



BIBLIOGRAPHY

INVESTIGATING THE OCEAN PLANET FOR SEA: Investigating Marine Science - Grade Six

This bibliography has been selected specifically for *Investigating the Ocean Planet - Grade 6*. A few of the titles listed are out of print, but worthwhile enough for you to check for them in your school and public libraries.

RESOURCES FOR STUDENT INFORMATION

ALL ABOUT WHALES. Dorothy Hinshaw Patent. Holiday House. 1987

An introduction to the biggest animals that have ever lived, discussing what they eat, how they communicate, as well as the kinds of whales.

A POD OF GRAY WHALES. Francois Gohier. Blake Publishing. 1988.

Wonderful photos accompany a natural history of the gray whale.

A POD OF KILLER WHALES. Vicki Leon & Jeff Foott. Blake Publishing. 1989.

Excellent color photographs enhance the informative text.

COASTAL RESCUE: PRESERVING OUR SEASHORES. Christina G. Miller and Louise A. Berry. Atheneum. 1989.

Outlines how different types of coasts are threatened ecosystems and discusses ways to protect these resources. Includes black and white photographs and diagrams.

THE CONTINENTAL SHELF. Alice Gilbreath. Dillon Ocean World Library. 1986.

Describes the continental shelves under the world's oceans as ecosystems being threatened by human influences. Also discusses mariculture and conservation efforts. Color and black and white photographs illustrate the text.

CREATURES OF THE DEEP. Lionel Bender. Watts. 1989.

Excellent look at the interesting and seemingly bizarre life of the deep sea.

EXPLORING THE SEA: OCEANOGRAPHY TODAY. Carvel Hall Blair. Random. 1986.

An overview of oceanography including descriptions of the world's oceans, plate tectonics, currents, waves, plant and animal life, exploration and products from those oceans. Full-color illustrations on every page.

GREAT WHALES, THE GENTLE GIANTS. Patricia Lauber. Holt. 1991.

Describes the characteristics and behaviors of different kinds of whales and discusses why they are threatened by extinction.

HOMES IN THE SEA: FROM THE SHORE TO THE DEEP. Jean H. Sibbald. Dillon Ocean World Library. 1986.

An introduction in words and color photos to the environmental requirements of various undersea animals.

HUMPBACK WHALES. Francois Gohier. Blake Publishing. 1991.

Excellent color photographs enhance the informative text.

JACQUES COUSTEAU: FREE FLIGHT UNDERSEA. Paul Westman. Dillon. 1980.

A biography of the French oceanographer whose explorations under the sea focused the world's attention on that fragile resource.

JELLYFISH AND OTHER SEA CREATURES. Oxford Scientific Films, photographs by Peter Parks. Putnam. 1982

Examines in text and photographs the physical characteristics and life cycles of jellyfish and related sea creatures.

KILLER WHALES. Dorothy Hinshaw Patent. Holiday House. 1993.

This book has a well-written text and terrific photographs with explanatory captions. Patent discusses that scientists do not know all the answers and leaves the reader with unanswered questions. Also addressed is the issue of holding whales in captivity to provide entertainment for humans.

KILLER WHALES. Seymour Simon. Lippincott. 1978.

A straightforward and well-researched presentation that covers the physical characteristics of this mammal, its life style in captivity and myths and legends about killer whales. Illustrated with photographs.

LAND UNDER THE SEA. Hershell H. and Joan Lowery Nixon. Dodd. 1985.

Clear simple text describes the land under the sea. Black and white photographs and maps picture undersea explorations and topography.

LOOK INSIDE THE OCEAN. Laura Crema, translated by Patrizia Malfatti. Pole & Look Learning Books, Putnam & Grosset. 1993.

Simple die-cut illustrations lead the reader into deeper levels of the ocean and information about the creatures that live there.

THE MYSTERIOUS UNDERSEA WORLD. Jan Leslie Cook. National Geographic Books for World Explorers. 1980.

