

Student Discussion Worksheet

Directions: Discuss and answer the following questions about the online *Science News* article "[Earth's oceans are storing record-breaking amounts of heat](#)." A version of the story, "Earth's oceans broke heat records in 2020," appears in the February 13, 2021 issue of *Science News*.

Define the claim and supporting data

Answer the following questions individually before discussing them with a partner.

1. What claim does the article make about the ocean?

2. What data, or evidence, is given to support the claim?

Communicate the findings

Discuss the following questions with a classmate. Write down your thoughts and be prepared to share your answers with the class.

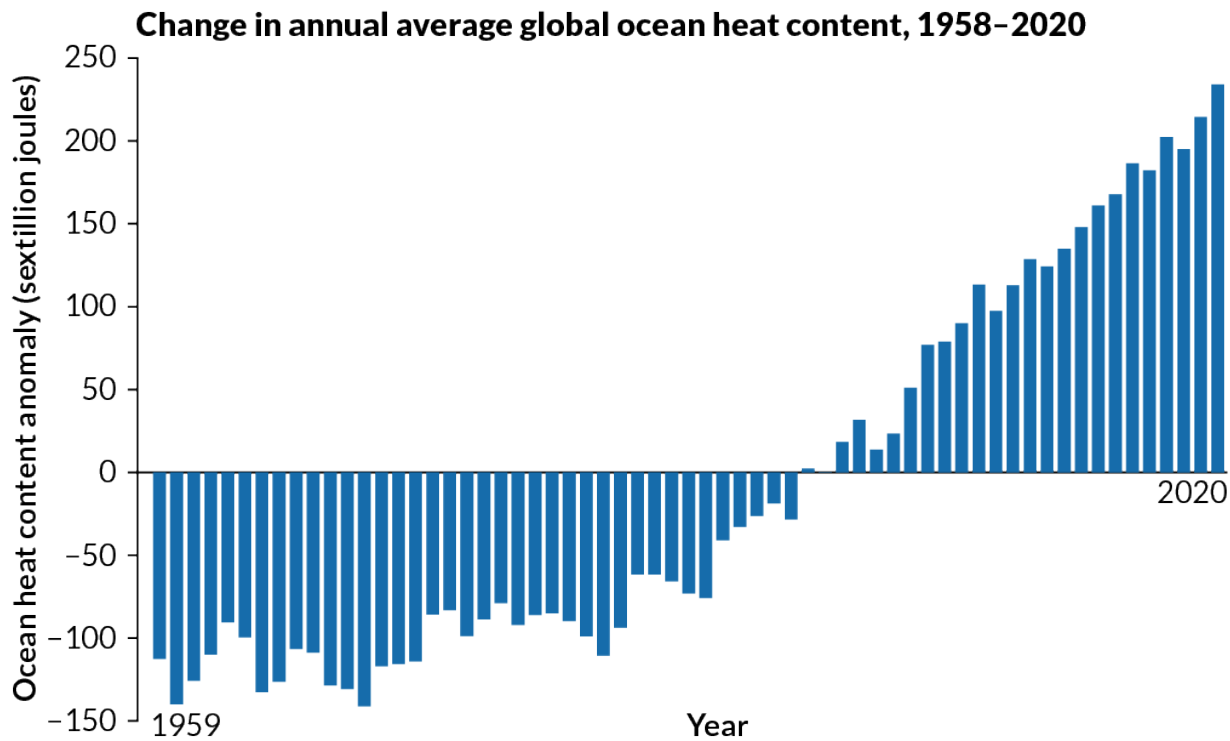
1. What analogy did scientists come up with to describe their findings? What information was likely needed to create the analogy?

2. Based on the information given in the article, can you figure out the calculation used to come up with the analogy? What assumptions do you have to make? Explain.

3. Does the analogy present the relevant data in a way that supports the claim? What usefulness do analogies have in communicating concepts? Explain.

Display the data

The graph below appears with the story in the February 13, 2021 issue of *Science News*. Study the graph and discuss the following questions with a partner. Be prepared to turn in your answers to your teacher.



SOURCE: L. CHENG ET AL/ADVANCES IN ATMOSPHERIC SCIENCES 2021

1. What information was needed to create the graph? Describe how that information is displayed on the graph.

2. What overall trend in data does the graph display? Does the graph's design present the relevant data in a way that supports the claim? Explain.

Analyze the strategies

Discuss the following questions with a classmate. Write down your thoughts and be prepared to share your answers with the class.

1. Did you find the analogy or the graph more beneficial to your understanding? Is it effective to pair the strategies? Explain.

2. What other strategies could be used to communicate the findings to the public?

Extension: A new alternative

Propose an alternative method of displaying or explaining the oceanic heat data described in the *Science News* article. Or, create your own analogy for another *Science News* article that appears in the February 13, 2021 issue. The analogy should communicate the magnitude of quantitative data used to support a scientific claim.

