Ocean in the News

Below are articles related to the ocean from mainstream media and their connections to Ocean Literacy Principles.

Article 1:

Bioplastics Could Put Some Shrimp in Your Barbie

Perkins, S. (June 4, 2018). *Bioplastics could put some shrimp in your Barbie*. *Science News for Students*. Retrieved June 23, 2018, from https://www.sciencenewsforstudents.org/blog/eureka-lab/bioplastics-could-put-some-shrimp-your-barbie

This article is related to Ocean Literacy Essential Principle #6, the ocean and humans are inextricably interconnected. Fundamental concept b states that we get foods, medicines, and mineral and energy resources from the ocean. It provides jobs and supports our nation's economy (shortened). Fundamental concept g states that everyone is responsible for caring for the ocean. Both of these concepts are important to understand in order for the reader to recognize the significance of the article.

The article describes two Intel Science Fair projects that focus on creating bioplastics. Although the article briefly addresses the harm that plastics cause in the environment and even specifically state that plastics can be found in the stomachs of fish, truly understanding 6g would help the reader to understand how important the student projects are in helping to create a solution to a major environmental problem. The way the article is written, it focuses more on the winning projects rather than the importance and value the solutions have for the future. I would like to see more discussion on what the next steps are to continue the research that was conducted.

The title of the article is a tribute to one of the projects which used the shells of shrimp along with spider silk fiber to create a bioplastic. The student used waste from seafood as part of the materials in making a material that can be used to wrap and carry food. Being ocean literate will help the reader to see the importance of the ocean providing for our basic needs but also, how we can utilize the ocean's resources wisely to minimize our harmful impacts on it.

Article 2:

Floods Kill Dozens, Displace More Than a Million in India, Bangladesh.

Floods kill dozens, displace more than a million in India, Bangladesh. (June 19, 2018). *Business Insider*. Retrieved June 28, 2018, from https://www.businessinsider.com/r-floods-kill-dozens-displace-more-than-a-million-in-india-bangladesh-2018-6?r=UK&IR=T

Essential Principle #3, the ocean is a major influence on weather and climate is addressed in this article. Several of the fundamental concepts, a-d, are important to understand the weather concepts that the article should address. EP #6, the ocean and humans are inextricably interconnected with concept f, coastal regions are susceptible to natural hazards is also very

important to understand when reading this article.

The article provides the details of how many people were killed or displaced from their homes due to heavy rains and monsoonal weather. It does state that the area where the flooding has occurred is “particularly vulnerable to storms in the rainy season, which has just begun.” Unfortunately, a person who is not ocean literate may not fully understand that this is a weather pattern that can be predicted by understanding heat absorption by the ocean and wind formation as a result of the uneven heating of Earth’s surfaces. Additionally, if EP #6f was originally considered prior to locating the dwellings, then there could possibly have been less loss as a result of the flooding.

Article 3:

SLO County is going to see a dry summer. But could El Nino come in the fall?

Lindsey, John. (June 30, 2018). *SLO County is going to see a dry summer. But could El Niño come in the fall?*. *sanluisobispo*. Retrieved July 7, 2018, from https://www.sanluisobispo.com/news/weather/weather-watch/article214131174.html

This very sciency article addresses EP #3, the ocean is a major influence on weather and climate, concept c (El Nino). Unfortunately, the article assumes a basic understanding of El Nino and weather predicting methods.

The article is surprisingly heavy on the jargon and light on explanation for the average ocean illiterate reader and for a newspaper article. Having an understanding of what SST means and how that relates to rain formation would be very valuable. Based on our class live session that discussed El Nino, I believe most people do not understand what El Nino means and how it is predicted and this article does not help. The article does not even directly address that sea surface temperatures are related to El Nino; the reader has to make that connection and if they are unaware of what SST means, they are likely to miss the connection. I think a better understanding El Nino and SST could go a long way in helping people to prepare for upcoming months, whether those be very dry or very wet.

