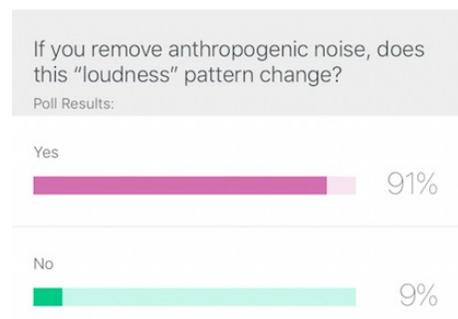
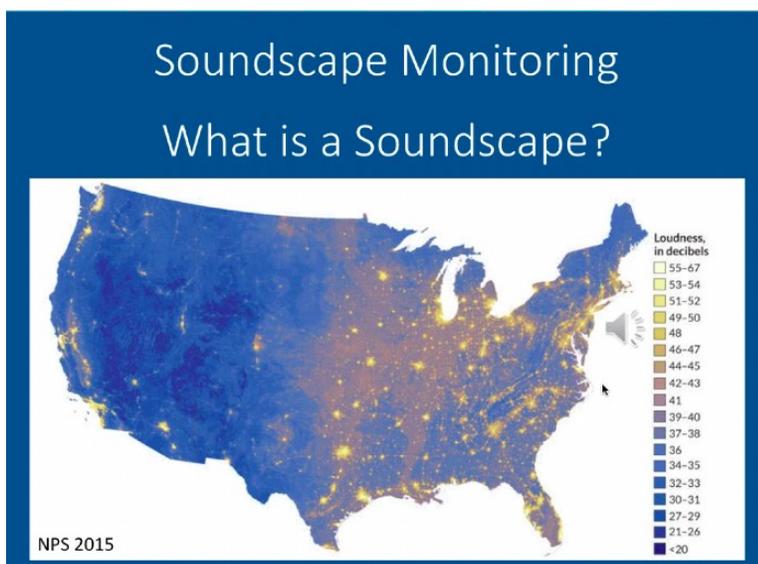


Kate Macaulay Webinar Reflection

On April 9th, I had the pleasure of attending the “Listening to “See” Beneath the Waves: Soundscapes in Channel Islands National Marine Sanctuary,” webinar by Dr. Lindsey Peavey Reeves, a Research Specialist for NOAA’s Channel Islands National Marine Sanctuary. Given the time of the webinar I wasn’t able to include my students, but children who are 10 years old and 6 years old attended the webinar with me. We all found it incredibly interesting, thought provoking and my children really loved the interactive questions embedded into the presentation.

Dr. Peavey began the presentation by showing a loudness map of the united states. We observed that the loudest areas were in and around cities. Dr. Peavey asked the attendees whether removing anthropogenic noise would change the patterns on the map.



Most people answered incorrectly, which introduced us to the idea that humans and human activity are not the only producers of sound. In addition to humans, there are biological sounds, and

geophysical sounds. Geophysical sounds include the sound of water movements over the surface of the Earth. To illustrate how all of these sounds manifest underwater, Dr. Peavey shared this informative image of two right whales trying to communicate with one another through the other noises of the ocean.

Dr. Peavey shared the website: <https://dosits.org/> Discovery of Sound in the Sea which houses an audio gallery of underwater sounds ranging from the familiar, whales, to the unfamiliar, snapping shrimp.

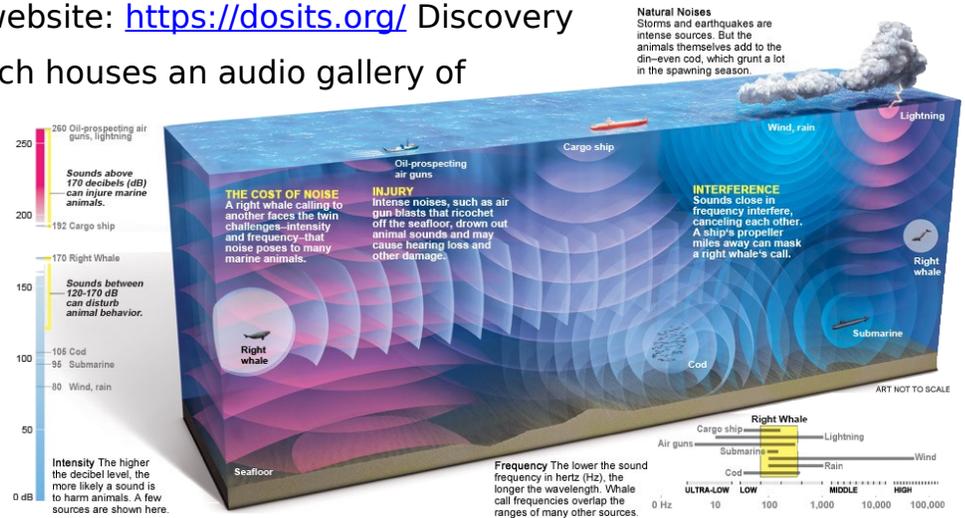
As part of Dr. Peavey's research, she monitors underwater

sound in a variety of noise reference stations located in the Channel Islands Marine Sanctuary. She and her team are hoping to better understand how marine animals are affected by the non-biological noises that are polluting the waters near the Channel Islands. To do this, they first had to collect baseline data on the ambient noise of the area so that they can have a basis for comparison. These studies could lead to innovation around technology and procedures, for safer fishing, shipping, drilling, and military testing practices. This brought to mind an article that I read recently in the NYTimes, "Oceans Are Getting Louder Posing Potential Threats to Marine Life,"

<https://www.nytimes.com/2019/01/22/science/oceans-whales-noise-offshore-drilling.html>

In addition, soundscape data could be compared to climate change data and therefore help to round out the picture of what is happening to marine animals as the sea temperatures rise.

My 5-year-old and 9-year-old were both extremely interested and curious about the topic of underwater sound. I could certainly see using the resources that Dr. Peavey provided to augment the ACES curriculum. It will help to create a more well-rounded picture of what's actually going on under the water and what animals are contending with as they migrate, look for food, and look for mates. As students present about their marine animals, they could create a soundscape to represent some of the sounds found in that animal's underwater environment. The idea of soundscapes could also



be a great point of integration for a STEAM challenge incorporating in the study of sound frequencies.