

ACTIVITY: Create a beautiful cross-section of the ocean



OVERVIEW: Discover the changes in the ocean from surface to deep.

DISCIPLINES: Science, physics

OBJECTIVES: Students will be able to:

- describe the color changes at different ocean depths
- discuss the changes in light at different ocean depths
- describe the changes in temperature at different ocean depths
- discuss how some animals live at different ocean depths and others travel up and down and why.
- discuss vertical migration.

**NOTE: If you choose, this can be a two-part craft and would need to dry overnight before kids can finish.**

GRADE LEVEL(S): K to 6th



Day 1: 20 minutes

Day 2: 20 minutes



MATERIALS: Tempera paint: blue and black (child-safe)

Water color paper (4.5 x 6 inch)

4 containers (flat, shallow) to hold paint (large enough to hold paper)

Plastic spoons

Paper towels

Running water or container with clean water

Drying rack or flat surface to allow pictures to dry flat.

## OPTIONAL

Pre-cut animal pictures of your choice

Glue sticks (child-safe)

Crayons

## WHAT TO DO:

### Preparation

Pre-cut paper to 4.5 inch x 6 inch size

OPTIONAL: Pre-cut animals (one set per student)

### Day of:

Pour paint into 3 separate shallow containers, 2 blue, one black.

Pour clean water into 4th container

Add water to thin paint to be used for shallower water.

**\*NOTE:** To create lighter surface water, thin blue paint with water in one container. The thicker paint (not thinned with water) will be darker for the deeper wear. The deepest water needs to be black.

**We recommend you make a tester page to find the right color/consistency for each depth and to show as an example.**

## Part 1

## Introduction Discussion

Ask: *When you're outside during the day, where does the light come from? If you went to the deep sea, do you think it is bright or dark? Why?* Explain that the only light in the ocean comes from the surface. Light, however, can only travel so far down. (You might use the analogy of flashlight or car lights on dark night. The light only travels a little way.) Explain that the deeper you dive, the darker the ocean becomes until it is pitch black. Tell kids they'll make a cool craft showing how the ocean becomes darker in the deep.

(NOTE: Before you begin, be sure the student's name is written in crayon on the back of the paper.)

Tell kids they're going to make a painting of the ocean from the surface to the deep sea.

STEP 1: Quickly moisten paper with clean water up to the level you want the paint to saturate.



Dip paper into paint.

STEP 2: Dip paper into thinned blue paint. Wiggle or swish around to make waves. Use a plastic spoon to add to surface waves.



Allow excess paint to drip back into container.

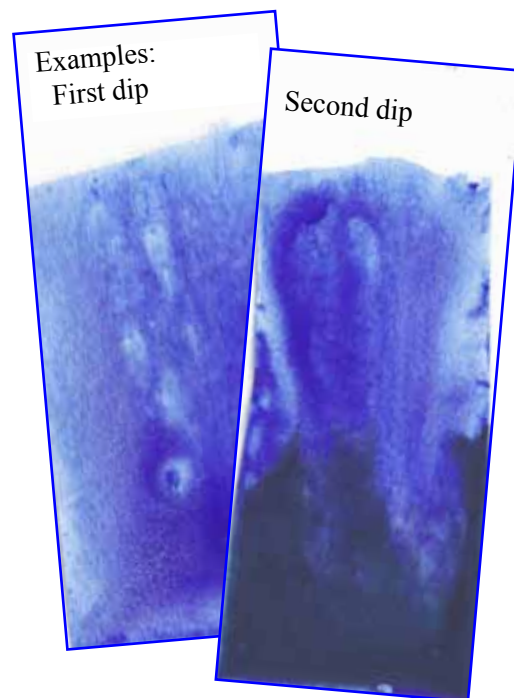
STEP 4: To create deep, darker blue portion of ocean, dip the paper into thicker blue paint. To leave the surface water lighter, do not dip the paper as deep as the first time. Wiggle or swish around.

