

Science Time

Program Content for March 22, 2017

Read the article “Pluto-huggers” push to restore planetary status’ on page A5 of the Saturday, March 18, 2017 edition of The Seattle Times.

Objective

- I can determine Pluto’s planetary status

Next Generation Science Standards (NGSS) connection

Disciplinary Core Idea - Earth and the Solar System

- Kepler’s laws describe common features of the motions of orbiting objects, including their elliptical paths around the sun. Orbits may change due to the gravitational effects from, or collisions with, other objects in the solar system.

Pre-reading and Vocabulary: Define each term and then use it in a sentence to demonstrate your understanding.

1. orbit
2. cosmic
3. astronomer
4. debris

Comprehension Questions

1. How long ago was Pluto “ejected” from being a planet?
2. How many planets are between Pluto and the sun?
3. Pluto is no longer a planet. Instead it is now called a _____.
4. If Pluto is adopted as a planet under the proposed new rules how many total planets would there be in our solar system?
5. Why has Pluto’s popularity increased in recent years?
6. What was the vote tally for and against Pluto remaining as a planet in 2006?
7. What is the International Astronomical Union (IAU) definition of a full planet?
8. What is the relationship between a planet’s slingshot force and distance from the sun?
9. How is the scientific community split between the identity of Pluto?
10. What characteristic about Pluto does Dr. Brown believe led people to falsely believe that Pluto was a planet for 75 years?
11. What does scientist K. Runyon propose for the new definition of a planet?

Prompts and Extensions

1. Split your class into astronomers (Pluto is not a planet) and planetary scientists (Pluto is a planet). Have each side research the position of each scientific discipline and use evidence and reasoning to argue whether or not Pluto’s planet status should be reinstated. This can be done in the form of a debate or trial.
 - Use this [article](#) to help research why Pluto is not a planet
 - Use this [article](#) or [this one](#) to help research why Pluto should be a planet
2. Watch the Stephen Colbert, Neil deGrasse Tyson [interview](#) mentioned in the article you just read about the NASA flyby and reasons why Pluto should not be categorized as a planet.

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3. Explore NASA's [webpage](#) dedicated to Pluto where you can view images, watch videos, and read articles about the 2015 flyby; don't miss the short video showing you what it might be like to land on Pluto's surface.

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