Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period: \_\_\_\_\_\_\_

**AoW #1-6 Life Beneath Frozen Anartic**

**Read** and **thoroughly connect to the entire** article by generating connections, questions, inferences, and visuals in the margin.

* **Answer** the **4 questions**.
* **Complete the GIST activity.**
* **Write** a **two paragraph reflection** following the following guidelines:

**First paragraph** – Objective summary

**Second paragraph** – Connect the article to our unit

***Check for spelling and grammar!***

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirement** | **Points** | **Student Evaluation** | **Teacher Evaluation** |
| I have provided a **variety of thoughtful annotations** for the entire article. | 20 |  |  |
| I have answered the **4 comprehension questions** using textual evidence if applicable. | 20 |  |  |
| My **first paragraph is an objective summary**. It is evident that I followed the 6 steps for writing an objective summary. | 25 |  |  |
| My **second paragraph connects the article to our EitO unit**. I cited specific evidence from the text that I feel relates to our unit. | 25 |  |  |
| I have **minimal grammatical and spelling mistakes**. | 5 |  |  |
| **Gist** of article | **5** |  |  |
| Total |  |  |  |

# 

# What life lies beneath the frozen Antarctic has scientists curious

By Agence France-Presse, adapted by Newsela staff

Grade Level **7** 09/14/2017

A secret world of animals and plants – including unknown species – might live in warm caves under Antarctica's glaciers, scientists said last week.

The caves have been hollowed out by steam from active volcanoes, researchers said. They also said the caves have light and could reach temperatures of 77 degrees Fahrenheit (25 degrees Celsius). This means a whole ecosystem of flora and fauna, or plants and animals might live deep beneath the frozen surface.

The study, led by the Australian National University, showed extensive cave systems around Mount Erebus. Erebus is an active volcano on Ross Island in Antarctica.

## New Plant, Animal Species Could Be Discovered

Lead researcher Ceridwen Fraser said they used scientific analyses of soil samples from the caves. The analyses revealed interesting traces of DNA from sea plants, mosses and small animals.

Most of the DNA was similar to mosses, sea plants and invertebrates found elsewhere in Antarctica. However, not all the sequences of DNA could be fully identified.

Fraser said the study offered an enticing glimpse at what might live beneath Antarctica's ice. "There might even be new species of animals and plants," Fraser said.

"The next step is to go and have a really good look and see if we can find communities living beneath the ice in Antarctica," she added.

## Antarctic T-shirt Weather

Despite the continent's freezing temperatures, Fraser said heat from the volcanoes could reach the caves. This might make them capable of hosting life. Light also can filter deep down where the ice is thin. It might be warm enough "to wear a T-shirt and be comfortable."

Co-researcher Charles Lee is from the University of Waikato in New Zealand. Lee said there were many other volcanoes in Antarctica. Therefore, subglacial cave systems could be common.

Researchers have yet to find out how common the underground caves are in Antarctica. "We don't yet know just how many cave systems exist around Antarctica's volcanoes, or how interconnected these subglacial environments might be," he said.

"They're really difficult to identify, get to and explore," Lee added.

## Exploration Will Not Be Easy

The research was published in the international journal Polar Biology. It said more than 15 volcanoes in Antarctica are either currently active or show evidence of recent activity, with new ones still being found.

But despite recent advances in understanding Antarctic biodiversity, scientists still know "little about life in the continent's subglacial cave systems." These systems might be home to a variety of diverse animal and plant communities.

Researchers want to keep studying ice caves to find more animals and plants. "Our results highlight the importance of investigating these cave systems in greater detail to confirm the presence of living macrobiota," the research said about the difficult exploration.

QUESTIONS:

1. Read the following statement.

***According to the author, scientists have found evidence that Antarctic cave systems may support life*.**

Which sentence from the article provides the BEST support for the above statement?

A. They also said the caves have light and could reach temperatures of 77 degrees Fahrenheit (25 degrees Celsius).

B.The analyses revealed interesting traces of DNA from sea plants, mosses and small animals.

C. Fraser said the study offered an enticing glimpse at what might live beneath Antarctica's ice.

D. Despite the continent's freezing temperatures, Fraser said heat from the volcanoes could reach the caves.

2. Which paragraph from the section "Antarctic T-shirt Weather" that explains something the researchers still do not know?

3. Read the introduction [paragraphs 1-4].

Which phrase from the paragraph helps you understand what the term "ecosystem" refers to in the article?

A. world of animals and plants

B. unknown species

C. beneath the frozen surface

D. extensive cave systems

4. Read the paragraph from the section "New Plant, Animal Species Could Be Discovered."

***Fraser said the study offered an enticing glimpse at what might live beneath Antarctica's ice. "There might even be new species of animals and plants," Fraser said.***

How does using the word "enticing" affect the tone of the sentence above?

A. It conveys a sense of excitement.

B. It conveys a sense of enjoyment.

C. It conveys a sense of excellence.

D. It conveys a sense of confidence.

**Get the GIST**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Source \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Read the article or section of text.
2. Fill in the 5 Ws and H.

Who:

What:

When:

Where:

Why:

How:

3. Write a 20-word GIST summary.

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