

## **Read the following and answer the questions that follow.**

The following is an extract from the National Geographic News Web Site. It was written on Aug 26<sup>th</sup>, 2006 by Mason Inman.

### **Pluto Not a Planet, Astronomers Rule**

Pluto has been voted off the island.

The distant, ice-covered world is no longer a true planet, according to a new definition of the term voted on by scientists today.

"Whoa! Pluto's dead," said astronomer Mike Brown, of the California Institute of Technology in Pasadena, as he watched a Webcast of the vote. "There are finally, officially, eight planets in the solar system."

In a move that's already generating controversy and will force textbooks to be rewritten, Pluto will now be dubbed a dwarf planet.

But it's no longer part of an exclusive club, since there are more than 40 of these dwarfs, including the large asteroid Ceres and 2003 UB313, nicknamed Xena—a distant object slightly larger than Pluto discovered by Brown last year.

"We know of 44" dwarf planets so far, Brown said. "We will find hundreds. It's a very huge category."

A clear majority of researchers voted for the new definition at a meeting of the International Astronomical Union (IAU) in Prague, in the Czech Republic. The IAU decides the official names of all celestial bodies.

The tough decision comes after a multiyear search for a scientific definition of the word "planet."

The term never had an official meaning before.

#### **What Is a Planet Today?**

According to the new definition, a full-fledged planet is an object that orbits the sun and is large enough to have become round due to the force of its own gravity. In addition, a planet has to dominate the neighborhood around its orbit.

Pluto has been demoted because it does not dominate its neighborhood. Charon, its large "moon," is only about half the size of Pluto, while all the true planets are far larger than their moons.

In addition, bodies that dominate their neighborhoods, "sweep up" asteroids, comets, and other debris, clearing a path along their orbits. By contrast, Pluto's orbit is somewhat untidy.

The new definition also establishes a third class of objects that orbit the sun—"solar system bodies," which would apply to many asteroids, comets, and moons.

The new definition of "planet" retains the sense that a true planet is something special.

"It's going to be hard to find a new planet," Brown said. "You'd have to find something the size of Mars. Finding a new planet will really mean something."

#### **Disgruntled**

But for now the vote is drawing some opposition. Planetary scientist Andy Cheng said the definition is ambiguous, because it hasn't answered the question "how round is round?"

"This will be an issue in the future," Cheng said. "Dozens of objects are going to be straddling this line. The new definition is not going to help us with this."

#### **Not Universal**

Richard Conn Henry is an astrophysicist at Johns Hopkins University in Baltimore, Maryland. He says he never considered whether Pluto should be a planet until a few years ago. But when the planetarium at New York City's American Museum of Natural History removed Pluto from the ranks of the planets, it got him thinking.

"This tiny thing in this oddball orbit—a planet? Give me a break!" Henry said. "I think that, when the dust settles, people will recognize that there really are just eight planets."

## Graphic Organizer for Persuasive Paragraph

Topic Sentence (state your opinion)

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Reasons to Support Your Opinion

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Closing Sentence (restate your opinion)

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**Both Sides Now - Template for Making Judgements**

<b>Both Sides Now</b>		
<b>Evidence that Supports</b>		<b>Evidence that Opposes</b>
	<b>Question or Statement</b>	
<b>Decision</b>		
<b>Reasons</b>		

