

# EXPLORING

## Science

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### Webmaster



**Prerequisite:** A Cadet must have earned the **Computer Knowledge** merit badge before being awarded the **Webmaster** merit badge.

#### PURPOSE

To help the Cadets gain a working knowledge of the World Wide Web and apply the skills learned in the Computer Knowledge badge in God's service.

#### LEARNING

##### 1. Definitions

*Internet*—The Internet is a massive network of networks, a networking infrastructure.

*Web Browser*—A web browser is a software application that enables a user to display and interact with text, images, and other information typically located on a web page.

*WWW*—The World Wide Web, or simply Web, is a way of accessing information over the medium of the Internet.

*WYSIWYG*—Commonly spoken as WIZ-zee-wig, it is an acronym for What You See Is What You Get. WYSIWYG is an application that enables you to see on the display screen exactly what will appear when the document is printed.

*FTP*—File Transfer Protocol is the protocol for exchanging files over the Internet.

*Resolution*—Resolution refers to the sharpness and clarity of an image, measured in pixels on a monitor or dots on a print out.

*Hyperlink*—An element in an electronic document that links to another place in the same document or to an entirely different document. Typically, you click on the hyperlink to follow the link. Hyperlinks are the most essential ingredient of all hypertext systems on the World Wide Web.

*HTML*—HyperText Markup Language. The authoring language used to create documents on the World Wide Web.

*HTTP*—HyperText Transfer Protocol. The underlying protocol used by the World Wide Web. HTTP defines

how messages are formatted and transmitted, and what actions web servers and browsers should take in response to various commands.

*File System*—is a method for storing and organizing computer files and the data they contain to make it easy to find and access them.

*Navigation*—a method of moving from one web page to another web page.

*ISP*—Internet Service Provider. An organization that offers users access to the Internet and related services.

*TCP/IP*—Transmission Control Protocol/Internet Protocol. The suite of communications protocols used to connect computers on the Internet

*Search Engine*—A program that searches documents for specified keywords and returns a list of the documents where the keywords were found.

*URL*—Uniform Resource Locator. The global address of documents and other resources on the World Wide Web.

*Hit Counter*—Software that tracks the number of times a web page has been requested.

2. Have your Cadet demonstrate adding these web pages to his bookmarks for you.

#### DOING

The requirements in this section call for the Cadet to develop working knowledge of the Internet by creating web content. The Cadet should be encouraged to help create a web site that furthers God's kingdom. Also the Cadet should demonstrate that the computer he is using for this badge is secure, and that he is accountable for his internet use.

1. **Creating Web Content**—While you watch, have the Cadet download some photos to a computer and re-size them for use on the Internet. Have the Cadet demonstrate that he has created at least one web page and uploaded it to the Internet so that it can be viewed by you or, have the Cadet add content to at least three existing web pages and have the Cadet show them to you.
2. **Computer Security Review**
  - a. Cadet should show that these are in place on his computer or he should add them.

A firewall (hardware or software), current operating system software, antivirus software, and antispyware software are all ways to control Internet traffic between the WWW and your home computer. These hardware and software solutions stop outside Internet users from “looking” at what is on your home computer and gathering personal data from your computer, or sending your computer harmful applications that can corrupt your data.

Sometimes Parental Control Software is built into the operating system of your computer or it may need to be added on, but it gives the parent or guardian of a child a way to “block out” pages with inappropriate content from appearing in the Internet browser.

Placing the computer in a public location is a way to keep all who use the computer in your home accountable. If anyone in the home can see what the computer user is doing at any time, it helps to keep the user from viewing inappropriate web content.

Password protecting your computer keeps anyone who may visit your home and have physical access to your computer from changing or erasing data on your computer

Backing up documents or images is just a smart way to prevent the loss of thousands of hours of work that is stored on your computer. Despite all the preventative measures it is possible for the data on computers to be destroyed by viruses, and even the best computers can have hardware problems that cause data loss. So back it up!

- b. Self-explanatory
- 3. Reaching the World — Millions of people around the globe have access to the World Wide Web. With that potential audience, it is important that churches find ways to touch web users’ hearts with the Good News. Have the boys look critically at their church’s website and suggest ways that the site could be made more inviting and friendly to those who don’t know about salvation through Jesus Christ.