Pluto May Be a Comet, New Research Suggests

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Category : Science/Environment

Unlocking Word Meanings

Read the following words/expressions found in today's article.

1. ***accumulate*** / **əˈkjumjəˌleɪt** / (v) – to collect something
   Example: Make sure to clean your workstation so that dirt will not ***accumulate***.
2. ***coalesce*** / **ˌkoʊəˈlɛs** / (v) – to merge or gather together
   Example: Several scientists ***coalesced*** into a research team.
3. ***conflict with (something)*** / **kənˈflɪkt wɪθ, wɪð** / (idiom) – to disagree or contradict with something
   Example: I do not believe in the theory because it ***conflicts with*** the evidence that I found.
4. ***contradiction*** / **ˌkɑn·trəˈdɪk·ʃən** / (n) – something that is different from another thing
   Example: There is a ***contradiction*** between the results of the first and second experiments.
5. ***celestial body*** / **səˈlɛstʃəl ˈbɑdi** / (n) – a natural object in outer space
   Example: The sun and moon are ***celestial bodies***.

Article

Read the text below.

A new study suggests that Pluto may be a giant comet—an object in space that consists of ice—rather than a "dwarf planet."

Scientists from the Southwest Research Institute explored this possibility by comparing existing data. These data include information from NASA's New Horizons, the first spacecraft to travel to Pluto, and from the 2004 Rosetta mission that traveled to a comet called 67P.

The scientists discovered that the amount of nitrogen in Pluto is consistent with the estimated nitrogen levels of billions of comets that could have formed Pluto.

Thus, the scientists developed the theory "cosmochemical model of Pluto formation." This theory suggests that Pluto **accumulated** nitrogen when the surrounding comets **coalesced**. Nitrogen—one of the earliest chemicals in the solar system—was also found in comet 67P.

However, Pluto's low carbon monoxide levels **conflict with** the theory. This is because comets usually have high carbon monoxide levels. Despite this **contradiction**, the researchers suggested that water may have either destroyed carbon monoxide or trapped it in ice. They also hypothesized that there may be an ocean buried under Pluto's icy surface.

Despite this new theory, Pluto's status remains under debate. Arguments on its status as a planet began in 1992 when scientists discovered many **celestial bodies** of similar size in Pluto's area. In 2006, Pluto was reclassified as a "dwarf planet," which describes a celestial body that resembles a planet but does not possess its technical characteristics.

With more data on Pluto, scientists hope to answer more questions about it.

Viewpoint Discussion

Enjoy a discussion with your tutor.

Discussion A

• Do you think it is important to confirm Pluto's status as a dwarf planet? Explain.

• In your opinion, should scientists invest more in learning about other planets? Why or why not?

Discussion B

• Why do you think developing scientific theories is important?

• Do you easily believe scientific theories? Why or why not?

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