

## **Lesson Plan # 9 - An Introduction to the Ocean World**

To be taught on December 6, 2002 for Susan Bean's grade fourth grade class.

**Enduring Understanding:** The natural cycles that exist between producers, consumers, and decomposers, studied during the forest biome, can be found within the ocean biome as well. Human impact (pollution, overfishing, etc...) can both negatively and positively effect these cycles. Creating awareness of human impact can help in continuing the natural connections and cycles of ocean organisms.

(What is worthy and requiring of understanding?)

**Lesson Focus:** This lesson will focus on the organisms that exist within the ocean biome, categorizing each into producer, consumer, or decomposer. In addition, students will be placing various human actions under the headings of "hazard" or "help," illustrating how humans can impact the connections between the prior categorized organisms.

(What aspect of the "bigger picture" does this lesson address?)

### **Maine State Learning Result:**

#### ***Science and Technology***

##### **A. Classifying Life Forms**

Students will understand that there are similarities within the diversity of all living things. Students will be able to (Elementary Grades 3-4):

4. Compare and contrast the life cycles, behavior, and structure of different organisms.

##### **B. Ecology**

Students will understand how living things depend on one another and on non-living aspects of the environment.

Students will be able to (Elementary Grades 3-4):

4. Investigate the connection between major living and non-living components of a local ecosystem.

**Question:** Do producers, consumers, and decomposers exist within the ocean biome? What organisms belong under which group title? How do humans impact all of these organisms?

**Evaluation:** The final product will be a poster in which the students have grouped the given organisms. This poster can act as a means of evaluation, as it will assess whether or not the students understand what category each organism belongs under and how human actions can effect all of the organisms.

## **Method:**

### **1. Teacher Input:**

- Read *The Magic School Bus on the Ocean Floor*.
- give clear instructions on cutting, coloring, and pasting the various organisms on individual posters

### **2. Teacher Input & Guided Practice:**

- briefly review the definitions of producer, consumer, and decomposer. Ask students to recall the “web of life” that illustrated how all of these organisms are connected.
- Have students define new words, “hazard” and “help”

### **3. Independent Practice:**

- students will have to cut and paste each creature in its respective category on their individual posters (the students can color their organisms when they finish the first task, if time allows). The students will also have to figure out what human actions are considered “hazards” or “help” to these organisms and then place the action cards on the poster in their respective categories as well.
- Students will then be asked to make connections between the various organisms, drawing arrows to those that are connected.

### **4. Closure:**

- The closure will consist of more work on the posters. As a class, we will discuss how these organisms are all connected. From there, I will ask the students to add a green mark (I will either have stickers or the students will have markers) to the specified category for each “help” card they have on their poster. The students will then cross out (place a large red “X”) over one specified organism for each “hazard” card that is on their poster. From here we will discuss how each organism connected to those producers will be effected by these human impacts. (Each hazard and help card specifies an action that will determine what we add or cross out). We will then have a short discussion on ways in which we can help to not impact the ocean’s organisms (in a local, simple, manner- so as not to place the burden of a tragedy on these fourth graders!)

## **Materials:**

worksheets (pages with organisms to cut out and color)

coloring materials

scissors

glue stick

posters or large sheets of paper for each student

*The Magic School Bus on the Ocean Floor*

**Words to define:**

Ocean – the sea surrounding the earth (a major biome of the world)

Producers - a green plant that makes its own food

Consumers - that which eats producers

Decomposers - organisms that breaks down dead matter, i.e. fungi and bacteria

Hazard – a source of risk or danger

Help – to benefit, remedy, make better

**Engagement & Sustained Inquiry:** The students' individual posters will allow them to each see how everything is connected and provide them with a product to be proud of. Hopefully the final discussion and closure will leave them will a bit of sustained inquiry.