

Discovering Language Arts Intermediate Research Skills Teacher's Guide

Grade Level: 6–8

Curriculum Focus: Language Arts

Lesson Duration: 1–2 class periods

Program Description

Interviewing a Veterinarian (7 min.)— Interviews are an excellent way to research and collect data. **Research: Look it Up** (5 min.)— Use your library's computer database to search for books by subject, title, or author. **Research Skills: The Sky's the Limit** (6 min.)— Finding articles in newspapers, magazines, and other periodicals is essential to reporting on current events. **Researching the Brooklyn Bridge** (5 min.)— Think about the types of resources that are best suited to a particular research topic. **Internet Research** (6 min.)— Internet search engines are a quick

way to find Web sites with information about a topic.

Organizing Research (4 min.)— Writers organize the data about a topic into timelines, outlines, notes, and graphs. **Research Papers** (6 min.)— Choose a good research topic, gather information from a variety of sources, evaluate the information, and group it into categories. **Research: Cite Your Source** (4 min.)— A bibliographical list should be in alphabetical order by the authors' last name. Sources that don't have authors should be alphabetized by title.

Onscreen Questions

- Interview a friend about a favorite pet or kind of animal. Take notes and organize the best answers.
- Think of a topic you would like to read about. Look for a book on this topic by searching the library's database.
- Pick a topic that you would like to read about. Find an article on that topic using the *Reader's Guide to Periodical Literature*.
- Research other suspension bridges. What sources would you use to write a report?
- Practice searching for "electricity" on the Internet. Use different search engines to find information.
- Use a timeline, outline, or graphic to organize your ideas for a research paper.
- Select a science topic to write about. Use this process of writing a research paper as a guide to prepare an outline.

- Create a bibliography for your next research paper. Remember to use the proper format.
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Lesson Plan

Student Objectives

- Evaluate Web sites based on their relevance to a research topic.
- Evaluate Web sites based on their credibility as sources of factual information.

Materials

- *Discovering Language Arts: Intermediate Research Skills* video
- Copies of a list of Web sites on a particular subject, one per student group (see *Procedures*)
- Computer with Internet access (optional)
- Chart paper
- Black felt tip marker

Procedures

1. Watch *Discovering Language Arts: Intermediate Research Skills* with your students. Talk about using the Web as a research tool. Explain that Internet search engines are a quick way to find information about a topic. Ask students what they learned about using the Internet as a research tool from watching the program. Ask them these questions: How would you use an Internet search engine to find information on a research topic? What should you look for in a Web site as a source for research information? How can you make sure the information on a site is relevant and credible? What kinds of sites offer the best information?
2. Divide students into groups of four or five and tell students that they will examine a list of Web sites on a research subject and evaluate them as sources of information. Each group will look at Web sites about a subject:
 - veterinary medicine
 - the light bulb
 - New York City skyscrapers
 - the Brooklyn Bridge
 - Benjamin Franklin
 - Hoover Dam
 - magnetism
3. Give each group a research subject from the list. Have the groups spend a few minutes talking about their subject. Tell them to decide on a specific topic area to focus on within the broad subject. What is the main topic? What kinds of information would they need for a research

report on this topic? As a group, have them think of questions about this topic and information they would want to find. What keywords do they think they could type into a search engine to find relevant Web sites? Organize their answers and ideas into order of importance. Explain to students that once they know the kinds of information they are looking for, they will be better prepared to evaluate the sources found in an Internet search.

4. Once students have narrowed down the information they would like to find, hand out lists of Web sites to the group. Tell students that the list is comprised of four Web sites. Each site is listed with its title, URL address, and a brief description that would be found on an Internet search page. The following are lists of four different Web sites for each subject, including the title and description that would appear in a search engine listing. (All sites were found using the Yahoo search engine.)

VETERINARY MEDICINE

Cornell University College of Veterinary Medicine

Description: The College of Veterinary Medicine at Cornell University is a leader in academic and clinical veterinary medicine. The world-class research facilities with recognized strengths in the physical...

www.vet.cornell.edu

Veterinary Medicine Publishing Group

Description: Publishers to the veterinary industry.