An overview of the ocean's physical properties, plant and animal life, exploration and sunken treasures. Profusely illustrated with excellent color photographs.

OCEANS. Seymour Simon. Morrow. 1990.

Striking color photographs, diagrams and lucid text present our ocean world. Explains water in motion, waves, currents, tides, shoreline changes and how our climate is influenced by the oceans.

THE OCEANS ATLAS. Anita Ganeri. Dorling Kindersley. 1994.

A large format, pictorial atlas of the world's oceans. Takes the reader on an ocean-by-ocean survey above and below the sea surface using photographs, illustrations and maps. Includes three-dimensional computer scans of the seabed.

OCEANS IN PERIL. John Christopher Fine. Atheneum. 1987.

This very readable account, with black and white photos, examines plant and animal relationships and the effects of pollution and human greed on the world's oceans. Some possible solutions to the problems are offered.

THE SEARCH FOR THE RIGHT WHALE. Scott Kraus and Kenneth Mallory. Crown. 1993.

A scientific detective story about the right whale. Describes how careful research and a good hunch revealed some 300 previously unknown whales and their migration patterns.

SEA JELLIES: RAINBOWS IN THE SEA. Elizabeth Tayntor Gowell. Watts. 1993.

Clear diagrams and a conversational text introduce life cycles, while the excellent color photographs display the amazing diversity of jellyfish.

SEAS AND OCEAN, Usborne Understanding Geography. Felicity Brooks. Usborne. 1993.

An excellent reference that covers several of the geography topics presented in this curriculum. It explains how oceans form; the cause of waves, tides and currents; how the sea shapes the land; and, how we make use of the oceans, often with unforeseen consequences. Various methods for protecting the oceans are also presented.

THE SEA WORLD BOOK OF WHALES. Eve Bunting. Harcourt. 1980.

An account of the evolution and habits of whales, as well as the dangers to survival they now face.

SPILL! THE STORY OF THE EXXON VALDEZ. Terry Carr. Watts. 1991.

An in-depth look at one of the largest oil spills ever to occur.

STRANGE EATING HABITS OF SEA CREATURES. Jean H. Sibbald. Dillon Press. 1986.

Color photographs and text illustrate the interdependence of sea creatures as demonstrated by their eating habits. Includes a discussion food chains.

UNDERSEA, The Usborne Young Scientist. Usborne. updated 1990.

A general survey of several sea topics, including clearly presented information on the deep sea and water pressure.

UNDER THE HIGH SEAS: NEW FRONTIERS IN OCEANOGRAPHY. Margaret Poynter and David Collins. Atheneum. 1983.

Discusses the history of oceanography, explorations of the sea floor, currents, tides, pollution, sea farming and other discoveries. Includes black and white photos, maps and charts.

UNDERWATER LIFE: THE OCEANS. Dean Morris. Raintree Read About. 1988.

Describes some of the plant and animal life found in the ocean, and discusses some of the technology used for deep sea exploration.

WATCHING WHALES. John F. Waters. Cobblehill. 1991.

Focusing on a class that goes whale watching, beautiful color photographs accompany a text rich with information about whale behavior, whale watching, whale adoption, and scientists who study whales.

WATER WORLD. Mary Lee Settle. Lodestar. 1984.

Surveys the history of undersea biology and geology. Illustrated with black and white photographs.

WAVES. Herbert S. Zim. Morrow. 1967.

Black and white drawings and charts aid this discussion of waves, including how they move and how they are studied.

WAVES, TIDES AND CURRENTS. Elizabeth Clemons. Knopf. 1967.

Discusses some of the factors influencing waves, tides and currents; and, in turn, discusses the influence of these moving waters.

WHALE, an Eyewitness Book. Vassili Papastavrou. Alfred A. Knopf. 1993.

In the quality style of the Eyewitness books, the natural history and many other topics related to whales is presented. The incredible photographs make this book special.

WHALES. Lesley Ann Dow. Facts on File. 1990.