Article 4:

Seattle Just Banned Plastic Straws and Utensils

Ayana Archie and Emily Smith, C. (July 7, 2018). *Seattle just banned plastic straws and utensils*. *CNN*. Retrieved July 8 2018, from https://www.cnn.com/2018/07/02/us/seattle-bans-plastic-straws-and-utensils/index.html

This article is related to Ocean Literacy Essential Principle #6, the ocean and humans are inextricably interconnected. Fundamental concept e states that humans affect the ocean in a variety of ways and addresses laws, regulations, and resource management that affect what is taken out and put into the ocean. Another important EP is #1, the Earth has one big ocean with many features. Fundamental concept g addresses how the ocean is connected to major lakes, watersheds, and waterways.

It is important that the reader is ocean literate in order to better understand the article because the article does not clearly explain how straws and plastic utensils contribute to the plastic pollution problem in the ocean. There is only one sentence that attempts to justify the need for the plastic straw and utensil ban, “Greenpeace says 40% of plastics in the ocean are from single-use plastics.” This sentence however, is not enough for the reader to understand the full extent of the microplastics problem. As a matter of fact, many of my family and friends think the ban is ridiculous given the size of straws and utensils. They do not understand that these single-use plastics break down into microplastics and those are a big problem. Another problem with the article for a reader who is not ocean literate, is that they do not understand why a ban would need to occur at any location not near the ocean coastline. Seattle would make sense but for a reader in a land locked area, they may not find the need important, but instead just an inconvenience. In this case, essential principle #1, fundamental concept g is important to understand.

Article 5:

Thailand Rescue: Divers start Mission to Free Boys Trapped in Cave

Steve George, C. (July 8, 2018). *Thailand rescue: Divers start mission to free boys trapped in cave*. *CNN*. Retrieved July 12, 2018, from https://www.cnn.com/2018/07/07/asia/thai-cave-rescue-intl/index.html

I was interested to hear my family and friends discuss the rescue attempt in Thailand. This highlighted to me that there was a need for people to understand EP #3, the ocean is a major influence on weather and climate, also EP #2, the ocean shapes the features of the Earth, concept b (related to cave formation), and EP #7, the ocean is largely unexplored, concepts e and f (using models and collaboration among disciplines).

Aside from the obvious, being able to predict the monsoon and impending water rise (the “dwindling window of opportunity”), being able to understand how the caves formed and how they were connected seemed to play a big role in the discussions I heard. Many people I know were confused as to how the caves could go on for so long and be so deep under the land’s surface. A key piece I took away from the discussions and news stories was the interdisciplinary work between scientists and engineers of many areas of expertise who were involved in formulating a safe rescue. This story had such a profound effect on me that I am wanting to use it in class for a project. There is a lot of science and engineering that students can learn from this.

Article 6:

What We Know About the Missouri Duck Boat Disaster

Amir Vera, C. (July 24, 2018). *What we know about the Missouri duck boat disaster* . *CNN*. Retrieved July 28, 2018, from https://www.cnn.com/2018/07/24/us/missouri-duck-boat-investigation/index.html

There are a couple of important EPs for this article. I am taking liberty here in including the lakes as part of the EPs based on EP #1, the Earth has one big ocean with many features, concept f, the ocean is an integral part of the water cycle and is connected to all the earth's water reservoirs via evaporation and precipitation processes. I also extend this liberty to EP #6, concept c, the ocean is a source of inspiration, recreation, rejuvenation and discovery. Finally, EP #3, the ocean is a major influence on weather and climate, concept f plays a part in the summer weather patterns that the central states experience.

The article mentions that "the town was under a severe thunderstorm warning issued about half an hour before the boat capsized...the highest wind gust reported in the area was 63 mph." Having an understanding of how weather can change so quickly in certain areas is important to evaluating the potential cause of this tragedy. It is also important to understand that the ocean (and large bodies of water) are key parts of recreation/vacations and livelihood for a large number of people. Many of the people on the duck boat were tourists on vacation enjoying a very popular recreational activity. The driver/captain of the duck boat also was probably concerned with losing money if he cut the tour short. I can see that having a deep understanding of all these factors will likely play a big part in any lawsuits that occur as a result of this tragedy.