

Name: _____

The Internet is a valuable tool for finding answers to your questions about the world. This skill sheet will introduce you to some basic techniques for finding the information you need quickly. It also provides some questions you should ask as you evaluate whether or not the source of the information is reliable.

1. What is a search engine?

A search engine is like an on-line index to information on the World Wide Web. There are many different search engines to choose from. Some search engines index sites geared toward children. Others focus on educational sites, science-oriented sites, or government sites. Search engines differ in how often they are updated, how many documents they contain in their index, and how they search for information. Your teacher may suggest several search engines for you to try.

2. Defining your topic

Search engines ask you to type a word or phrase into a box known as a *field*. Knowing how search engines work can help you pinpoint the information you need. However, if your phrase is too vague, you may end up with a lot of unhelpful information.

How could you find out who was the first woman to participate in a space shuttle flight?

First, put **key phrases** in quotation marks. You want to know about the “first woman” on a “space shuttle.” Quotation marks tell the engine to search for those words together.

Second, if you only want websites that contain both phrases, **use a + sign** between them. Typing “**first woman**” + “**space shuttle**” into a search engine will limit your search to websites that contain both phrases.

If you want to broaden your search, use the word **or** between two terms. For example, if you type “**first female**” **or** “**first woman**” + “**space shuttle**” the search engine will list any website that contains either of the first two phrases, as long as it also contains the phrase “space shuttle.”

You can narrow a search by using the word **not**. For example, if you wanted to know about marine mammals other than whales, you could type “**marine mammals**” **not** “**whales**” into the field. Please note that some search engines use the minus sign (-) rather than the word **not**.

1. If you wanted to find out about science museums in your state that are not in your own city or town (or in the nearest city or town), what would you type into the search engine?

2. If you wanted to find out which dog breeds are not expensive and are easy to care for, what would you type into the search engine?

3. How could you research alternatives to producing electricity through the combustion of coal or natural gas?

3. Evaluating information found on the Internet

The quality of information found on the Internet varies widely. This section will give you some things to think about as you decide which sources to use in your research.

1. **Authority:** How well does the author know the subject matter? If you search for “Newton’s laws” on the Internet, you may find a science report written by a fifth grade student, and a study guide written by a college professor. Which website is the most authoritative source? Museums, national libraries, government sites, and major, well-known “encyclopedia sources” are good places to look for authoritative information.
2. **Bias:** Think about the author’s purpose. Is it to inform, or to persuade? Is it to get you to buy something? Comparing several authoritative sources will help you get a more complete understanding of your subject.
3. **Target audience:** For whom was this website written? Avoid using sites designed for students well below your grade level. You need to have an understanding of your subject matter at or above your own grade level. Even authoritative sites for younger students (children’s encyclopedias, for example) may leave out details and simplify concepts in ways that would leave gaps in your understanding of your subject.
4. **Is the site up-to-date, clear, and easy to use?** Try to find out when the website was created, and when it was last updated. If the site contains links to other sites, but those links don’t work, you may have found a site that is infrequently or no longer maintained. It may not contain the most current information about your subject. Is the site cluttered with distracting advertisements? You may wish to look elsewhere for the information you need.

4. Putting ideas into practice

1. What is your favorite sport or activity? Search for information about this sport or activity. List two sites that are authoritative and two sites that are not authoritative. Explain your reasoning. Finally, write down the best site for finding out information about your favorite sport.

2. Search for information about a physical science topic of your choice on the Internet (*i.e.*, “simple machines,” “Newton’s Laws,” “Galileo.”). Find one source that you would NOT consider authoritative. Write the key words you used in your search, the web address of the source, and a sentence explaining why this source is not authoritative.

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3. Find a different source that is authoritative, but intended for a much younger audience. Write the web address and a sentence describing who you think the intended audience is.

4. Find three sources that you would consider to be good choices for your research here. Write two to three sentence description of each. Describe the author, the intended audience, the purpose of the site, and any special features not found in other sites.

Extra space for notes:
