

Marine Life Interest Project

Introduction

This Interest project should increase the awareness of young women who are interested in learning more about the ocean environment. By exploring various aspects of marine biology, there is a lot to be learned about the ocean and its inhabitants and the importance of this delicate habitat.

You must complete at least three skill builders (including #1 & #2) one technology, one service, one career exploration and two from any of the categories.

SKILL BUILDERS

1. Wind waves are the type of waves that can be seen crashing on the beach. Wind waves transmit energy, not water mass. The energy from the wind causes the wave but the water molecules only move in small circles. You can see how this works by watching the sea gulls sitting on the water.

As the wind swell passes, the sea gull does not come crashing into the sand. Instead, the sea gull just moves up and around in a small circle, just as the water molecules in which it is resting. Watch all the birds on the water and see how they move.

2. 71% of the Earth's surface is covered by water. Therefore, it is very important that we understand and care for the ocean.

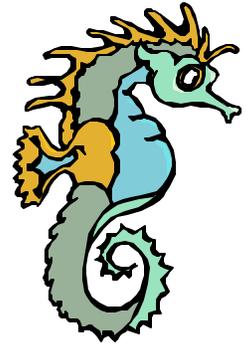
It is essential that we keep the ocean clean and healthy. Examine your community to find out how we are polluting the ocean locally. What are some ways that you can help minimize pollution? Globally, oil spills harm a lot of coastline.

Examine the effects that an oil spill has on the animals that live in the ocean and along the coast.

3. Learn about the different kinds of seaweed that live in the ocean. Look closely at some seaweed that has washed up on the beach. How are seaweeds which are non-vascular plants different from the vascular plants that live on land? The kelp forests off the Pacific Coast house a great variety of organisms. Read about the important habitat of the kelp forests and the animals that live there.

4. There is a wide diversity of organisms that live in the ocean. Learn about the smallest living organisms, plankton. What is phytoplankton? Zooplankton? Why is plankton so important to life on this planet?

5. What is the difference between vertebrates and invertebrates? Try to find an example of each on a trip to the beach or tide pool.



TECHNOLOGY

1. Visit the tide pools and carefully observe the animal community living in this area. Watch the animals' behavior. How do these animals interact with each other? How can these animals survive in the intertidal zone where the tide rises and falls, covering or exposing the animals and the waves constantly crashing on top of them? What special characteristics do these animals have to help them live in this demanding habitat?

2. Marine mammals are very important oceanic animals. Using the Web, complete the following research. What is the difference between seals and sea lions? How are baleen whales and toothed whales different? Many marine mammals are endangered species. How are fishing techniques harm these animals? Commercial whaling was banned in 1985. Are there any countries that are still practicing whaling? If so, which ones? Explain your feelings on countries that still practice whaling.

3. Find out how scientists use sonar, satellites, and super-computers to explore the deepest reaches of the oceans without getting wet.

4. Fresh water is very important to our survival. The major source of water is the ocean. Research the ways salt water can be converted to fresh water and try one of the methods you researched.

SERVICE PROJECTS

1. Volunteer with a marine education organization or an aquarium. Help educate others about the importance in preserving the marine ecosystem.

2. Help in a beach clean up.

3. Help a program like Friends of the Sea Lion.

CAREER EXPLORATION

1. There are many careers available that are related to the ocean and marine organisms. Interview someone who works in the marine science field and, if possible, arrange a tour of where they work. This may be a marine biologist, a marine mammal trainer, an aquarium keeper, a marine veterinarian, a college professor, a research scientist, etc. Ask them about their job, the kinds of things they do, how they got their job. Find out what schooling is necessary to work in this area. Ask them about the pros and cons of their job. What advice do they have for someone interested in a career such as

theirs?

more...

2. Investigate two tourism careers that are associated with an ocean environment, such as working in a aquarium or on a cruise ship. What kind of training, skills, and education is needed?

WHALE WATCH ORANGE COUNTY
American Cetacean Society
(714) 675-9881

3. Learn more about oceanography and some of the careers that might be included in this area.

RESOURCES

Orange County Marine Institute

24200 Dana Point Harbor Drive
Dana Point, CA 92649
(949) 496-2274

BOLSA CHICA STATE BEACH DEPT. OF PARKS AND RECREATION

18331 Enterprise Lane
Huntington Beach, CA 92646

FRIENDS OF THE SEA LION

20612 Laguna Canyon
Laguna Beach, CA 92561

ORANGE COAST COLLEGE PUBLIC AQUARIUM

2701 Fairview Dr.
Costa Mesa, CA 92628-5005

UPPER NEWPORT BAY

For Information please contact:
Orange County Department of Education
Outdoor Education
ATTN: Pam Johnson
P.O. Box 9050
Costa Mesa, CA 92628
(714) 966-4419