<http://www.vetmedpub.com/vetmed/>

Veterinary Medicine-Wikipedia, the free encyclopedia

Description: Veterinary medicine is informally as old as the human/animal bond but in recent years has expanded exponentially because...

http://en.wikipedia.org/wiki/Veterinary_medicine

American Veterinary Medical History Society

Description: Welcome to the American Veterinary Medical History Society. Veterinarians are often not aware of the historical significance of their profession. ... not realize the significant role that veterinary medicine has in American history.

<http://www.cvm.missouri.edu/avmhs/>

THE LIGHT BULB

Howstuffworks "How Light Bulbs Work"



Description: Before the invention of the light bulb, illuminating the world after the sun went down was a messy ... of events is that the light bulb itself could hardly be simpler...

<http://science.howstuffworks.com/light-bulb.htm>

Topbulb

Description: Sells light bulbs and related product.

<http://www.topbulb.com/>

Nodeworks-Encyclopedia: Incandescent Light Bulb

Description: Encyclopedia : I : IN : INC : Incandescent light bulb. Incandescent light bulb. The incandescent light bulb uses a glowing wire...

http://pedia.nodeworks.com/I/IN/INC/Incandescent_light_bulb

Light Bulb History - Invention of the Light Bulb

Description: Fascinating facts about the invention of the light bulb by Thomas Alva Edison in 1879. ... Swan began working on a light bulb using carbonized paper filaments ... among the most important men in history. ON THE WEB: Edison's Light Bulb. From the The Franklin Institute Science ...

<http://www.ideafinder.com/history/inventions/story074.htm>

NEW YORK CITY SKYSCRAPERS

New York City Skyscrapers

Description: Photos of big and tall corporate headquarters.

<http://www.nycskyscrapers.com/>

The Skyscraper Museum

Description: Skyscraper Museum is a private, not-for-profit, educational corporation devoted to the study of high-rise building, past, present, and future. Located in New York City ...

<http://www.wirednewyork.com/skyscrapers/>

New York Skyscrapers

Description: Study of New York City's most striking architectural entities, its high-rise buildings. Includes web cam views and history.

<http://www.greatgridlock.net/NYC/nyc.html>



New York City Attractions-Frommers.com

Description: New York City Attractions. Sort by: Author: Brian Silverman. Pub Date: September 16, 2005. Price: \$17.99. Related Titles: ... Museum of the City of New York. National Museum of the American Indian, George Gustav Heye...Schomburg Center for Research in Black Culture. Skyscraper Museum.

http://www.frommers.com/destinations/newyorkcity/21_indattr.html

THE BROOKLYN BRIDGE

Brooklyn Bridge

Description: Designed by John Augustus Roebling

www.greatbuildings.com/buildings/Brooklyn_Bridge.html

Brooklyn Bridge

Description: This site contains the history and specifics of the Brooklyn Bridge. Copyright International Technology Education Association

www.nycroads.com/crossings/brooklyn

"Brooklyn Bridge" (1991)

Cast, Crew, Reviews, Plot Summary, Comments, Discussion, Taglines, Trailers, Posters, Photos, Show times, Link to Official Site, Fan Sites ... seen this movie and would like to submit a comment

<http://imdb.com/title/tt0101055/>

EarthCam - MetroCams - Brooklyn Bridge Cam

Description: Live from the Edison Properties Manhattan Mini Storage building, 205 South Street, NYC. EarthCam brings you a live look at the **Brooklyn Bridge**. ... exclusively by EarthCam. **Brooklyn Bridge** graphics photos courtesy Gary Feuerstein's **Brooklyn Bridge** Website ...

<http://www.earthcam.com/usa/newyork/brooklynbridge/nojava.html>

Benjamin Franklin

The Electric Ben Franklin

Description: Diverse site about Benjamin Franklin, including his Silence Dogood articles, research articles, historical fiction, image galleries, 3D tours, puzzles, and links.

<http://www.ushistory.org/franklin/>



Autobiography of Benjamin Franklin

Description: Complete text of The Autobiography of Benjamin Franklin, considered the greatest autobiography produced in Colonial America.

