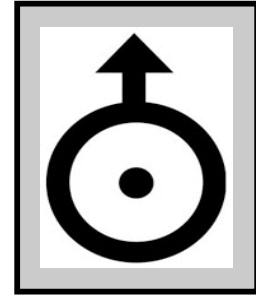


Station # 7 Uranus

(Pronounced: YOOR-a-nus)



Uranus is located 2870 million miles from the Sun, 1440 million miles from its closest neighbor Saturn, and 1630 million miles from its other neighbor Neptune.

The planet Uranus is as unusual as the planet Saturn is extraordinary.



Using the information on the Uranus Sign and the T chart below, take notes on this planet's unique characteristics. These notes are preparation for the activity that follows.

Characteristic	Information



Find-the-Fiction: Working in a small team, each person should have a number. Given the topic "*Unusual characteristics of Uranus*", each team member should write three statements about Uranus - two that are true and one that is fiction. When students are ready, the group leader will call a number and that team member will read their statements to the other teammates. Every other person in the group will hold up 1, 2, or 3 fingers to indicate his/her guess. When everyone has guessed, the author may reveal which statement is fiction. The group leader will then call another number at random so that group member can read their statements. This process should continue until all team members have had the opportunity to read their own statements.



Uranus Station # 7

Unusual...

- ✓ **Discovery** - Discovered accidentally by William Herschel in 1781, Uranus was the first planet detected by using a telescope.
- ✓ **Magnetic field** - Uranus' magnetic field is not aligned with its poles, nor does it appear to emanate from the center of the planet. This causes its magnetic field to twist like a corkscrew!
- ✓ **Axis** - Uranus is the only planet that rotates on its side. Its 98° tilt may be the result of a collision with another large object during the formation of the solar system.
- ✓ **Seasons** - Its unusual tilt produces the strangest seasons of any planet in the solar system. During its 84-year orbit of the Sun, each pole experiences 42 years of continuous sunlight, followed by 42 years of continuous darkness.
- ✓ **Rings** - Uranus has 10 narrow rings made up of car sized particles pitch black in color. This is in sharp contrast to Saturn's bright white snowball sized particles.
- ✓ **Moons** - Twenty-six moons, named after Shakespearian characters, orbit Uranus' equator. They appear to us as either orbiting in a target pattern or vertically up and down depending on Uranus' location in its orbit.
- ✓ **Atmosphere** - Uranus' beautiful blue-green color is due to small amounts of methane in its atmosphere. Peering into its virtually featureless cloud surface would be like looking into a lifeless, bottomless ocean.

Uranus Interior labels

Outer envelope - Hydrogen, helium and methane gasses.

Mantle - Rich in water, methane, and ammonia under high temperature and pressure.

Core - Rock and ice equal to about one Earth mass.

Uranus' Rings

This false color image was generated from Voyager 2 frames.

The real color of the rings are neutral gray and they are dark as charcoal.

Miranda, a Strange Moon

A mere 300 miles wide, Miranda has the most bizarre geology of any world in the solar system. It appears to have been blown apart and then reassembled, but more likely, its features are the result of fractures and eruptions of ice. Astronomers have called it "A world put together by committee."

