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How to Find Marine Information in Public and School Libraries

"I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the seashore . . . whilst the great ocean of truth lay all undiscovered before me."

-Sir Isaac Newton



Introduction - Getting around in the library

Rhode Island Sea Grant Advisory Service often receives requests from students who are writing term papers or doing science projects on marine topics. Frequently, the student does not realize that relevant information is available in libraries close to home.

Students may consult a classroom library, school library, or library operated by the community, government, or a university. Public library cards are available on request, and may often be used to borrow books from a group of libraries in a regional district. Your librarian can provide specific information. Interlibrary loan networks provide access to collections outside the local area.

When you begin exploring the library, first look for the card catalog. All of the books and publications available in the library are listed on cards and arranged alphabetically according to author, title, and subject. Many libraries have computerized their card catalogs, and the computer terminals are easy to use. Ask the librarian for help if needed. Next, locate the reference section. Here you will find encyclopedias, dictionaries, atlases, and indexes to periodicals.

This brochure offers guidelines for finding marine information, but the search process can be applied to any subject.

Step 1 - Select a topic

Choose a subject you are interested in and would like to learn more about. If the subject is too general you may need to narrow it down. "The Oceans" is too broad a topic. Check the encyclopedias in the reference section for ideas on specific aspects of the oceans. Are you interested in mammals, fish, shellfish, currents, tides, plants?

Decide on a specific area to pursue, and write down terms and names of people found in your reading to help in developing a search strategy. Note publications and authors listed in the references at the end of encyclopedia entries. As you learn more, your topic can become more precise. Your interest in fish might lead you to focus specifically on sharks, manta rays, or eels as you discover more information.

Step 2 - Search the card catalog

Consult the card catalog of the library using your subject terms, names of scientists or writers, or the titles of books. Besides finding books listed by subject, a computerized catalog may also find titles of any books that contain "keywords" you choose. The computer could, for example, display a list of all books in the library with the word "dolphin" in the title.

Start with the most specific information you have, like the name of an author or a book title, or the name of a specific plant or animal. If you have no luck, broaden the search by using a more general term. For the hard-shell clam, the search would begin with quahog and proceed through clam, mollusk, shellfish, and invertebrate. Keep trying until you have a list of several books to look for.

Be sure to write down not only the author and title of the book, but its call number. This number is found in the upper left corner of the library card or listed under "call number" on the computer screen. The call number is essential to locating the book. Books are arranged on the shelves according to subject. Libraries using the Dewey Decimal system will place science books in the 500s; the Library of Congress system uses a mixture of letters and numbers, such as QK573 for seaweed.

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599.5
W55

Winn, Lois King, 1944
Wings in the sea: the humpback whale
Lois King Winn, and Howard E. Winn. Hanover, NH:
University Press of New England, 1985.
151p.: ill.; 19x24 cm.
Bibliography: p. 137-148.
Includes index.

1. Humpback whale.
I. Winn, Howard Elliot
II. Title
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Figure 1. A card from the card catalog

The call number is in the upper left corner. Other information included: author's name and birth date; book title, complete author credit; location and name of publisher; date of publication; number of pages; illustrated; size of book; bibliography included (important to find further reading); index included; where else this entry is cataloged (helpful for finding subject terms).

Follow the letters or numbers in sequence to find your book on the shelf. If the specific book you want is out, others filed nearby may do just as well. Look to the left of your chosen book to find more general information, and to the right to find more specific books on your topic. Browsing through nearby books can be a valuable exercise. You may stumble across a book on a related topic that catches your interest, or find the elusive information you've been searching for.

Step 3 - Develop a search strategy

Once you have found a few books on your area of interest, they will begin to lead you on to others. Look in the bibliographies or lists of suggested readings for more sources. Write down keywords, authors, scientists, and book titles that interest you and that will provide additional information on your subject.

Think about your topic. Who would be writing about it, and where would the information be published—magazine articles, government publications, research journals, newspapers? A subject such as mussels could be written up in books describing aquaculture, in newspapers or popular magazines if there was a recent outbreak of red tide or an oil spill that affected them, or in research papers by scientists studying the impact of pollution on the environment. Add the names of authors and scientists to your list as you read about their work in the field.

Plants and animals are often identified by scientific names, such as *Mercenaria mercenaria* for the quahog. Write down these terms also. Use a dictionary when you find an unfamiliar word to help you understand the science you are reading about. These terms will help you expand your search for information at the same time as you are learning about your subject and refining your particular topic.

