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How to Use the Net in Your Classroom!

The Internet

There are several ways to help students understand this tool called the Internet. Your students have probably heard it a thousand times already... the information superhighway... the World Wide Web... the net. It all sounds so vast and complicated. However, brought down to its bare nuts and bolts, the Internet is simply a bunch of computers connected by phone lines! Okay, okay... sometimes T1 and T3 lines, which are like phone lines except they run digital data. Phone lines connect most homes and schools and they can be fairly slow because they are handling so much data traffic. If you are lucky enough to have a T1, or hold on to your seats, a T3 line, data will whiz in and out of your computer. When you reach another computer, or 'site,' you are tapping into whatever information they have made available in that computer. You can connect through these lines to other computers all over the world, hence the name... World Wide Web... or Internet.

The Human Net

A fun way to introduce the concept of the Internet to kids does not even require the use of a computer! It is a simple learning game that can be used with any group of kids. It does not take any special material or heavy preparation.

Objective of the Activity

The kids will simulate how the Internet works by creating computer sites, lines, and search engines.

Preparation

Ask each of the kids to secretly submit two fun facts or trivia about their lives that no one else knows. For example, Terrence got a raisin stuck up his nose when he was three or Meghan's favourite treat is peanut butter and bacon sandwiches. Kids will get the idea if you share a couple of examples from your own life! Take all the facts and write them out in a trivia question form sheet, deleting the names.

Your sheet might look something like this:

1. Who played connect the dots with his or her baby sister's freckles? _____
2. Who lived in another country for two years? _____

And so on ...

Directions

Place your kids in teams. For instance, if you have twenty kids, you might make five teams of four. Each team should set up its home base, or 'site,' in a separate area of the room. Each team then selects a 'search engine.' This person will be responsible for finding the bits of information the group needs in order to answer its trivia question sheet. The team should also select a recorder, someone who writes the answers down on the master sheet,

and an organiser to tell the 'search engine' where to go and for what information to look. It is optional to connect each group or site by a line taped on the floor or a pathway, but it helps to recreate the actual process.

Tell the students they have a set amount of time, say 20 minutes, to find as many of the names that answer the trivia questions as they possibly can. They must send their searchers out with one question at a time. The searchers need to go from group to group looking for the person who answers the question. When they find the answer they go back to their group and give the information to their home site (their 'computer').

The game might work like this. Ashley leaves her home base to look for the answer to the following. Who took a pet snake to the movies? _____

Ashley goes to the first site and asks her question. No one at the group has ever done the snake thing. So Ashley quickly goes to another site and asks them if they know. Julian admits that he was the one. Ashley quickly returns to her home site with the information. Ted writes down the information on his master sheet and they send their searcher out with a new request. When you call time, they all must return, count up correct answers, and score their papers. Then, and this is paramount, discuss the game.

At the end of the game, have fun sharing the answers and seeing which group got the most information. However, more importantly, discuss with the kids what the process was like. Did they experience having to slow down and wait because of traffic jams? Did they go to the wrong sites? What were their different roles? Then discuss how each role was like part of the Internet. The paths are the lines to get to new sites. Each group held a certain amount of information that other sites requested. The searchers were like search engines going from site to site trying to find information. This is a great starter activity. It gets children actually simulating the process that happens on the net. Kids understand the parts better and also feel less frustrated when their computers are slow to retrieve information or they go to the wrong sites.

Techno Babble

Believe it or not, what you have just demonstrated is the way the Internet works. Packets of information (each searching student) travel out through the phone lines until they reach a server (the group or 'site'). The 'packet' then queries that server, asking if it knows where the 'packet' should go. This protocol is known as TCP/IP. If the server does not know where to send the 'packet,' the 'packet' can go to another server.

Getting Your Feet Wet

Nowadays, connecting to the Internet is fairly easy. You need a computer, a phone line and a modem. Some modems are internal, hooked up to the guts of the computer; some are on the outside or external. Internet software is a must. Some available software titles are Netscape Navigator, Microsoft Internet Explorer, etc. Lastly, you have to join an

Internet service provider, which is basically someone who answers the phone when your computer comes a calling! Ozemail, Onenet, and Telstra Big Pond are common Internet service providers (IPS). Depending on when you got your computer, often these features come with your sales deal and you do not have to get anything in addition to what you have purchased. Now that you have all the right equipment, you are ready to get your feet wet.

Kids, no matter what the age, should have some successful structured experiences with the Internet before they surf and explore on their own. One of the greatest attributes of the Internet is the ability to pick a topic and surf around finding all the related information you can. Sometimes free exploration yields some really cool stuff. However, when you are looking for something specific it can be like searching for that proverbial needle in the haystack. Here is a surefire winner of a miniproject that introduces a beginner to the Internet's capabilities.