From the Great Creatures of the World series. Whale habitats, interactions, migrations, communication and the story of whale exploitation are addressed. Outstanding format and color photographs.

WHALES. Seymour Simon. Harper Trophy. 1989.

Discusses the characteristics of toothed and baleen whales. Excellent underwater photographs.

WHALES, DOLPHINS, and PORPOISES. Mark Carwardine. Dorling-Kindersley. 1992.

Marine mammals are compared through spectacular graphics which illustrate diving, hunting, etc. Focus is on habitats.

WHAT'S UNDER THE SEA? Solveig Paulson Russell. Abingdon. 1982.

An introduction to the various layers of the ocean and how we find out about them.

RESOURCES FOR LITERATURE INTEGRATION

Please be aware that in the more fanciful of these titles, the science content may not be accurate.

A WHALE FOR THE KILLING. Farley Mowat. Penguin. 1972.

The story of Farley Mowat's struggle to save a cruelly endangered fin whale trapped by receding tides in a cove on the coast Newfoundland in January of 1967. There it spouted and played until local "sportsmen" adopted it as a target. Mowat immediately begins a campaign to save its life.

THE BIG WAVE. Pearl S. Buck. Day. 1948.

The classic story of a tsunami hitting the shore in Japan. The black and white photographs are of paintings done by famous Japanese artists who lived a century or more ago.

CARRY ON, MR BOWDITCH. Jean Lee Latham. Houghton. 1955.

A Newberry Award winning adventure biography of Nathan Bowditch, a seafaring boy, who became the author of *The American Practical Navigator*, which is still used by sailors.

THE EYES OF THE AMARYLLIS. Natalie Babbit. Farrar, Straus and Giroux. 1977.

When the brig *Amaryllis* was swallowed in a hurricane, the captain and the crew were swallowed, too. For thirty years thereafter, the captain's widow, waited, certain that her husband would send her a message from the bottom of the sea. A haunting tale of lost souls and timeless love.

FIGHT AGAINST ALBATROSS TWO. Colin Thiele. Harper. 1976.

Conflict between the crew of an oil rig near an Australian fishing village and the villagers is the basis for Thiele's exciting story. Excellent characterization and engrossing, topical story line.

ICE SWORDS. James Houston. Atheneum. 1985.

The story of two boys who spend the summer at a research station in the Arctic with an American scientist studying the migration of whales. They are given diving lessons and join the researchers in diving under the sea ice to help in photographing the whales.

KILROY AND THE GULL. Nathaniel Benchley. Harper & Row. 1977.

Kilroy is a young member of a pod of killer whales, until he is captured and put into an aquarium. He makes friends with a seagull and with the gull's help, tricks the humans and rejoins his pod.

SEA SONGS. Myra Cohn Livingston. Holiday. 1986.

The many moods of the sea are captured in poetic images. Leonard Everett Fisher's full-color, full-page paintings are memorable.

SHARK BENEATH THE REEF. Jean Craighead George. Harper. 1989.

A suspenseful adventure story of a young boy whose family has always fished commercially for sharks in the Sea of Cortez. The boy's hunt for a "killer" shark is exciting. The story has a strong ecological background, and George, as usual, has her science straight.

SPILL. Chester Aaron. Atheneum. 1978.

This story takes place against the documented background of a very destructive oil spill from the collision of two huge oil tankers near the Golden Gate Bridge. The author tells this moving story of one family's crisis that resolves itself during the grueling days of rescuing birds and fighting to save an important lagoon.

TWENTY THOUSAND LEAGUES UNDER THE SEA. Jules Verne. Dent. 1976.

A classic adventure story, written in 1870, involving Captain Nemo, his electrically powered submarine, the *Nautilus*, and the fascinating environment of the deep sea.

WATERMAN'S BOY. Susan Sharpe. Bradbury Press. 1990.

