

First Big Book of the Ocean

RIF EXTENSION ACTIVITIES FOR EDUCATORS

STEAM-THEMED: SCIENCE, TECHNOLOGY, ENGINEERING, ART, MATH



SCIENCE OCEAN ZONES

Materials: clear water bottle, vegetable oil, water, blue food coloring, measuring cup, funnel

This activity can be done as a small group, in cooperative pairs, or individually.

Show students a visual of the zones (sunlight, twilight, midnight) at which sunlight is able to penetrate ocean water. Have students measure 1/4 cup of water and pour it into an empty bottle. Measure 3/4 cup of oil; add it to the water. Drop in 4-6 drops of blue food coloring. Seal the lid tightly and shake well to mix. As the oil and water settle in the bottle, students should be able to point out the three different zones in the ocean. Why don't the layers of oil and water mix?



TECHNOLOGY, SCIENCE OCEANS OF SIMILARITIES AND DIFFERENCES

Compare the animals from the text with animals from popular kids' tv shows or movies. How are the ocean animal characters in movies similar to the animals in the book? How are they different? Make a Venn diagram or other chart to show your comparisons graphically. If possible, show a few video clips from the shows or movies as well as videos of actual marine animals.

ENGINEERING, SCIENCE, TECHNOLOGY OILY OCEANS

Materials: large pan, water, vegetable oil, food coloring, feathers, cleaning materials (cotton balls, coffee filters, straws, sponges, dish detergent, etc.)

Have students watch this short video: <http://ocean.today.noaa.gov/oilintheocean>. Then, demonstrate an "oil spill" for your students. Pour water in the large pan and color it blue. Add feathers to represent the wildlife that lives in our oceans. Last, add some oil. Have students record their

observations about what the oil does when it hits the water.

How does it affect the feathers?

How might an oil spill affect birds and other marine life? Have students use the provided materials to experiment and come up with a cleanup plan for the oil spill. Which materials are most effective? Which are least?

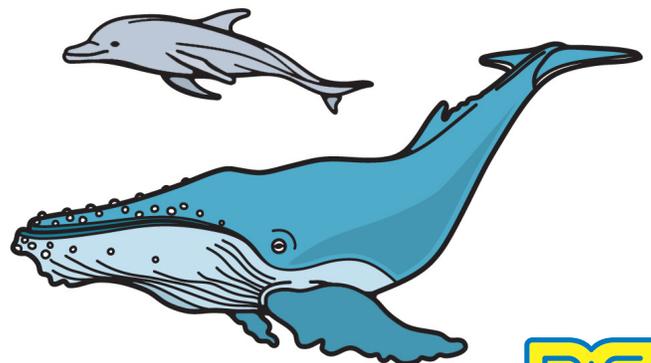
ART UNDER THE SEA

Materials: bulletin board paper, crayons, blue paint, water, paint brushes

Have students draw their favorite ocean animals on a large sheet of bulletin board paper. Students should use crayons to draw and make thick, heavy lines. Dilute blue paint with water to thin it out, then have students paint over the drawings and color the entire "ocean" blue. The paint will not adhere to the waxy crayon lines, so the ocean creatures will stand out.

MATH, SCIENCE, ART NOTHING COMPARES 2 YOU

Have students choose two animals from the text to compare in size (length, height, and weight). Let students be creative in how to show the comparisons. Students might make a model, draw a picture, write a series of equations, or create a chart to show their comparisons.



Reading Is
Fundamental