

NAME _____

ABOUT URANUS ♃



Uranus is the seventh planet from the Sun. It is named after the ancient Greek god of the sky, who was the father of Cronus (Saturn) and grandfather of Zeus (Jupiter). Though it is visible to the naked eye like the five classical planets, it was never recognized as a planet by ancient observers because of its dimness and slow orbit. Uranus has 27 known natural moons. The names for these moons are chosen from characters from the works of *Shakespeare* and *Alexander Pope*. Some of the names of these moons include *Ariel*, *Umbriel*, *Belinda*, *Titania*, *Oberon*, *Puck*, *Ophelia*, *Juliet*, and *Cupid*.

The Uranian system has a unique configuration among the planets because its axis of rotation is tilted *sideways*, nearly into the plane of its revolution about the Sun. Its north and south poles therefore lie where most other planets have their equators. Uranus has an axial tilt of 97.77° , so its axis of rotation is approximately parallel with the plane of the Solar System. This gives it seasonal changes completely unlike those of the other major planets. Other planets can be visualized to rotate like tilted spinning tops on the plane of the Solar System, while Uranus rotates more like a tilted rolling ball.

Uranus has a complicated planetary ring system, which was the second such system to be discovered in the Solar System after Saturn's. The rings are composed of extremely dark particles, which vary in size from micrometers to a fraction of a meter. Thirteen distinct rings are presently known, the brightest being the 'E' ring. All except two rings of Uranus are extremely narrow – they are usually a few kilometers wide. The rings are thought to be recently formed. The observations considered indicate that they did not form with Uranus. The matter in the rings may once have been part of a moon (or moons) that was shattered by high-speed impacts from asteroids. The numerous pieces of debris that were left as a result of those impacts were then formed into a limited number of stable zones corresponding to the present rings.

Questions about Uranus

1. What was Uranus named after? Where did they come up with the names of Uranus' moons? Which names have you heard of before?

2. What makes Uranus so different than all the other planets? What does its rotation around the Sun look like?

3. How many rings does Uranus have?

4. How did those rings form?