Two boys from a small town on the Chesapeake Bay help a scientist interested in cleaning up the water for the benefit of animals, plants, and people, while risking parental disapproval of people with too much education and of outsiders' interference in their means of earning a living.

WINDOWS ON THE DEEP: THE ADVENTURES OF UNDERWATER EXPLORER SYLVIA EARLE. Andrea Conley. Watts. 1991.

Young readers meet Sylvia Earle, a scientist who enjoys exploring the depths. Her concern for the well-being of our water resources and her plans to explore the deepest know part of the Pacific Ocean are presented. The text includes highlights of diving history.

POETRY

A CHILD'S TREASURY OF SEASIDE VERSE. Mark Daniel, (comp.). Dial. 1991.

A collection of verses about the sea from Byron, Shakespeare, Whitman and other British and American writers of the 19th and early 20th centuries.

ALL THE SMALL POEMS. Natalie Worth. Farrar. 1987.

These small poems of familiar, ordinary subjects are perfectly complemented by Natalie Babbitt's small black and white drawings.

PIPING DOWN THE VALLEYS WILD. Nancy Larrick. Dell. 1968.

A wonderful collection of poems including many relating to the sea and shore.

THE RANDOM HOUSE BOOK OF POETRY. Jack Prelutsky, (comp.).

Illustrated by Arnold Lobel. Random House. 1983

A treasury of 572 poems many with a marine theme.

THE SEA IS CALLING ME. Poems selected by Lee Bennett Hopkins. Harcourt. 1986.

A collection of poems pertaining to the sea and seashores. Each poem is appropriately illustrated in soft colors.

RESOURCES FOR TEACHERS & STUDENTS

Included are books, curriculum, media resources, equipment, posters, etc. The books in this list present further information in a more difficult text; even so, many of them will be enjoyed by children for the illustrations and photographs.

BOOKS

KEEPERS OF THE EARTH: NATIVE AMERICAN STORIES AND ENVIRONMENTAL ACTIVITIES FOR CHILDREN. Michael J. Caduto and Joseph Bruchac. Fulcrum. 1988.

A combination of Native American legends and related activities that help young people understand our natural world and our relationships with it includes section on water which contains stories and activities particularly well-suited to marine science. Illustrated in black and white.

THE MARINE BIOLOGY COLORING BOOK. Thomas M. Niesen. Barnes and Noble. 1982.

An introduction to the major marine environments and their inhabitants. Coloring plates illustrate the organisms in detail as the text explains their life cycles and interactions.

CURRICULUM

GENTLE GIANTS OF THE SEA Curriculum guide. The Whale Museum, P.O. Box 945, Friday Harbor, WA 98250. (206) 378-4710

Learning Links, Inc., A Literature Based Reading Program, 2300 Marcus Avenue, Dept. A 92, New Hyde Park, NY 11042 offers these ocean related, grade appropriate trade books with accompanying study guides:

THE CAY. Theodore Taylor

CALL IT COURAGE. Sperry

ISLAND OF THE BLUE DOLPHINS. Scott O'Dell

RANGER RICK'S NATURESCOPE; DIVING INTO OCEANS Activity Guide. National Wildlife Federation. 1988.

WHALES Curriculum guide. Project ORCA, Pacific Science Center Explore More Store, 200 Second Ave. N., Seattle, WA 98109. (206) 443-2870.

POSTERS

MARINE MAMMALS of the WESTERN HEMISPHERE Poster. Available from: Government Bookstore, 915 Second Ave., Rm. 194, Seattle, WA 98174 (206) 442-4270.

SOFTWARE

EXPLORE-A-SCIENCE: WHALES Software. William K. Bradford Publishing Co., 310 School St., Acton, MA 01720.

Presents an accurate simulation of a whale watch. Provides background information and enables students to draw from animated graphics, a variety of scenes, and their own imaginations to create electronic books that reflect their knowledge of whales.

