



My Underwater World

By: Tamar Burris

Grade Level: 3

Time Allotment: 1, 2-hour session; 1, 20-minute session

Overview: In this activity, students will learn about underwater plant and animal life and will create their own underwater scenes using crayons, watercolor paints, and sand. By watching the video, students will get a better understanding of the underwater world and will learn about the many types of plants and animals that can be found in the different layers of the ocean. While exploring the Monterey Bay Aquarium site students will cement the learning that took place during this lesson.

Subject Matter: Science

Learning Objectives:

- Students will demonstrate their familiarity with differences between underwater plant and animal life and human life by participating in a class discussion
- Students will display their knowledge of ocean life by creating an underwater scene

Standards: Montana State Science Standard 3.1: *Students demonstrate knowledge of characteristics, structures and functions of living things, the process and diversity of life, and how living organisms interact with each other and their environment. Identify that plants and animals have different structures and systems, which serve different functions.* (Source: <http://www.opi.state.mt.us>)

Media Components: DragonFly TV #109: Plants

Monterey Bay Aquarium Activities

(<http://www.montereybayaquarium.org/lc/activities.asp>) -- This site is the official Monterey Bay Aquarium Web site. On this page you will find several different online activities that students can explore, as well as activities that you can print out and send home with your students. Each activity is centered on marine life.

Materials:

- 18 by 24-inch white drawing or construction paper (at least 1 per student)
- Crayons (multiple colors, 1 box per student)
- Pencils (1 per student)
- Erasers (1 per student)
- Blue watercolor paint (1 per group of 4 students) and watercolor paint brushes (1 per student)
- Containers for water (1 per group of 4 students)
- Newspaper or drop cloth to cover tables
- Glue
- Sand (2-3 bags or 1 full bucket) and scoop or small measuring cup to pour sand
- “Something’s Fishy!” handout, 1 per student
- 1 copy of “The Underwater Alphabet Book” by Jerry Pallotta, Charlesbridge Publishing, 1991

Teacher Prep:

Get sand

Cover tables with drop cloth

Load and cue video to “Floating Forest” Introduction, your visual cue is a background image of the ocean with “Floating Forest” written in white over it and the sound cue is background music

Bookmark (<http://www.montereybayaquarium.org/lc/activities.asp>)

Introductory Activity: “Something’s Fishy!”

1. Hand out the Fishy Quiz worksheets.
2. Give students 10-15 minutes to find five things wrong with the picture.
3. Talk about the answers. Ask students such questions as, “Are you sure that fish do not have legs? What do they have instead? How do they move?”
4. Discuss the beach, the ocean; ask students to tell you about their experiences at the beach. “What does sand feel like?” “How does the ocean taste?” “Did you see any fish?”

Learning Activities:

1. Set the focus for media interaction: Students will have to tell you what kinds of animals the kids find near the bottom of the ocean. (Answer: urchin, octopus, sea stars, clam, and crab). Press play and watch the “Floating Forest” section of the Plants episode (from the teacher prep cue beginning with “Floating Forest” Intro). While students are watching, point out unusual sea life and encourage them to do the same.
2. Pause the tape with the words “Dive #2: The Canopy” onscreen. Ask students to answer your media interaction question, what kinds of animals were found at the bottom of the ocean? Ask students to predict where most of the animals will be found, near the bottom of the ocean or in the canopy. Set focus for media interaction: Students will have to tell you where the kids found more living

creatures, at the bottom of the ocean or in the canopy. (Answer: At the bottom.)
Resume playing the video.

