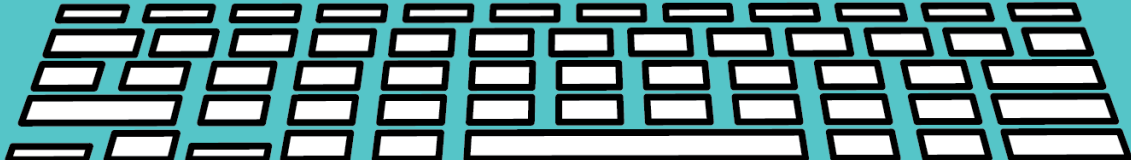
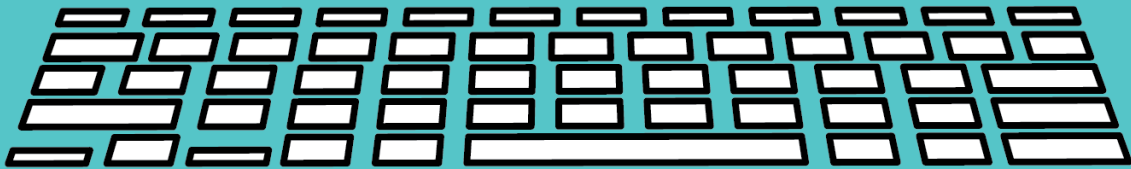


FRIDAY WAS  
ORIGINALLY  
THOUGHT TO  
BE A SOLID  
BALL OF ICE

Short Answer	Type Answer Here
1. What planet is considered Neptune's twin?	
2. What is Neptune's largest moon called?	
3. Who first spotted Neptune, thinking it was a star?	
4. How many official moons does Neptune have?	
5. What color does Neptune appear to be?	
6. Which planet has the largest gravity of the planets?	
7. Which planet is the windiest?	
8. Who is Neptune named after?	



Short Answer	Type Answer Here	Fill in the Blank	Type Answer Here
1. What name is considered Neptune's?		9. Neptune is the _____ planet from the Sun.	
2. What is Neptune's largest moon?		10. Astronomers used _____ to calculate where Neptune should be.	
3. Who first spotted Neptune, thinking it was a star?		11. The moons are named after gods of _____.	
4. How many official moons does Neptune have?		12. Neptune is the smallest of the _____ giants.	
5. What color does Neptune appear to be?		13. In 1839, _____ spotted one of the most significant _____.	
6. Which planet has the largest gravity of the planets?		14. Light from Neptune takes about _____ hours to reach Earth.	
7. Which planet is the windiest?		15. Neptune is _____ times wider than Earth.	
8. Who is Neptune named after?		16. There is a water-_____ ocean deep inside.	



# PLANET NEPTUNE

Neptune is the eighth planet from the Sun, with a distance of 2.8 billion miles (4.5 billion km) from the Sun. Neptune is 30 times further from the Sun than Earth. It has the third-largest mass and fourth-largest radius of the eight planets. Its radius is 15,387 miles (24,778 km), and its diameter is 30,598 miles (49,244 km). Neptune is four times wider than Earth. Many consider Neptune to be the Uranus' twin due to its similar size and appearance.

Neptune is the smallest of the gas giants. The coldest planet in the solar system has a thick atmosphere of hydrogen, helium, and methane with a layer of ammonia, and a core of rock and ice. Like Uranus, the blue color comes from the methane in the atmosphere. Methane absorbs red light from the Sun, however, blue light gets reflected back into space, so Neptune appears blue.

The planet Neptune has an upper atmosphere of clouds, an atmosphere of hydrogen, helium, and methane, a mantle with water, ammonia, and methane ices, and a core of rock and ice. Most of Neptune's energy comes from the inner core. In the lower region of Neptune, there is a water-ammonia ocean deep inside. While it may appear icy, it is scorching, dense fluid. Some scientists also think that methane transforms into diamond crystals that "rain" down.

Neptune is named after the Roman god of the sea due to its blue color. In Greek mythology, that is Poseidon. There is some controversy over who discovered Neptune. At first, astronomers determined that Uranus' orbit around the Sun didn't match their predictions. So, they assumed that another planet was pulling on Uranus with gravity. Now astronomers understand that Neptune has the second-largest gravity of the planets (Jupiter has the largest). Neptune also has a powerful magnetic field which is 27 times stronger than Earth's.

Neptune formed about 4.5 billion years ago. Some astronomers think it was closer to the Sun originally and drifted away about

4 billion years ago. Astronomers used mathematics to calculate where Neptune should be. In 1846, Johann Gottfried Galle (Germany) used the math from Urbain Le Verrier (France) and John Couch Adams (Britain) to see Neptune through a telescope. This confirmed the math calculations. Neptune was the first planet to be found using math. Yet, Galileo first spotted Neptune in 1613. He thought it was a star, which he drew in one of his drawings. He never saw it again, though.

The cold weather on Neptune includes massive storms and powerful winds, the most winds of any planet. Average surface temperatures are -353 degrees Fahrenheit (-214 degrees Celsius). This coldest and windiest planet has wind speeds greater than 1,200 mph (2,000 km/hour). This wind speed is almost the same as the F/A-18 Hornet fighter jet in the U.S. Navy. Earth's most powerful winds have wind speeds that reach up to 250 mph (400 km/h). In 1989, Voyager 2 spotted one of the largest significant storms ever recorded. Neptune's storm, called the "Great Dark Spot," was the size of Earth and lasted five years. Extreme pressure and low temperatures on Neptune mean that life cannot survive there. It takes about four hours and six minutes to send the signal from Voyager back to Earth. From Neptune, it takes about four hours to reach Earth.

Neptune has 14 known moons, with the potential for more to be discovered over time. The moons are named after the gods of water. Triton, the largest moon, was discovered in 1846. It has a retrograde orbit, which means it orbits backward versus the rest of the moons. Triton is the seventh-largest moon of all the planets. Some astronomers think that Triton is a captured dwarf planet. Triton is larger than Pluto, which is now considered a dwarf planet.

Like Saturn, Neptune has six rings, named after the discoverers, Le Verrier, Lassell, Arago, and Adams. The rings are made of ice and dust.

Neptune's day lasts for only 16 hours. However, a year on Neptune lasts 165 Earth years due to its distance from the Sun.



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