VIDEODISCS, VIDEOTAPES and SLIDES

DESCENT INTO MONTEREY SUBMARINE CANYON: A BIOLOGICAL EXPEDITION slide show. Available from: Sea Studios, 810 Cannery Row, Monterey, CA 93940 (408) 649-5152.

Includes 55 images.

THE GREAT OCEAN RESCUE. Videodisc. Tom Snyder Productions, 80 Coolidge Hill Rd., Watertown, MA 02172. 1-800-342-0236.

A simulation with interactive disc.

THE MONTEREY BAY AQUARIUM VIDEO TREASURY. Monterey Bay Aquarium, 886 Cannery Row, Monterey, CA 93940-1085 ph. (408) 648-4850.

Segments in the 69 minute long video tape include: Feeding on the Rocky Shore, Reproduction on the Rocky Shore, The Kelp Forest, Marine Mammal Introduction, Flukes and Flippers, Voices in the Sea, Seasons of the Squid, Plankton, Behind-the-Scenes: Collecting, and Dive into Monterey Canyon.

THE VOYAGE OF THE MIMI videos, software, etc. Sunburst Communications, 101 Castleton Street, P.O. Box 100, Pleasantville, NY, 10570-0100. 1-800-321-7511.

Combining a narrative storyline with short documentary pieces, the Voyage of the *MIMI* is based on the story of the 72-foot ketch *MIMI* and her crew, who set out upon the open seas to locate and study whales. The story brings to life the experiences of the crew as they work together to learn and survive. The curriculum package combines videos or videodiscs, computer software, and print materials.

THE WORLD'S BELOW videotape. Sea Studios, Monterey, CA. 1988. Available from Monterey Bay Aquarium, 886 Cannery Row, Monterey, CA 93940-1085 ph. (408) 648-4850.

A visual journey through six undersea habitats of California's Monterey Bay: The Sallow Water World, The Kelp Forest, The Soft Plains, Time-Lapse Ballet, Pelagia, and Midnight Waters. Initially, the journey is accompanied by music only, then Dr. Sylvia Earle narrates a return to these undersea worlds.

OTHER RESOURCES

DISCOVERY SCOPES. Available from: Discovery Scope, Inc., P.O. Box 607, Green Valley, AZ 85622 (602) 648-1401.

This usable and highly versatile hand-held, wide-field microscope includes an adaptor to hold clear view chambers which can serve as tiny aquariums.

HUMPBACK WHALE Bulletin Board Kit available from Kit Cache, Box 691, Wasilla, Alaska, 99687.

A reusable bulletin board kit of the humpback whale.

MAC'S FIELD GUIDES. 2321 -34th Ave. S. Seattle, WA 98144.

Available for all kinds of marine and terrestrial organisms, Mac's guides are heavy plastic cards with detailed drawings for identification.

MARINE EDUCATION; A BIBLIOGRAPHY OF EDUCATIONAL MATERIALS AVAILABLE FROM THE NATION'S SEA GRANT COLLEGE PROGRAMS. July 1988. Available from: Marine Information Service, Sea Grant College Program, Texas A & M University, College Station, TX 77843-4115.

A highly recommended free resource that includes a state-by-state listing of regional resources, as well as curriculum and other materials of general interest.

THE MONTEREY BAY AQUARIUM ANIMAL SETS and ECOSYSTEM SETS. Monterey Bay Aquarium, 886 Cannery Row, Monterey, CA 93940-1085 ph. (408) 648-4850.

Animal sets include: Marine Mammals (Gr. K-12) and Sharks/Fishes (Gr. 3-12). Ecosystem sets include: Rocky Shore (Gr. K-5), Sandy Seashore (Gr. K-8), Kelp Forest (Gr. K-12), Deep Sea (Gr. 6-12) and Ecology/ Conservation (Gr. K-12). Each set includes materials and activities developed by the aquarium staff.

WHALE ADOPTION PROGRAMS:

Humpback whales - Whale Adoption Project, Dept. L88, 407 State St., P.O. Box 1372-027, Santa Barbara, California 93102.

