

# Discovering Neptune - Educator's Guide (Ages 12-15)



## At the end of these Night Sky activities students will understand:

- Neptune is the eighth and most distant planet from the Sun
- Neptune is categorised as a giant planet
- Big Blue is a large and long-lasting storm in Neptune's atmosphere
- Neptune takes decades to orbit the Sun

## Astronomy background information

Blue-coloured Neptune is one of the Solar System's giant planets and most distant planet from the Sun. Neptune is about 30 times as far from the Sun as Earth and takes about 176 years to orbit the Sun. It cannot be seen without a telescope and was discovered in 1846.

About four times as wide as Earth, Neptune has no solid surface but instead has a massive and stormy atmosphere of mainly hydrogen and helium. "Big Blue" is a giant cyclonic storm that has persisted for decades in the planet's atmosphere. Deep inside it, Neptune also has substantial quantities of water, ammonia and methane. In astronomy jargon these compounds are called "ices" hence the planet is classed as an ice giant. However, inside Neptune these compounds exist in a high-temperature state at enormous pressure.

NASA's *Voyager 2* spacecraft made our first visit to Neptune in 1989. This quick flyby gave us a look at Neptune and its moons including giant Triton, a world with geysers and a thin atmosphere. Neptune has a set of rings but these are much fainter and darker than Saturn's rings.

## Night Sky App Essential Settings

Go to Night Sky Settings  and make sure the following Preferences are set.

### Turn On these Effects:

Real Sky Representation  
Show Trajectories and Orbits  
Environment Based Horizon

### Turn Off these Effects:

Show Satellites  
Day Time Effect  
Show Glass Mythology  
Show Constellation Lines

## Accessible Learning:

- Text size can be increased in the Preferences section
- Star numbers can be reduced by sliding two fingers down the screen

