

Unit 12: Mysteries of Pluto

Narrator: At the edge of our solar system, lies the dwarf planet, Pluto. It's located within the Kuiper belt—an area filled with thousands of small icy celestial bodies. While it's one of the largest objects in the Kuiper belt, Pluto is only half as wide as the United States and about two-thirds the size of Earth's moon. It takes two hundred and forty-eight earth years to orbit the sun. And it does so from a distance of 3.6 billion miles, 40 times the space between the Earth and the sun.

This extreme distance from the solar system's main source of heat means extreme temperatures for Pluto, ranging between minus two hundred and twenty-six and minus two hundred and forty degrees Celsius. Due to the frigid temperatures on Pluto's surface, its core, made of rocks and metals, is covered with a mantle of ice.

And its crust is made of rock material and layers of frozen gases. These frozen gases cover Pluto's surface which stretches over 6.4 million square miles, making it a little larger than Russia. The icy terrain there is much like Earth's with polar ice caps, valleys, plains, and craters. But unlike Earth, Pluto has giant mountains of ice, floating on rivers of frozen nitrogen.

Pluto was first discovered in 1930, by American astronomer Clyde Tombaugh. It was named after the Roman god of the underworld, and was considered the solar system's ninth planet.

But in 2006, Pluto lost this status after objects of similar size to Pluto were discovered in the Kuiper belt. These discoveries caused scientists to re-consider Pluto's status as a planet.

They decided that a true planet, has to: orbit the sun, not be a moon, have enough mass to form a round shape, and also be able to clear its own path of orbit of debris. This, Pluto cannot do. So, Pluto was removed from our list of true planets and re-classified as a dwarf planet.

Pluto's story represents our continuing search for new discoveries and our ever-changing understanding of the universe.