

Science Time

Program Content for March 8, 2017

Read the article 'Fossils may show life on Earth got off to a very early start' on page A3 of the Thursday, March 2, 2017 edition of The Seattle Times.

Objective

- I can explain the evidence for and against the discovery of 3.7 - 4.2 billion year old bacteria fossils.

Next Generation Science Standards (NGSS) connection

Connections to Nature of Science

- Science findings are frequently revised and/or reinterpreted based on new evidence.

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

1. fossil
2. paleontologist
3. hydrothermal vent
4. evolution
5. filament

Comprehension Questions

1. What did researchers report about a recently found fossil?
2. What evidence might this recent discovery reveal about Earth?
3. Why did one scientist call the patterns in the rocks discovered, "dubiofossils"?
4. How old were the fossils discovered in Greenland that scientists argued were once mats of bacteria?
5. How old is the geological formation Nuvvuagittuq?
6. Around what type of geological formation did Nuvvuagittuq form around?
7. What two (2) hints of life were found around Nuvvuagittuq?
8. What two (2) big implications might the discovery of life at Nuvvuagittuq have for the understanding of life's early evolution?
9. Why are some scientists unsure that the fossils found in Nuvvuagittuq rocks are actually bacteria? List two (2) reasons.

Prompts and Extensions

1. Watch this [video](#) from the scientists who discovered what may be the earliest signs of life ever discovered on Earth. This resource may also be used as a way to prepare and engage students prior to reading this week's Science Time article.
2. Read about the discovery of the 3.7 billion year old fossils discovered in Greenland that were mentioned in this article [here](#) and the 3.4 billion year old fossils [here](#).
3. Watch this [TedTalk](#) about how life may have begun on Earth and the dividing line between living and non-living things.
4. Learn a bit more about bacteria cells using this [interactive simulation](#).

Science Time is posted to the Web on Wednesdays. Please share this NIE Science Time program with other teachers. To sign-up for the electronic edition for your class, please register

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