<http://www.earlyamerica.com/lives/franklin/index.html>

Amazon.com: Biography - Benjamin Franklin: Citizen of the World (1996): Video

Description: Have one to sell? Biography - Benjamin Franklin: Citizen of the World (1996 ... It seems that the more you know about Benjamin Franklin, the less you know about him ...

<http://www.amazon.com/exec/obidos/tg/detail/-/6303501079/104-1669771-6997547?v=glance>

Benjamin Franklin: A Man of Many Talents

Description: Benjamin Franklin. A Man of Many Talents. We have studied about Benjamin Franklin. We've learned that when ... Grade - Pocantico Hills School. Benjamin Franklin by Joseph Siffred Duplessis

<http://www2.lhric.org/pocantico/franklin/franklin.htm>

HOOVER DAM

Hoover Dam

Description: Includes a virtual visitor center, history, photo gallery, teacher resources, and recommended rafting tours for the Hoover Dam. From the U.S. Department of the Interior.

<http://www.usbr.gov/lc/hooverdam/>

American Experience: Hoover Dam

Description: Facts about the dam, environmental concerns, construction timeline, significant people and events, teacher's guide, enhanced transcript, and bibliography.

<http://www.pbs.org/wgbh/amex/hoover/>

Hoover Dam Bypass

Description: Welcome to the Hoover Dam Bypass Website. The Hoover Dam Bypass Project reached another major milestone in October 2004 with the award of the contract for the final connection - the Colorado River Bridge.

<http://www.hooverdambypass.org/>



Hoover Dam inside and out your photo gallery to Hoover Dam

Description: Hoover Dam, one of the great accomplishments. Great photo essay of Hoover Dam. Pictures are of both the inside and outside of Hoover Dam. ... Hoover Dam. Inside and Out ... The Hoover Dam is outside of Las Vegas, approximately a 1 hour drive

<http://c1b.com/hooverdam.htm>

MAGNETISM

Magnetism

Description: The ancient Greeks, originally those near the city of Magnesia, and also the early Chinese knew about strange and rare stones (possibly chunks of iron ore struck by lightning) with the power to attract iron. ... Until 1821, only one kind of magnetism was known, the one produced

<http://www-istp.gsfc.nasa.gov/Education/Imagnet.html>

Exploratorium: Science Snacks About Magnetism

Description: Basic magnet demonstrations that teachers could make using common, inexpensive, easily available materials.

<http://www.exploratorium.edu/snacks/iconmagnetism.html>

Magnetism – Succeed in Physical Science

Description: Explanation of Magnetism to Succeed in Physical Science.

<http://www.school-for-champions.com/science/magnetism.htm>

The Great Magnet, The Earth

Description: The Great Magnet, the Earth The Great Magnet, the Earth This site provides a non-mathematical introduction to the magnetism of the Earth, the Sun, the planets and their environments, following an historical thread. It is also available in French...

<http://www.phy6.org/earthmag/demagint.htm>

5. Have student groups discuss and evaluate the list of sites for their subject. Instruct them to look at the titles, URLs, and brief description of each Web site. Which of the Web sites do they think will give the most relevant information? Which of the Web sites do they think will give the most credible information? Will the information found on this Web site be reliable? How do they know? Which Web sites will not have the information they are looking for?
6. Give groups a chance to use the Internet to look at the Web sites on their list and further evaluate them. If Internet access is not available, print out a copy of a page of information from each site for the groups to read through. Were they correct about the kinds of information that



would be found on each site? Do they believe the information on this site to be credible? Was their group correct about the sites that would be better research tools?

7. Hold a whole class discussion about what students learned about using the Internet for research. What kinds of Web sites would be the most useful as a research source and why? Which Web sites would be the least useful or credible and why? What are some rules or hints to follow when using an Internet search engine as a research tool? Using a piece of chart paper and a black marker, create a class list of rules and hints and display it in the classroom for future reference.

Assessment

Use the following three-point rubric to evaluate students' work during this lesson.

