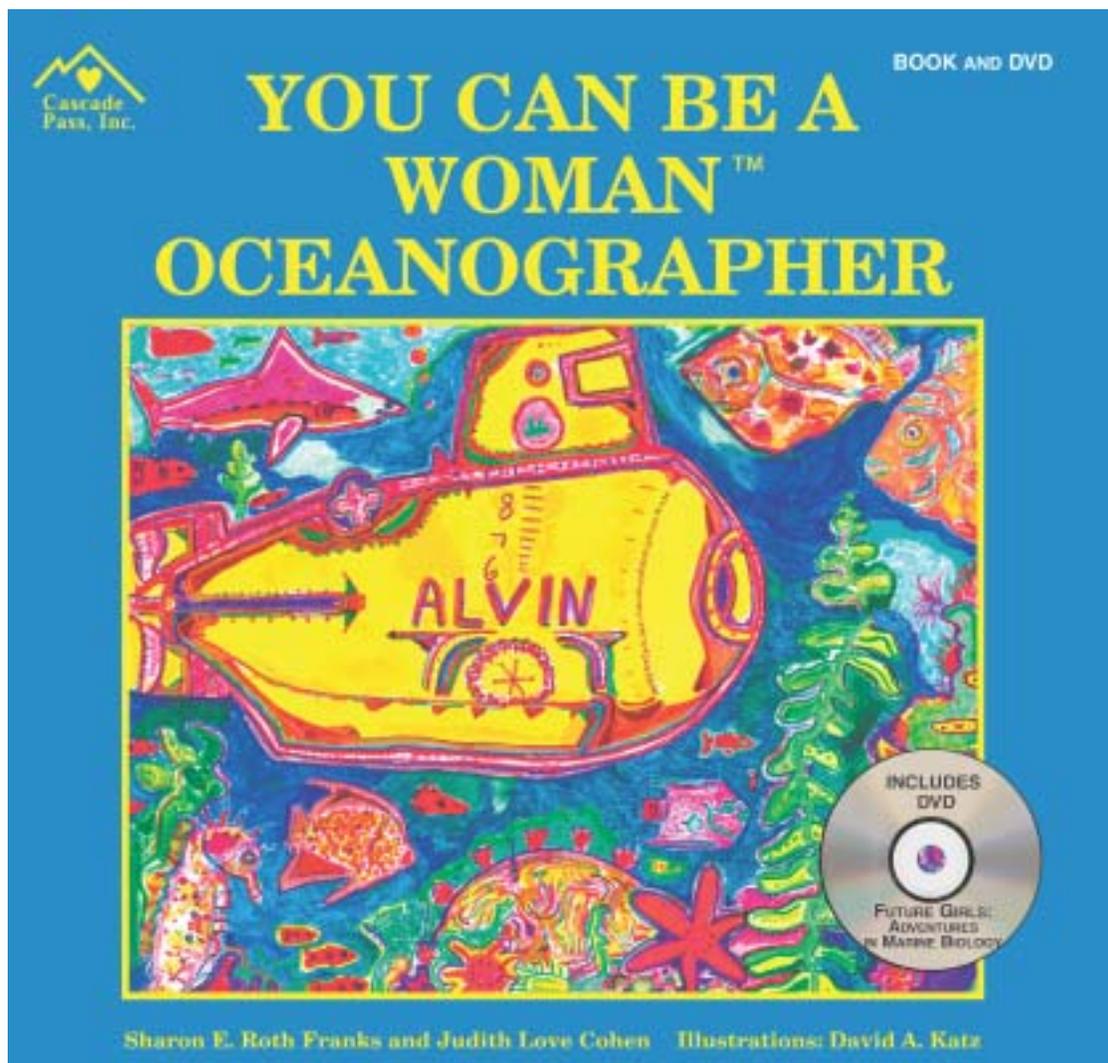




YOU CAN BE A WOMAN™ OCEANOGRAPHER



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SCIENCE LESSON PLAN 1

PURPOSE: To gain an understanding of how oceanographers collect organisms from the deep sea and to demonstrate how the choice of equipment determines what they learn.

MATERIALS: Water-filled tank, assorted objects (beads, plastic sea life), two nets of different mesh sizes, shallow plastic container. The objects range in size from smaller than the opening in the small mesh to larger than those in the large mesh.

PROCEDURES: Add objects to water-filled tank. Stir the tank just before each child takes a turn.

Give the first child the larger mesh net. Have the child close his eyes since it is too dark to see deep beneath the surface of the ocean. Have the child sweep net once through tank.

Next, help child empty “catch” into plastic container. Discuss collection.

Repeat, with another child and the other size mesh net.

CONCLUSIONS: Were there differences in the collections when different nets were used?
Were there differences when the net was swept at different depths?
What differences would you expect if the plastic fish could swim away?

SCIENCE LESSON PLAN 2

PURPOSE: To gain a familiarity with oceanographic instrument moorings and how they are anchored and recovered.

MATERIALS: Water-filled tank, balloons (slightly blown-up), paper clips (half opened), string, colored pipe cleaners, whistle, metal washers.

PROCEDURES: Have children assemble instrument moorings as follows: Tie a length of string, which represents the mooring line, onto the balloon (the balloon represents the float). Make sure the string is shorter than the depth of the water in the tank. Add a bent paper clip to the other end of the string (mooring line). The paper clip represents the release mechanism. Add three instruments to the mooring (three pipe cleaners of different color).

Have the children deploy the moorings by taking them to a spot in the tank and releasing the balloon end of the string, holding on to the paper clip (release end). The metal washers represent the anchors. Fasten them to the release mechanism and let them sink.

To recover the moorings, have one child blow a whistle. In the real world this would trigger a release of the anchor. Have a child unhook the paper clip. The float will rise to the surface.



CONCLUSIONS: What is the purpose of the float, the anchor and the release?
Why would you want to leave the instruments untended?
Do scientists really use balloons in the ocean? (No. Strong glass spheres are used instead.)

SCIENCE LESSON PLAN 3

PURPOSE: To determine the different life forms that live at different ocean depths.

MATERIALS: Posterboard, drawing materials (crayons, colored pens, paper), variety of books with pictures of sea life, scissors, glue.

PROCEDURES: Have the children divide the posterboard into different depths: 100 meters, 500 meters, 1000 meters, etc.

Have the children draw or cut out pictures of sea animals or plants appropriate to each level of the ocean depth and glue them onto the posterboard at the appropriate depth.

CONCLUSIONS: What kinds of plants and animals are found closest to the surface?
What are the animals and plants like in the deepest regions?
How do they differ?

RESOURCES: Library books on ocean life such as *Exploring the Sea, Oceanography Today*.