First Search

Once you have clicked your way to the Internet, you will see a variety of options. No matter what software you are using you will see a place to enter the name of where you want to go. It is often shown as a blank box with the letters URL next to it. You have two options. You can enter the name of an address, if you already know it, or you can go to a search engine. Most likely, you will go to a search engine. The next section, *Internet Tricks and Traps*, contains detailed information and activities using search engines. For now, get your feet wet with an absorbing address. In the blank box type the address:
<http://pao.gsfc.nasa.gov/>

Type this exactly; the web is very picky about how you write addresses. This will bring you to the home page of NASA. Here you can have kids bring up current pictures from satellites, hear audiotape, see video clips, read about the latest mission, and much more! Simply click on a box topic that interests you. Have some fun just exploring the site. Each button will bring you to a new page of information or what is called a link. If you ever want to get back, you have a back and forward button on most Internet browser programs. This is like leafing backwards in a book. Keep clicking and you will go back to pages you have already seen. Forward will bring you to your most recent pages. Do not forget to use your arrows on the sides of your browser to see the whole web page. Web pages are pretty long, and sometimes you need to page down to see the whole thing on your screen. This is a fascinating site, so see it all. It is a good way to 'advertise' how cool the net is.

Tricks and Traps

Searching for specific information on the web can be a daunting task for even the most experienced Internet user. Even with the powerful search engines available over the web, finding what you need is more an art than a science. Ask five different power users what their favourite search page is, and chances are, you will get five different answers. Finding the search that works best for you will be a matter of personal preference and familiarity. There are several tricks and tips that apply to any search engine.

Search engines, by their very nature, open the entire web to you - the good, the bad and the ugly. Even the most benign searches can return surprising and quite inappropriate responses. Do your searching before class and bookmark your finds.

More Is Less

The more information you provide in your initial search, the fewer unrelated sites you will have to sift through. This may at first seem counter-intuitive. It seems more natural to narrow a search by adding detail as you go along, but this is not the case on the Internet. For instance, if you are interested in the Smithsonian new rocketry exhibit you might be tempted to start with general inquiries like 'Science Museums' and narrow it down from there, but this will return hundreds of unrelated hits and waste your time. Searching for 'Science Museums Smithsonian Air and Space Rocketry' will get you just where you want to be.

Great Sites Link Alike

If you cannot find exactly what you need, try to find a large site (university or the like) that has similar types of information. Many times these sites will have a page of links that will help you search.

Consider the Source

In the arcane semantics of web addresses, the most important information for the searcher is often the last part of the address: .com=commercial .edu=educational, .org=organisation, .gov=governmental, etc. These codes will help you decide if the site is trying to sell you something or actually provides useful material. Australian sites usually have .au at the end.

When a Picture Is Not Worth a Thousand Words

Most Internet browsing software allows you to enter a 'Text Only' mode. This dramatically reduces the time new pages take to download. When you are searching, it is often a good idea to turn off the graphics and take a quick look at prospective matches.

Here Today, Gone Tomorrow

The web is a constantly changing, amorphous collection of computers. As a result, pages are sometimes forgotten, lost, down, changed, moved, corrupted, or removed. As a result, sometimes your favourite site will return an error when you try to access it. Do not give up on it, most of these errors are temporary and the site will be back.

Easy Internet in the Classroom

The next section (pages 9-59) is designed to make Internet use easy and fun. It involves an Internet address, a brief description of the site, and then a project idea for your students. The projects are suggestions. Surely, once you get going and feel comfortable, you will find your own cool sites and come up with your own project ideas. Often, the sites come with an educator's section that lists curriculum ideas for that site and also resources for the teacher. These are sometimes outstanding and at other times ... well ... not so good.

There are two projects listed per page. You might find it useful to cut these out, paste them onto index cards, and keep them in a file box by your computer. As you become a computer expert, your library of addresses and ideas will grow and grow, and you can easily share them with others. Another way you can keep a list of web addresses that you like is by using the Bookmark feature, with which most browsers come.

Bookmarks

Use the tool bar that is across the top of your browser. Locate the section called 'Bookmarks.' When you are at an address that you think is something you would like to save, click on 'Bookmark,' and then on 'Add Bookmark.' Your browser will automatically store the address under 'Bookmarks.' When you want to go back to the address of the site you saved, go to the bookmark section and you will find the site (bookmark) listed. Click on it and it will take you to the site! Beware. There is usually no great fanfare when you have bookmarked. So, you may think it has not happened, and you will attempt to bookmark again. On some browsers you could end up with a huge folder of the same bookmark listed over and over again before you figure it out.

On pages 59-85, each of the 101 Cool Sites has a marker with the name of the site and the net address. Cut these out, laminate for longevity, and place by the computer. This way, your students have a visual reminder of the site they are exploring, and they can practise typing the address in order to access the site.

Curriculum Areas and Levels

In the following section, sites are listed under specific curriculum areas. Science, English, society and environment, mathematics and art are covered. Though the projects are labelled under a specific content area, often a site can be used across curriculum boundaries. Many of the projects are already approached as pieces of integrated units. The resources listed are meant to be as flexible as possible. Many of the ideas are built around curriculum that teachers already use. If curriculum folders or notebooks are already utilised, these project ideas can be cut out, put on cards and attached to the content folders to be shared.

Most of the sites are appropriate for students of all ages, and the projects are general enough that the instructor can modify them to suit their needs. If a site is geared very specifically toward one level, it will be noted. One might think that the Internet is only appropriate for older students. Not so! More and more, sites are appearing for the youngest of learners. Please remember that all sites and ideas should be previewed by you before you try them in the classroom.