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Missed Live Session 6-21-22

The website for APA formatting is a tremendously helpful resource, especially for those of us that have been out of school for nearly a decade.

The two websites that Amy shared, NOAA Sea Level Viewer and MRLC.gov, are two additional resources that I can foresee implementing into my lessons. Both websites invite the user to explore the current and predicted phenomenon of sea-level rise. I could use this website as an opener to a lesson on climate change, having the students explore the site freely at first, then asking them to make observations, generate questions, and make predictions. One beneficial feature is the various simulations of sea-level rise in specific locations around the USA. My school is in lower Manhattan, not far from the "Fulton Street" simulation spot on the map. Students can click on the location and view a current picture from the location and then use the slider to view how the location will look depending on the height of sea-level rise. My students often ask me whether they need to worry about climate change in their lifetime. I think that using this website to see how their neighborhoods might be affected by climate change is an excellent hook for student engagement and buy-in.

As a relatively new resident of NJ, I was surprised to learn of the issue concerning the intrusion of saltwater into fresh groundwater in the southern part of the state. I have only realized that many factors and implications can arise from sea level rise. In previous years, I have focused my climate change lessons on how sea-level rise will contribute to severe flooding, impacting humans and other organisms living near or on the coast. It wasn't until recently that I began to understand the impact seawater infiltration has/will have on groundwater, contaminating reserves of vital freshwater needed for drinking and agricultural purposes. Including the contamination of freshwater as a factor of sea-level rise can shift conversations surrounding climate change to include a focus on the economic, social, emotional, and political implications.

Teaching the difference between weather and climate is critical in early education because students need a strong foundation in climate science to build their climate literacy. I am always looking for ways to simplify seemingly complex scientific concepts for my younger students. I liked the weather and climate "daily outfit vs. closet of clothes" analogy and will most likely borrow it next school year. I will be teaching 6th-grade life science this coming school year. I plan to have my students build a terrarium, keeping them in class for the remainder of the school year for students to make frequent and long-term observations about how carbon and water are cycled and recycled in a closed system indefinitely. Having students engage with a terrarium over time can extend their thinking to consider factors that might disrupt the cycling/recycling of these elements in our planet's systems.

How do we take and teach positive action regarding climate change? Policy changes must be made at the state, national, and global levels. I think it is important to teach younger students about individual efforts they can undertake (i.e., reducing their carbon footprint by recycling, turning off lights, etc.) to teach personal responsibility and instill a collectivist mindset. This will help them understand that individual action is the first step in making change. However, as children grow into young adults, they must understand the impact their decisions will have as voters, consumers, and community members. Each year, just before summer vacation, my

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school community collectively chooses a book to read in preparation for our annual "Book Day," a day in which teachers and students prepare workshops based on themes from the book. Two years ago, our middle school read Alan Gratz's "Refugee." I collaborated with a social studies teacher to present a workshop on Climate Refugees in which the students were given climate change facts and a video clip of Greta Thunberg's climate activism. We asked our students to draft a proposal to their elected representative, in which they shared their climate concerns and then asked their representative to take action. One group of students asked about imposing a carbon tax within NYC. The project allowed students to take positive action, empowering themselves as citizens of science.