

Science Time

Program Content for April 19, 2017

Read the article 'New evidence of potential for life on ocean world' on page A2 of the Friday, April 14, 2017 edition of The Seattle Times.

Objective

- I can explain the role the Cassini spacecraft has played in exploring the search for life in outer space.

Next Generation Science Standards (NGSS) connection

Crosscutting Concept - *Connections to Nature of Science*

- Science assumes that objects and events in natural systems occur in consistent patterns that are understandable through measurement and observation.

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

1. geyser
2. microbe
3. vapor

Comprehension Questions

1. What did NASA's Cassini spacecraft detect near Saturn?
2. What do scientists think might be the cause of the geysers on Enceladus?
3. Is there life on Enceladus? Explain.
4. Describe what Enceladus looks like?
5. What does the presence of hydrogen near Enceladus suggest to scientists?
6. How was the hydrogen on Enceladus discovered?
7. What do the discovery of hydrogen and carbon dioxide on Enceladus suggest?
8. For how long has the Cassini spacecraft been circling Saturn?
9. What type of life do scientists hope to find on Enceladus?
10. Describe how the Cassini mission will come to an end.

Prompts and Extensions

1. Watch this NASA [video](#) detailing how Cassini collected data from Enceladus and how it is being interpreted by scientists.
2. Explore Cassini's dedicated [website](#) to learn more about its mission and view stunning images and videos of its discoveries. This [link](#) will send you directly to a page dedicated to Enceladus, Saturn's "Ocean Moon."
3. The article you just read stated, "Cassini has no instruments that can detect life, so it will be up to future robotic visitors to seek out possible life on Enceladus." Based on what you read in the article do you think future visits to Saturn to search for life are worthwhile? List the evidence from the article that would make a future visit a worthwhile venture. Brainstorm a list of ideas why it may not be such a good idea.

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