Your search strategy can be a simple process. First, think of a general topic, find some encyclopedia articles and general books for background information, and develop a list of subject terms. Second, search the card catalog and browse through the shelves as you refine your topic and build your list of subject terms, authors, and book titles to expand your search for information. Third, consult the reference section and periodical indexes. An effective search is a cyclical process—as you build your list of terms and references, you will return to the card catalog to locate them, and these sources will lead you on to others. Finally, consult with your teacher and librarian for further advice.

Step 4 - Search the periodical literature

If you have chosen a very specific or current topic, such as Persian Gulf oil spills or pollution in Narragansett Bay, information may not be easily found in books. Periodicals, such as popular magazines, research journals, and publications of scientific organizations often are the best source for such information.

To find articles on your subject, consult an index such as the Reader's Guide to Periodical Literature or the General Science Index. The Reader's Guide

will index articles in popular magazines such as Time, Newsweek, and Smithsonian; and the General Science Index will list articles in Oceanus, Sea Frontiers, Natural History, Science, Nature, Science News, and other science periodicals. Start with the most recent indexes and work your way back.

These indexes will group articles according to subject, such as "Whales" or "Sea otters." Keep looking under related headings until you find what you need. The subject words used by the indexes may be different from the ones on your list, or in the card catalog. Watch for "see" or "see also" suggestions in the index.

If you don't find your subject right away, think of more general terms. For instance, to find an article on plastics that are polluting the oceans, look in the General Science Index under the heading "Waste disposal in the ocean." Once you have found the most useful headings, use the same indexing terms to consult other yearly volumes of the index.

Oil spills and wildlife The disaster that won't go away. G. Laycock. Audubon 92 (106-108ff) Sp 90

Figure 2. A sample periodical index entry.

1st line: Category

2nd line: Title, author, periodical title

3rd line: Volume number (92) pages (106 to 108 and continued), issue (Spring), year (1990)

When you have developed a list of useful citations, consult the serials list or card catalog to determine if the library holds the volume you need, and find the call number. You will need the call number to locate the periodical on the shelves. Current copies may be displayed separately in a reading area.

Browsing can help in finding unexpected sources of information. Look through current periodicals for any that may touch on your area of interest and scan the table of contents. When you find one useful article in a publication, check other issues of this same title.

Step 5 - Try a computerized periodical index

Many libraries now have periodical indexes available on CD-ROM compact disks. These indexes can provide more current listings than book-type indexes, and quickly search a variety of publications related to your topic.

You can easily learn how to type in a subject term and receive a list of articles where that word is used in the title or as an indexing term. It is especially important to think about your search terms when using the

computer since it will match up the words you type exactly with the words in the record for the article. Be sure words are spelled correctly and try both singular and plural forms of the word.

Step 6 - Use the reference collection

The reference section in the library contains special books that cannot be checked out, so they are always available to consult. In addition to encyclopedias, dictionaries, atlases, and periodical indexes, you may find other resources including field guides and lists of local birds, plants, and animals.

Step 7 - Visit other libraries

If your library has insufficient material on your topic, you may want to try a larger library or one specializing in science. Try the main branch of your local library, or a university library (most are open to the public). Your librarian can make suggestions.

Another option is to use interlibrary loan services. Your librarian may be able to borrow a book or periodical from another library for you. This option should be exercised only when necessary, because it requires extra time and effort from both the lending and the requesting libraries.

Step 8 - Ask for help!

The librarian will be able to suggest books to look at, indexes to consult, and help you with computer searching. The librarian can also advise you about interlibrary loans, or if another library would hold more materials on your subject.

Tips for Success

- Selecting a good topic is critical. The topic must be neither too general nor too specific.
- Start out with some general background reading to help put your subject in perspective.
- Keep a record of your sources and where you found them so you can return to them if necessary.
- Keep a dictionary handy. Every field of science has its own vocabulary.
- Write down every possible book and article that may be useful. Some may turn out not to add to your information and have to be discarded.
- Plan enough time for your research.
- Ask the librarian for advice and assistance.
- Persevere!

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Additional copies of this brochure are available from Rhode Island Sea Grant Information Office, University of Rhode Island Bay Campus, Narragansett, RI 02882-1197. Order P1205. RIU-H-91-003.