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Nature of Science/Nature of Math Assignment

Article: <https://www.newsweek.com/earth-massive-die-off-dinosaur-extinction-1457228>

The article “TWO BILLION YEARS AGO, UP TO 99 PERCENT OF LIFE ON EARTH DIED IN AN EVENT MORE CATASTROPHIC THAN MASS EXTINCTION OF THE DINOSAURS” by Hannah Osborne discusses a recent discovery about a mass die-off on our planet billions of years ago that was larger than the dinosaur extinction. This article has some ideas that represent the nature of science correctly as well as some ideas that incorrectly represent the nature of science. The article brilliantly explains *how* scientists came to this particular conclusion or discovery. The author explains in detail how fossils were used as data and then analyzed to use as evidence to help them explore the idea of this mass extinction. The article goes in depth about what the evidence means and how it led scientists to discover this mass die off. Like the “Understanding How Science Really Works” website states “there are *many* ways to test almost any scientific idea; experimentation is only one approach. Some ideas are best tested by setting up a [controlled experiment](#) in a lab, some by making detailed observations of the natural world, and some with a combination of strategies”(Understanding Science, 2019). This article by Osborne is impressive in that it shows people another method used in science other than just experimentation in a lab. For example Osborne states “an international team of scientists examined rocks from Hudson Bay, Canada, that would have formed billions of years ago. They were looking at barite, a mineral that holds information about

how much oxygen was in the atmosphere at a given time” (Osborne, 2019) .It focuses on the methods used to obtain the information, not just the information itself. The article also uses a great deal of percentages to enhance their point and help people understand the magnitude of their discovery. According to the NGSS Appendix L, this is something students should be able to do by 6th grade.

The article also incorrectly represents some of the beliefs of the nature of science. There is no discussion of the fact that in science there can never be 100 certainty. Osborne presents the information as if it is 100 percent factual without any doubt or uncertainty. In reality science is always changing and new data is always being discovered to help us understand our world. Like the “Understanding Science, How Science Really Works” states “scientists are constantly elaborating, refining, and revising established scientific ideas based on new evidence and perspectives” (Understanding Science, 2019). The article should be more clear about the new information discovered and how scientists are constantly gathering new data and discovering new information.

Citations:

Osborne, H. (2019, September 2). Two billion years ago, up to 99 percent of life on Earth died in an event more catastrophic than mass extinction of the dinosaurs. Retrieved from <https://www.newsweek.com/earth-massive-die-off-dinosaur-extinction-1457228>

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