Kim Wilson
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In her New York Times article, **TRILOBITES *In Coral Skeletons, Microscopic Portraits of Resilience?,*** Steph Yim seeks to present the findings of science in a clear and unbiased manner. She meticulously cites her sources with direct links to articles related to her findings, presents two sides to the topic of coral reef calcification, and carefully articulates each position with verbiage like 'may possibly', 'given current projections', and 'suggested'.

Part A.

• Scientific Investigations Use a Variety of Methods

Lim not only connects the reader to the two methods being used to present the findings of the research on coral reef calcification, but she also cites outside contending scientific sources as well, while recognizing that they did not participate in the research study:

"When we precipitate aragonite in the lab, just in a bucket of seawater, it forms this very characteristic pattern with very long, needle-shaped crystals," said Nicola Allison, a lecturer in earth sciences at the University of St. Andrews, who did not participate in the research.

Alex Gagnon, an assistant professor of oceanography at the University of Washington who was not involved in the research, suggested it was an oversimplification to take seawater chemistry out of the equation.

These citations give the reader a broader view of all of the methods and findings of this research.

• Scientific Knowledge is Open to Revision in Light of New Evidence

Early in the article, Lim acknowledges that scientists have been arguing the importance of the process of calcification in coral for decades. She asserts the latest study as support of one of the debated positions on the topic: *The findings suggest that coral may be more robust in the face of human-driven ocean acidification than commonly thought.* Though this makes it appear that science is open to revision, no fast conclusions have been made through this study, and the debate continues.

• Science Addresses Questions about the Natural and Material World

The research study cited in this article is seeking to find the answers as to what impact acidification in the world's oceans, climate change, and carbon emissions are having on the world's coral reefs, as reef health is essential to the health of the entire ocean.

Part B. Select 3 of the practices in Common Core Mathematics Practices and write a brief analysis of how the article meets the math practice

• Make sense of problems and persevere in solving them

"The problem is, we have lots of data that show many coral species are very sensitive to environmental change," said Alexander Venn, a senior scientist at the Scientific Center of Monaco, who was not involved in the study.

Because of the importance of the world's coral reefs to the entire ocean ecosystem, and because of the impending worldwide impact of carbon emissions on the environment, this is a problem that requires careful exploration. Scientists involved in this research have been looking to see what impact these emissions are having on coral. Though evidence from this research study seems to show that coral reefs may not be as impacted from ocean acidification, the inaction this could promote in the scientific community could be detrimental to the world's reefs if this study is inaccurate. Yim presents all sides of this argument to demonstrate that.

• Reason abstractly and quantitatively

Scientists involved in this research are accountable to looking at all of the evidence and data. Yim presents the argument from Alexander Venn to show that there has been data from multiple studies, not just this one. She cites the techniques used by Dr. Falkowski to study smooth cauliflower coral, and acknowledges the limitations of what scientists understand about the formation of coral.

• Construct viable arguments and critique the reasoning of others

This article shares the many facets of the research and arguments about the resiliency of coral reefs. Yim pulls from information from scientists participating in this particular research study, and even quotes the critiques of certain research studies presented by other scientists: *Alex Gagnon, an assistant professor of oceanography at the University of Washington who was not involved in the research, suggested it was an oversimplification to take seawater chemistry out of the equation.*