3. Stop the tape with the divers waving to the screen and saying, “Now we’re going to let all the animals go.” Ask students to answer your media interaction question. Ask them whether their prediction came true, did they correctly guess the kids would find more animals near the bottom of the ocean before watching this segment?
4. After the show, discuss the kinds of things the students saw. Ask them what color the water was and things like, “Did it look like most of the sea life lives near the surface of the ocean or down at the bottom?” (Answer: the bottom) and “How come the kids had to wear special equipment when they went underwater?” (Answer: so they could breathe). Talk about the differences between fish and humans, how do the fish breathe underwater? (Answer: fish have gills that they breathe through, they are able to breathe underwater) How do they move? (Answer: Fish use their tails and fins to swim.)
5. Read “The Underwater Alphabet Book” aloud. Pause on different pages, asking students to describe the color, shape, etc. of the plant/animal on that page. Ask them to repeat the names of particular plants or animals or to share real-life encounters they may have had with that particular plant or animal. Point out the fins and gills on the fish, ask students to tell you what these body parts do.
6. After you have finished reading the book, discuss the different plants and animals that were pictured in it. Are they different from plants and animals they see on dry land? Ask them to describe some of the differences they noticed. (Possible answers include seaweed, sea turtles, coral, Angel fish, octopus, and Zebra Pipefish; differences between underwater and land animals may include things like scales, wings, legs, and flowers or leaf shapes)
7. Tell the students they are each going to be drawing their own pictures of underwater scenes. Draw examples of simple fish and plants on the board or chart paper. Using a large white sheet of drawing paper, demonstrate creating an underwater scene. Use pencil at first and remind them that pencil can be erased so not to use crayons until they like their drawing.
8. Draw a line across the paper, about an inch or so above the bottom edge, marking where you want your sand to go. Let them know you drew that line to remind yourself not to draw anything there because that is where the sand is going to go. Ask them something like, “Why did I draw that line? Will I draw any animals or plants beneath that line?” to make sure they understand. Discuss the possibility of drawing a water line on top of the paper, or making bigger fish and smaller fish or even a diver.
9. Demonstrate coloring in your fish and plants with crayons, but tell them you are not coloring in the water because you will be painting it blue. Ask them something like, “Should you color in the water?” and make sure they understand not to color in the water. Talk about placement of fish and plants and where the most fish tend to hang out, ask them questions so they can demonstrate what they have just learned about underwater life.
10. Pass out drawing paper, pencil, and eraser to each student and have them begin their drawings.

11. Set up a painting station with blue watercolor paints and containers of water so that when students finish coloring their underwater scenes they can move to a supervised area to paint in their water. (Crayon shows through watercolor so they can paint right over their whole drawing)
12. Set aside the underwater scenes for at least one day, allowing the paint to dry.
13. The following day, or when the drawings are dry, set up a workstation (be sure to cover the workstation table with newspaper or a drop cloth) where students can put sand on their paintings in a supervised fashion. For younger students, pour some glue onto a plate or into another container and have them dip pieces of scrap paper into the glue and smear the glue onto the areas where they would like sand. Once the glue has been applied, allow students to scoop some sand out of the container and shake it over the glue. Hold the drawing vertically against the covered table and gently shake off any sand that is not sticking. Repeat pouring the sand onto the drawing until all of the glue has been covered. Set aside to dry.
14. Hang the finished pictures in the classroom and do an “exhibit” walk so that students get a chance to view their classmates’ drawings. Afterward, talk about the drawings, the ways they were different and the ways they were similar.

Culminating Activity:

1. Pair students into groups of two or three (no larger, if you do not have enough computers, use the computers as a station and rotate groups through).
2. Have student groups log on to <http://www.montereybayaquarium.org/lc/activities.asp>
3. Set focus for media interaction: Students should be able to match the fish in the Crunch, Nibble, and Bite game to their particular ways of eating (Answers: Parrotfish=Crunch, Shark=Bite, Butterfly fish=Nibble, Grouper=Gulp)
4. Have students play the “Crunch, Nibble, Gulp, Bite” and “Explore the Kelp Forest” interactive games.
5. Discuss the games. Ask students to answer your focus for media interaction question. Ask them to share what new information they learned from the Explore the Kelp Forest game, ask them where the otters live (Answer: in the canopy, at the top of the ocean) and where the shrimp are found (Answer: towards the bottom of the ocean).

Cross-curricular extensions:

English

Write stories about the ocean from the point of view of a fish

Science

Do a science project on water pollution

Do group investigations/reports on different types of animals that live in the ocean

Make a model of the ocean floor

Art

Make paper-mache fish mobiles

Community Connections:

- Plan a field trip to an aquarium, tide pools, or a local beach.
- Invite a marine biologist or diver to speak in your classroom.
- Write letters to government officials asking them to protect the oceans.
- Create an underwater mural to be displayed at the school or in the community.

Something's Fishy!

Find 5 things that are wrong with this picture



TEACHER COPY

Something's Fishy!

Find 5 things that are wrong with this picture