Orca whales - The Whale Museum, P.O. Box 945, Friday Harbor, Washington 98250. (206) 378-4710.

Gray whales - Cascadia Research Collective, 218 1/2 W. Fourth Avenue, Olympia, Washington 98501. 1-800-747-7329.

The Books That Inspire Marine Biology

John Trowbridge and Jim Wandersee*

Results of a survey of 1200 marine educators and scientists concerning the use of marine literature for instructional purposes.

Recommended Readings by All Groups

(includes noninstructional books)

Top 25 Suggested titles out 583 suggested books and 416 different titles

Rank	Title	Author
1.	The Sea Around Us	Rachel Carson
2.	Log From the Sea of Cortez	John Steinbeck
3.	Beautiful Swimmers.....	William Warner
4.	Life and Death of the Salt Marsh	John and Mildred Teal
5.	Edge of the Sea	Rachel Carson
6.	Kon Tiki.....	Thor Heyerdahl
7.	The Living Dock	Jack Rudloe
8.	Moby Dick	Herman Melville
9.	Old Man and the Sea	Ernest Hemingway
10.	Silent Spring.....	Rachel Carson
11.	Sailing Alone Around the World.....	Joshua Slocum
12.	Seaside Naturalist.....	Deb Colulombe
13.	Under the Sea Wind.....	Rachel Carson
14.	Cannery Row	John Steinbeck
15.	Chesapeake	James Michener
16.	Island of Blue Dolphins.....	Scott O'Dell
17.	Marine Biology Coloring Book	Niesen
18.	Outermost House.....	Henry Betson
19.	Silent World	Jacques Cousteau
20.	Soundings	Frank Searles
21.	Time of the Turtle	Jack Rudloe
22.	Voyage of the Beagle	Charles Darwin
23.	Waves and Beaches	Willard Bascom
24.	Whale for the Killing	Farley Mowatt
25.	Year of the Crab.....	William Sargent

Books Instructors Suggest Their Students Read

Top 5 of 81 titles given

Rank	Title	Author
1.	Log From the Sea of Cortez	John Steinbeck
2.	Moby Dick	Herman Melville
3.	The Sea Around Us	Rachel Carson
4.	Life and Death of the Salt Marsh.....	John and MildredTeal
5.	Cannery Row	JohnSteinbeck

Books Selected as Required Reading in Courses Taught

Top 10 of 125 titles

Rank	Title	Author
1.	Life and Death of the Salt Marsh.....	John and Mildred Teal
2.	Beautiful Swimmers.....	William Warner
3.	Kon Tiki.....	Thor Heyerdahl
4.	Old Man and the Sea	Ernest Hemingway
5.	The Sea Around Us	Rachel Carson
6.	Two Years Before the Mast	R.H. Dana
7.	Twenty Thousand Leagues Under the Sea	Jules Verne
8.	Silent Spring.....	Rachel Carson
9.	Whale for the Killing.....	Farley Mowatt
10.	Under the Sea Wind.....	RachelCarson

Books That Influenced Respondents or Which Affected Their Job Choice

Top 5 of 49 titles

Rank	Title	Author
1.	Between Pacific Tides	Ed Ricketts
2.	SilentSpring.....	RachelCarson
3.	The Sea Around Us	Rachel Carson
4.	Log From the Sea of Cortez	John Steinbeck
5.	Silent World	Jacques Cousteau

Books With Which Respondents Philosophically Identify

Out of 37 suggested titles only two books were suggested by three people:

Sand County Almanac

Aldo Leopold

Silent Spring

Rachel Carson

*** Authors:**

John Trowbridge
Southeastern Louisiana University
Dept. of Teacher Education
SLU-749
Hammond, LA 70402
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Jim Wandersee
Graduate Studies in Biology Education
Dept. of Curriculum and Instruction
Louisiana State University, LA 70803
e-mail ciwand@lsuvm.sncc.lsu.edu