



A CLEAN SEA: THE RACHEL CARSON STORY



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SCIENCE LESSON PLAN 1 - TIDE POOL

- PURPOSE:** To familiarize children with the kind of life Rachel Carson found in the tide pools she explored.
- MATERIALS:** Real shells, rocks and stones, sand, driftwood, barnacles, sea plants, etc.; a water table, a small wading pool, or a baby sized tub; water and salt.
- PROCEDURES:** Together with the children, make a pretend tide pool using the salt water, the tub or pool and add all the other ingredients.
Have the children name and categorize the things in their tide pool.
- CONCLUSIONS:** What are the differences between a living tide pool and a pretend tide pool?
How is a real tide pool made? Do real tide pools change?
Which things in the tide pool were once alive?
How do the objects in the tide pool feel to your touch?

SCIENCE LESSON PLAN 2 - LOOKING CLOSELY

- PURPOSE:** To encourage children to observe more closely and build their awareness of an ocean environment.
- MATERIALS:** Magnifying glasses and, if possible, a magnifying glass stand; objects from the ocean environment: fish skeleton, sponge, starfish, shells, sand, rocks, barnacles, bird feathers, seaweed, etc.
- PROCEDURES:** Place objects on a table and let children examine them with the magnifying glasses. Have children name the objects and describe what they observe.
- CONCLUSIONS:** How do the objects look different when they are observed through the magnifying glass?
What do you notice about the object when you study it closely?

SCIENCE LESSON PLAN 3 - WHAT IS IN THE WATER?

- PURPOSE:** To show children that life exists even when we can't see it with the naked eye.
- MATERIALS:** A microscope and blank slides; a pail of ocean (or pond) water; other objects such as sand, bird feather, small sliver of driftwood, seeds, an insect, etc.
- PROCEDURES:** Place one of the objects under the microscope.
Have the children look and comment on what they see.
Repeat by putting a large drop of ocean or pond water on the slide and putting it under the microscope.





CONCLUSIONS: What can you see with/without the microscope?
Is there life in the water even when you can't see it?

SCIENCE LESSON PLAN 4 - OCEAN FISHING GAME

PURPOSE: To familiarize children with the variety and names of living things in an ocean habitat.

MATERIALS: Pictures of various ocean habitat life forms; glue; tagboard; clear contact paper; paper clips; poles; magnets; string.
Pictures might include: fish, eels, crustaceans such as shrimp, crabs, and lobsters; mammals such as sea otters, whales, dolphins, sea lions, harbor seals, and walruses; echinoderms such as starfish and sea urchins; mollusks such as snails, clams, scallops, oysters, octopi and squid; reptiles such as sea turtles and sea snakes.

PROCEDURES: Prepare the "fish" by gluing the pictures on the tagboard, covering the pictures with clear contact paper and attaching one or more paper clips to each card. Prepare the "fishing poles" by attaching one end of the string to the poles (glue, tape, staples) and a small magnet to the other end of the string (tie the string around the magnet).
Designate an area on the floor to be the "ocean" and put pictures with paper clips in this space. Have the children fish with their magnet poles, and "catch" creatures of the sea.
When a creature is "caught", have the child name and categorize their creature. They can then put the creature back in the "ocean".

CONCLUSIONS: What might you see if you lived near the ocean?
Which creatures are bigger/smaller than you are?
Which creatures spend time on land as well as in the ocean?
Which creatures lay eggs, which bear young?
Which creatures have shells?
Which creatures swim/crawl?
If you were really fishing, could you catch this creature?



SCIENCE LESSON PLAN 5 - MAKING A BOOK ABOUT THE ENVIRONMENT

PURPOSE: To encourage children to express their interests and concerns as they relate to the environment just as Rachel Carson did.

MATERIALS: Markers, crayons, pictures of wildlife, glue, pages for a book, stapler to "bind" the book.



PROCEDURES: Have each child decide what topic to write about. Suggested topics might be ways to save the environment, a day at the ocean, or a favorite wild animal. Have the children write their story or dictate the words to an adult. Have the children illustrate the story with their own drawings or with pictures from magazines.

SUGGESTED SUPPLEMENTARY ACTIVITIES

TRIPS: An aquarium, an arboretum, a bird sanctuary, a park, a nature preserve, a pond or brook. Have the children examine plants and animals and record their observations.

RESOURCES: Books about the environment, tapes of sounds of the ocean, bird songs, babbling brooks.

GUESTS: An environmentalist, a marine biologist, a zoologist, an ornithologist, a botanist. Invite one of these to visit your class.

