

## Why Pluto is No Longer a Planet

Quickly now: How many planets are there in our solar system?

If you were awake during any science class from the second grade on, you know the answer to that question is nine. More people are probably aware of the number of planets in our solar system than are aware of the number of continents on Earth. That number is seven.

But there are not as many planets in the solar system as they used to be. No, none of them flew off into interplanetary space nor fell into the sun.

In 2006, the International Astronomical Union came up with a new definition for planet. The proposal did not really change the official definition, since there has never actually been an official astronomical definition of the word, only a popular one.

It seems rather unusual for scientists to have never officially defined a term they have used for hundreds of years, but so it is with planet. But a committee of the IAU has finally proposed a definition for planet, and it leaves one of our the original planets out.

Every school child from now on will have to learn that there are eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.

That's right; Pluto has been downgraded by the new planetary definition. It is now called a pluton, a new term that defines an object that is larger than a comet or an asteroid, but not big enough to be a full-fledged planet.

Most students learned that Pluto has a single moon, called Charon. But that also has changed. Since Charon and Pluto are so similar in size and they both orbit a common center of gravity that is in space between the two bodies, the correct term for the pair will be a double pluton.

The asteroid Ceres is also now a pluton, as is the newly discovered planetary object orbiting far beyond Pluto, unofficially named Xena. At least a couple dozen other very large asteroids may be reclassified as plutons as well.

So what is the new official definition of a planet? It has to be a body that is orbiting a star and be big enough to have enough gravity to hold itself together as a sphere.

Our solar system will now be taught as the sun, around which orbit eight planets, four plutons, and hundreds of thousands of comets and asteroids.

## NOTES AND QUESTIONS:

1. How many planets are there now? \_\_\_\_\_ List them in order starting with the closest to the sun.
2. Which planet was reclassified?
3. What is the new term for a body that is not big enough to be a planet but too big to be an asteroid?
4. How many of these new kinds of objects are there in the solar system?
5. What world organization redefined the term planet?
6. When did the reclassification take place?
7. What is the name of the newly-discovered pluton that orbits farther out than Pluto?
8. How many comets and asteroids are there in our solar system?
9. In the new definition of planet, there are two criteria that must be met in order to be called a planet. What are the two things?
10. Our Moon is an object that is large enough for its own gravity to hold it together as a sphere. Would the Moon now be classified as a planet? \_\_\_\_\_ Explain.