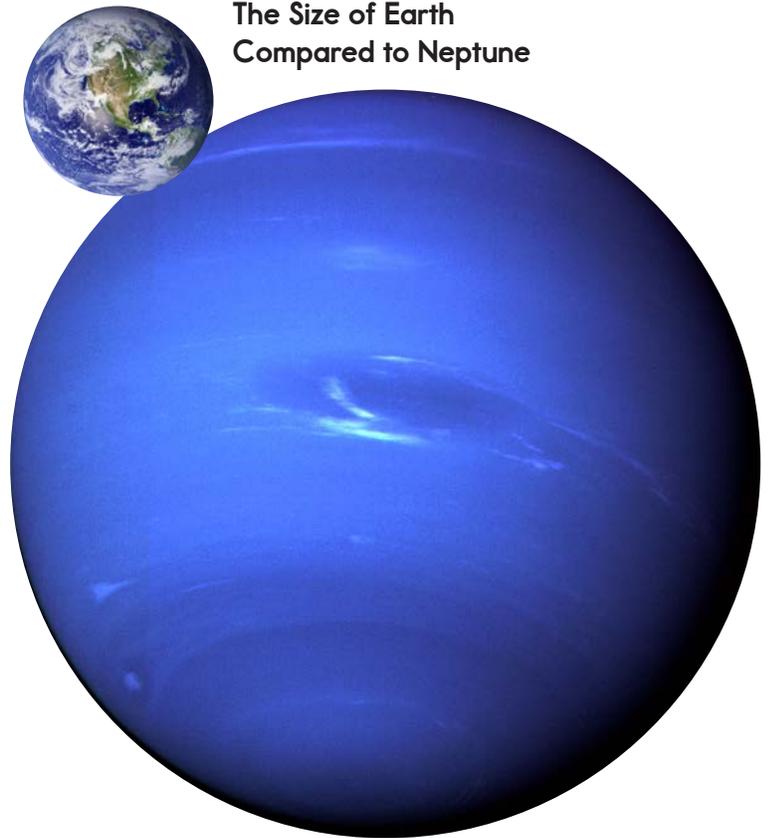
- 
- Do You Know?**
- Neptune was named after the Roman god of the sea.
 - Neptune was the first planet located through mathematical predictions rather than through observations of the sky.
 - *Voyager 2* is the only human-made object to have flown by Neptune.
 - Neptune is the stormiest planet. The winds there can blow up to 1996 kilometers (1,240 mi.) per hour. That's eight times as fast as Earth's strongest hurricanes.

Photo Credits:
Icon: composite of NASA photos; pages 1, 2 (top right): courtesy NASA Planetary Photojournal; page 2 (top left, bottom right, bottom right inset): courtesy of NASA/JPL; page 2 (top center): courtesy of NASA GSFC; page 2 (bottom left): © Science Source



Clouds swirl around Neptune's Great Dark Spot in this photo taken by the *Voyager 2* spacecraft.



Voyager 2 took this photo of Neptune's rings in 1986. They are made of dust and other particles as well as "moonlets," which are slightly larger objects. These moonlets cause the rings to clump up in places.



Triton (inset) is one of the coldest objects in the Solar System. Its surface (main) is covered with frozen nitrogen, giving the moon a bright sheen in sunlight.