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Lessons From The Ocean 3/14 Live session

Reflection

This Lesson from the Ocean was focused around Physical and Geo science. Because I primarily teach Life Science, I am on the lookout for ways to integrate physical and earth science data and information to connect to the life science concepts, and this particular lesson from the ocean made it easy to do so.

Right out of the gate, we learned about LIGHT. Yes, light and its wave mechanics is a topic more frequently found in a physics textbook, but as the primary source of energy in a food web, light energy also finds its way into the Living Environment curriculum when we talk about photosynthesis. I particularly liked the light penetration visual that was presented. Talking my students through what is presented in the chart (that different wavelengths of light penetrate to different depths of the ocean) would be an engaging way to start an inquiry-based lesson where they hypothesize about where to find algae, phytoplankton, and other aquatic plant life. Elsewhere in the life science curriculum, when we discuss adaptations for survival, it would be interesting to revisit this light penetration visual and see if students are able to make connections that piece together the camouflage adaptations organisms have to survive at various depths of the ocean, based on the available light.

When the Life Science curriculum investigates early life on Earth, (notably Miller & Urey's experiments about how organic molecules potentially could have arisen from non-organic molecules found on primitive Earth), the data from CTD profiles (conductivity, temperature, depth) could be used to help students construct explanations (Science and Engineering Practices).

This live session concluded with a great demonstration of the difference between Glacial melt and Iceberg melt, and how one contributes more to sea level rise than the other. I think this was a powerful visual for students to make a better understanding of cause and effect (Cross Cutting Concept). Of course, Climate Change is a large part of the Living Environment curriculum, and using examples from the ocean will enable students to make comprehensive conclusions. Having access to temperature data for the ocean, whether from satellite maps or from CTD profiles, students will be able to analyze and interpret data (SEP), and ultimately be empowered to design solutions!