

## *Investigating Search Engines and Directories*

<b>Modesto City Schools Library Lesson Plan</b>	
Adapted by Dana Stemig, Library Media Teacher	
Grade Level	Sixth Grade
Info Lit Standard/s	2.17 Identifies and uses keywords to find specific information. 2.29 Understands the use of a variety of electronic resources.
Library Objective/s	Compare search engines, directories, and meta-search engines. Describe the features of one or more specific sites. Explain why smart searching includes trying more than one search site.
State Standard/s	Writing 1.4 Use organizational features of electronic text (e.g., bulletin boards, databases, keyword searches, e-mail addresses) to locate information.
Time	One 30 minute lesson for Activity Sheet 1 with demonstration; One 30 minute lesson for Activity Sheet 2 with demonstration; Time for the students to investigate the sites will depend on the number of computers available.
Lesson Title	Investigating Search Engines and Directories
Introduction	Ask students: What do you do when you need information from the Internet? The Internet is made up of so many web pages that it is very difficult to find what you need. One of the tricks is to know what search engines to use to find different types of information.
Vocabulary	Search engine, directory, meta-search engines, spider
Activity	Distribute Activity Sheet 1: Investigation Search Engines and Directories. Read the page with the students. Discuss important points and explain needed concepts. If you are able to display the Internet for the students, model using several search engines. Distribute Activity Sheet 2. Read the section on directories with the students. Be sure to discuss the fact that people, not computers, choose the sites on directories. Although there may be few sites selected, those sites will be more useful and of a higher quality. If you are able to display the Internet for students, model using several directories. Read the section on meta-search engines with students. If you are able to display the Internet for students, model using meta-search engines.

	<p>Distribute Activity Sheet 3. Students will need to have access to a computer for this lesson. It is advisable to complete one copy of this page with all students as a model before sending them to the computer to do it on their own. Go to <a href="http://www.becybersmart.org">www.becybersmart.org</a> and click on the diamond. Find the title of this lesson- Investigating Search Engines and Directories. Choose one site and record the findings on Activity Sheet 3. Allow students to go to the computers either individually or in pairs or groups and complete Activity Sheet 3.</p>
Closure	<p>Ask: How do search engines and directories differ? (Search engines are indexed by computer programs and directories are indexed by people. Search engines usually have many more sites indexed than do directories.)</p> <p>Tell students: Share one feature of the site you visited with your partner.</p> <p>Ask: Why is it a good idea to try more than one search site? (Because no one search site covers the entire Web. Also, search sites offer different search options.)</p>
Resources	<p><i>This lesson is adapted from <a href="http://www.cybersmartcurriculum.org/lesson_plans/68_16.asp">www.cybersmartcurriculum.org/lesson_plans/68_16.asp</a> The activity sheets may be downloaded from this site.</i></p>

