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Lessons from the Ocean: Science on the Water Planet
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Fitting Algae Into the Food Web

I selected Fitting Algae Into the Food Web (*Fitting Algae Into the Food Web*, n.d.) as a starting point for my pedagogy requirements. At my new school, I will be working with grades 4 - 8. One of my goals in the STEAM lab is to support the classroom teacher by providing extensions of the lessons. Also, I had not worked through a food web in decades, so reviewing the basics with a fifth-grade approach is helpful.

The online version of the activity runs on Adobe Flash. Flash is no longer supported on major browsers. This is unfortunate as I have seen many Flash modules on the NOAA and other environmental sites. The Bigelow website (*Online Resources - Bigelow Laboratory for Ocean Sciences*, n.d.) seems to have several Flash modules. I tried two possible solutions for running Flash locally that I found on the web, but neither would let me run the online version of the activity. Fortunately, there is a pdf version of the game that can be printed and worked on paper.

This lesson supports “Essential Principles of Ocean Science” 5D (*Ocean Literacy Principle #5*, n.d.). The ocean supports a great diversity of life and ecosystems. - “Ocean biology provides many unique examples of life cycles, adaptations and important relationships among organisms (symbiosis, predator-prey dynamics, and energy transfer) that do not occur on land.”

Middle school students can complete this lesson in one class period. The lesson pace assumes prior knowledge of food webs. Cover the vocabulary discussion and lesson introduction before starting the activity. The directions provided work without modification. If the teacher does not do the cutting and organizing, this takes at least 15 minutes of the class period. This link shows the starting point for the activity. It is essential students spend time studying the Trophic table (rotate the sheet at the top of the Chrome browser) as this contains the data for organizing the web. The student is applying the data from this sheet to build the organism relationships on the web.

The beginning placements are more difficult as there is no clear place to start. Working with the clue cards makes the student guess and then try a different order. As the organisms are placed on the web, it becomes easier to make the subsequent placements since each placement reduces options. To reinforce learning, I would follow the clue card all the way through the clues (see page 2), such as (Fish - A/21, B/40, C/20…), pick up the common clue, and write this on the answer sheet. The common clue for fish is “Fish have three other predators.” The common clue for Seals is “Seals are Carnivorous. Please note this was left off the final product. This link is the final product.

My approach to this activity would be much like one of my students. I was eager to start, so I thought going through the clues was the quickest way to complete the task. After a couple of passes on the clue cards, I started using the Tropic Table and discovered this was the best way to identify the position of an organism in the food web.

References

Fitting Algae Into the Food Web. (n.d.). Retrieved June 2, 2021, from https://archive.bigelow.org/edhab/fitting_algae.html

Ocean Literacy Principle #5. (n.d.). National Marine Educators Association. Retrieved June 2, 2021, from https://www.marine-ed.org/ocean-literacy/principle-5

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