- **3 points:** Students thoughtfully and accurately evaluated Web sites based on their relevance to a research topic; thoughtfully and accurately evaluated Web sites based on their credibility as sources of factual information; and identified several rules or hints to follow when using Internet search engines as research tools.
- **2 points:** Students generally and somewhat evaluated Web sites based on their relevance to a research topic; generally and somewhat accurately evaluated Web sites based on their credibility as sources of factual information; and identified a few rules or hints to follow when using Internet search engines as research tools.
- **1 point:** Students were unable or unwilling to evaluate Web sites based on their relevance to a research topic without a great deal of assistance; were unable or unwilling to evaluate Web sites based on their credibility as sources of factual information without a great deal of assistance; and identified one or fewer rules or hints to follow when using Internet search engines as research tools.

Vocabulary

credible

Definition: Capable of being believed; plausible

Context: Determining which Web sites contain credible information is an important part of researching a topic.

database

Definition: A collection of data arranged for ease and speed of search and retrieval

Context: The book is in the database.

Internet

Definition: An interconnected system of networks that connects computers around the world via the TCP/IP protocol

Context: An Internet search engine can provide a lot of information quickly.

keyword

Definition: A word used as a reference point for finding other words or information

Context: Using multiple keywords will help find more Internet sites specific to a topic.

relevant

Definition: Having a bearing on or connection with the matter at hand

Context: Some Web sites will give more relevant information than others.

research

Definition: Close, careful study; scholarly or scientific observation or study

Context: Online encyclopedias can help guide research by illustrating other ideas.

Web site

Definition: A set of interconnected Web pages, usually including a home page, generally located on the same server, and prepared and maintained as a collection of information by a person, group, or organization

Context: Type the name "Benjamin Franklin" into a search engine to generate a long list of Web sites.

Academic Standards

Mid-continent Research for Education and Learning (McREL)

McREL's Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education addresses 14 content areas. To view the standards and benchmarks, visit

<http://www.mcrel.org/compendium/browse.asp>

This lesson plan addresses the following national standards:

- Language Arts – Writing: Gathers and uses information for research purposes
- Language Arts – Viewing: Uses viewing skills and strategies to understand and interpret visual media
- Language Arts – Listening and Speaking: Uses listening and speaking strategies for different purposes

The National Council of Teachers of English (NCTE)

The National Council of Teachers of English and the International Reading Association have developed national standards to provide guidelines for teaching the English language arts. To view the standards online, go to <http://www.ncte.org/about/over/standards/110846.htm>

This lesson plan addresses the following English standards:

- Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience
 - Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge
 - Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities
 - Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information)
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Support Materials

Develop custom worksheets, educational puzzles, online quizzes, and more with the free teaching tools offered on the Discoveryschool.com Web site. Create and print support materials, or save them to a Custom Classroom account for future use. To learn more, visit

- <http://school.discovery.com/teachingtools/teachingtools.html>
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DVD Content

This program is available in an interactive DVD format. The following information and activities are specific to the DVD version.

How To Use the DVD

The DVD starting screen has the following options:

Play Video – This plays the video from start to finish. There are no programmed stops, except by using a remote control. With a computer, depending on the particular software player, a pause button is included with the other video controls.

Video Index – Here the video is divided into sections indicated by video thumbnail icons; brief descriptions are noted for each one. Watching all parts in sequence is similar to watching the video from start to finish. To play a particular segment, press Enter on the remote for TV playback; on a computer, click once to highlight a thumbnail and read the accompanying text description and click again to start the video.

Curriculum Units – These are specially edited video segments pulled from different sections of the video (see below). These nonlinear segments align with key ideas in the unit of instruction. They include onscreen pre- and post-viewing questions, reproduced below in this Teacher's Guide. Total



running times for these segments are noted. To play a particular segment, press Enter on the TV remote or click once on the Curriculum Unit title on a computer.

Standards Link—Selecting this option displays a single screen that lists the national academic standards the video addresses.

Teacher Resources—This screen gives the technical support number and Web site address.

Video Index

I. Interviewing a Veterinarian

Examine the steps required to conduct a successful interview and get firsthand information directly from an expert.

II. Research: Look It Up

Learn how to use a library database to find books that will provide information about specific topics.

III. Research Skills: The Sky's the Limit

Learn how to use the *Reader's Guide to Periodical Literature* to find periodical articles on current events.

IV. Researching the Brooklyn Bridge

Explore the type of information found in magazines, atlases, dictionaries, and newspapers.

V. Internet Research

Learn how to evaluate Web sites to find relevant, credible information.

VI. Organizing Research

Discover how to make an outline and other pre-writing organizational tools.

VII. Research Papers

Examine the steps involved in writing a research paper, including identifying a good topic and gathering and evaluating information.

VIII. Research: Cite Your Source

Explore how to cite books, magazine articles, and other sources properly.

Curriculum Units

1. How to Conduct an Interview

Pre-viewing question

Q: Have you conducted an interview or been interviewed?

A: Answers will vary.

Post-viewing question

Q: What are the steps in conducting an interview?

A: First, prepare and ask relevant questions. During the interview record the responses by taking notes



or using a recording device. Afterwards, review your notes while the interview is fresh in your mind, and organize the information most relevant to your topic into useable data.

2. Library Database

Pre-viewing question

Q: Have you ever used the computer database at a library?

A: Answers will vary.

Post-viewing question

Q: What are the three ways to search a library database?

A: You can search a library database by subject, title, or author. To search by subject, type the topic into the subject field on the search page of the database. To search by title, type the title into the title field. Omit articles (*the, a, an*) from the search because the database is organized by the first word and does not include articles. To find an author, use the author field; type the last name of the author followed by a comma and the first name.

3. Reader's Guide to Periodical Literature

Pre-viewing question

Q: Name some magazines, newspapers, or other periodicals.

A: Answers will vary.

Post-viewing question

Q: How do you use the *Reader's Guide to Periodical Literature*?

A: You can search by subject or author; both are in one list and organized alphabetically. Take a broad approach when searching by subject; for example, you might use "architecture" as a search term when looking for a specific structure. When searching by author, look up the first letter of the author's last name; authors are organized alphabetically by last name.

4. Informational Resources

Pre-viewing question

Q: What resources are helpful for research?

A: Answers will vary.

Post-viewing question

Q: What information is found in magazines, newspapers, atlases, and dictionaries?

A: Magazines contain stories and articles, often on a topical theme. Newspapers feature daily news, opinions, and feature stories. Old newspapers are often kept for historical reference. An atlas includes maps, informative illustrations, graphics, tables, and graphs. Dictionaries provide definitions, parts of speech, pronunciations, and the etymology – or history – of a word.

5. Evaluating Internet Information

Pre-viewing question

Q: What are some advantages and disadvantages of using the Internet for research?

A: Answers will vary.



Post-viewing question

Q: Why are online encyclopedias helpful sources of research?

A: Online encyclopedias provide factual and credible information, and they often help guide research by listing related topics.

6. Graphic Representations

Pre-viewing question

Q: How do you organize your research notes?

A: Answers will vary.

Post-viewing question

Q: What graphic organizers do writers use?

A: Writers organize information notes, outlines, timelines, and graphs.

7. Writing a Paper

Pre-viewing question

Q: Have you ever written a research paper?

A: Answers will vary.

Post-viewing question

Q: What are the steps to follow in writing a research paper?

A: Identify the topic, making sure it is well defined and not too broad or too narrow. Then gather information from a variety of sources. Evaluate the information, and group it into categories. Incorporate your ideas with the information.

8. Writing a Bibliography

Pre-viewing question

Q: Have you ever written a bibliography?

A: Answers will vary.

Post-viewing question

Q: How are books, Web sites, and magazine articles cited in a bibliography?

A: A book citation lists the author's name, the book's title, the city and name of the publisher, and the date of publication:

Faraday, Joseph. *Magnetism Age*. London: Harper Collins, September 1980

A Web site citation lists the name of the online source, the date the site was accessed, and the Web site URL:

Magnetism Today, August 5, 2005. <<http://www.sciencetoday.com>>

A magazine citation lists the author, the title of the article, the magazine title, the date of publication, and the article's page numbers:

Smith, Marcia. "Magnetism in Our World." *Popular Science*. Volume 2 (August 2005): p112-114