Name \_\_\_\_\_ Date \_\_\_\_\_

## Investigating Search Engines and Directories

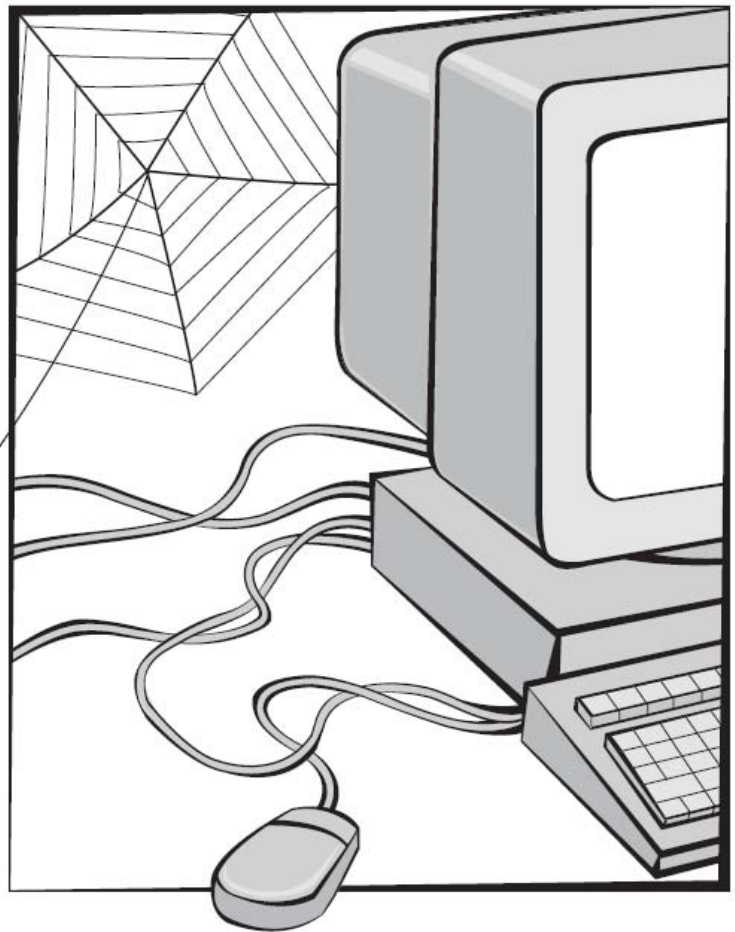
### How does a **SEARCH ENGINE** work?

Search engines use a computer program called a **spider** to roam the World Wide Web exploring Web pages and their links. The spider collects information and then a second computer program **indexes** all the information. Each search engine's spider and index organizes Web pages a bit differently.

Search engines also have a third computer program that actually goes into the index to find **matches** between your keywords and Web pages.

The sites with the best matches are displayed first. Each search engine has a different way of identifying the best sites. This is why you are very likely to get different results from different search engines.

These three tasks are all done without any human involvement—so a huge number of sites are indexed quickly.



Name \_\_\_\_\_ Date \_\_\_\_\_

**How does a DIRECTORY work?**

In a directory, **people**, not computers, put the index together. Editors evaluate Web sites and organize them into subject categories.

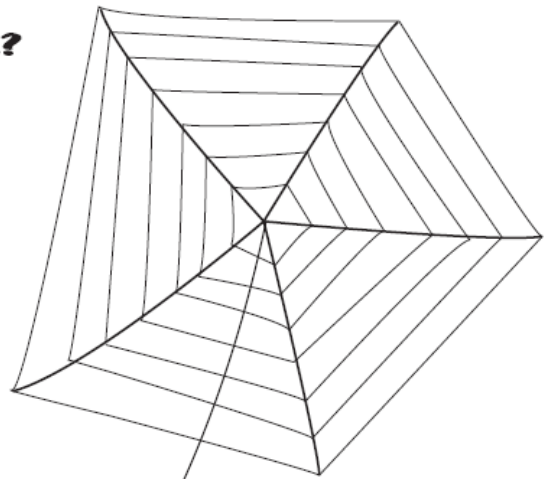
Because people have chosen them, the sites in directories may be of higher **quality**.

However, the number of sites in a directory is usually much **smaller** than in a search engine's index.

Many people use the term "search engine" to describe either a search engine or directory. And many search sites offer both services.

**How does a META-SEARCH ENGINE work?**

A meta-search engine sends your keywords to several search engines at the same time. The results from each search engine are organized and displayed on one page. This type of service is useful when your topic is very **narrow** and you want to search as many Web sites as possible.

**Be CyberSmart!**<sup>®</sup>

No one search engine, directory, or meta-search engine covers the entire Web. So, don't get stuck in a rut by using only one. Try them all.



Name \_\_\_\_\_ Date \_\_\_\_\_

**Search Site Name** \_\_\_\_\_

**1.** This site is generally known as a (check one):

- Search engine     Directory     Meta-search engine

**2.** What other kinds of information or activities are on the home page of this search site?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**3.** Try a quick search for *tandem bicycles*. What kinds of information are provided on the results page?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**4.** How can you submit questions or comments about the site?

\_\_\_\_\_  
\_\_\_\_\_

**Sum It Up**

Make up a slogan to remember this site.