STEP 5: Remove the paper from the paint and allow excess to drip back into container.

STEP 6: To create the dark deep ocean, dip the lower portion of the paper into the black paint.

STEP 7: Remove the paper from the paint and allow excess to drip back into container.

Allow to hang dry on drying rack or on flat surface overnight or for several hours.



(OPTIONAL: Add your favorite animals to picture)

## Part 2

Give each student his/her (dried) painting.

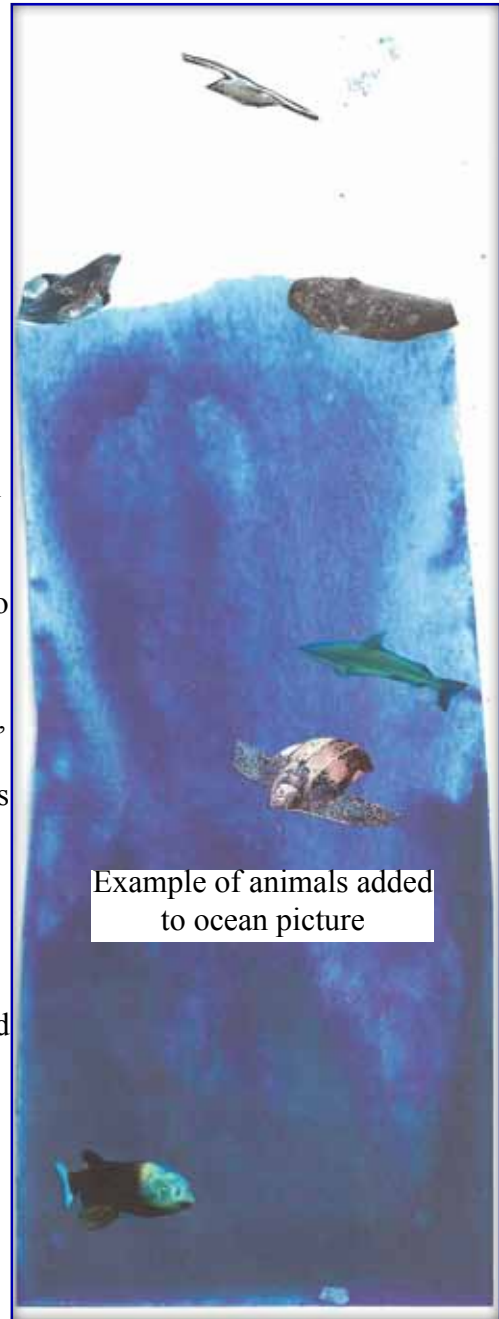
STEP 1: Have students point to the surface (top) of the ocean in their painting. Next, have them imagine taking the submersible to that part of the ocean. Have them look around. Ask them what animals they might see at or near the surface. (Repeat appropriate answers and suggest others. Be sure to mention the animal they'll glue to the picture.)

Next, have them point to the middle of their painting, then take the submersible there. Have them look around. Ask them what animals they might see at or near the surface. (Repeat appropriate answers and suggest others. Be sure to mention the animal they'll glue to picture.)

Then, have them point to the deepest part of their painting, then take the submersible there. Have them look around. Tell them, since it's dark, they should turn on special lights to see the animals. Ask them what animals they might see in the deep. (Repeat appropriate answers and suggest others. Be sure to mention the animal they'll glue to picture.)

STEP 2: Tell kids they'll add some of the animals they saw on their dive to their painting. Hold up one animal and have kids tell what kind of animal it is, if they can. Share a fact or two about that animal. Have kids guess where it lives (Repeat appropriate answer or tell them). Have them point to that location on their painting. Then have them glue the picture to their painting.

STEP 3: Repeat Step 2 with each animal.



Example of animals added to ocean picture



Allow students time to write down (or draw) their thoughts, discoveries, questions or write a story about their deep-sea picture in their *Deep Thoughts Journal*.