

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



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

- Pluto was discovered in the modern era
- Pluto's surface features imply it has an ocean under its crust
- It has an unusually elongated and inclined orbit
- Pluto and similar objects are classified as dwarf planets

## Astronomy background information

Discovered by Clyde Tombaugh in 1930, Pluto was regarded as a major planet. The public were invited to propose names for the new-found world. Pluto, after the Roman god of the Underworld, was suggested by 11-year-old Venetia Burney.

*New Horizons* spacecraft images of Pluto show Pluto has a complex icy surface. There are extensive and usually smooth plains as well as darker and more rugged areas. The plains lack impact craters, implying they formed compatibly recently when some fluid material escaped from under Pluto's surface. This is evidence for an ocean beneath Pluto's frozen crust.

Astronomers determined that Pluto is smaller than our own Moon and has an elongated orbit significantly inclined to the "Ecliptic", the plane all the planets orbit on. Other objects like Pluto, including Eris and Makemake, with similar orbits were found. In 2006, astronomers voted to create a new definition of planet to exclude Pluto and other small worlds. Pluto and similar bodies which do not match the criteria to count as planets were placed in a new category of dwarf planet.

## Night Sky App Essential Settings

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

### Turn On these Effects:

Show Trajectories and Orbits  
Environment Based Horizons  
Show Ecliptic Line

### Turn Off these Effects:

Show Satellites  
Daytime Effect  
Real Sky Representation  
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

