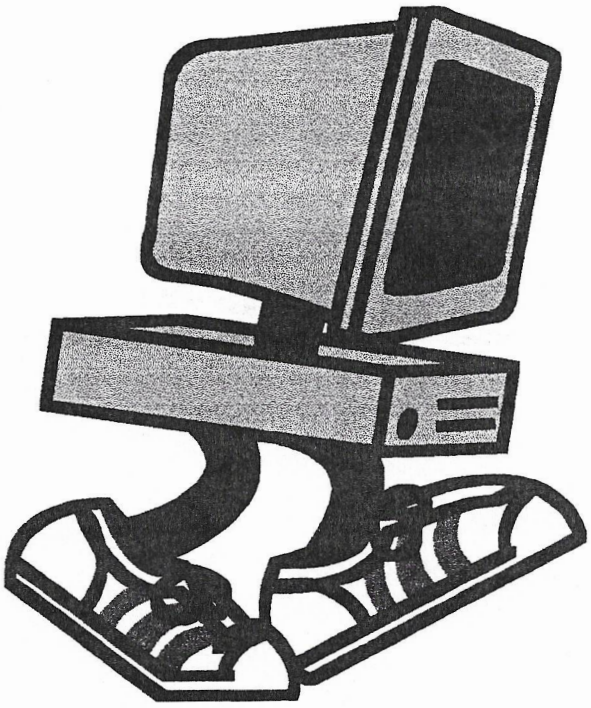
Computers Don't Byte



They just run

COMPUTERS DON'T BYTE

NOTE: Customize your presentation by asking questions at the beginning of the session. If your audience has had a lot of experience with computers, the beginning part of this lesson might be geared to a discussion only. In order to be able to answer the questions that might come through the discussion, the presenter should have some prior knowledge of computers and how they work. This can be gained though self study or by experience. There are a couple of books that are mentioned in the lesson that are helpful. Add to your internet presentation names of your local internet service providers and some interesting web addresses. You can do research at your local library or on the internet. Since web addresses and phone numbers become out of date so rapidly , none were added to this presentation.

AGENDA

Handout #1

5 Minutes	Introduction
20 Minutes	Getting to know Computers
	Parts of a computer Popular software packages
5 Minutes	Using computers at home
10 Minutes	How to buy your computer
20 Minutes	The "Internet" or the "World Wide Web"
	"What is it Anyway?" "Why would I want to get on?"
10 Minutes	Summary
	Questions & Answers

MATERIALS NEEDED

Handouts
Pencils

Overheads of the handouts which is optional
Overhead Projector

Evaluations

Flip Chart (optional) with Markers

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INTRODUCTION

Welcome to the session of "Computers Don't Byte." The goal is to give you some information about computers, answer some of your questions and help you become better acquainted with the internet.

In order to present this program on what you would like to know about computers, please answer some questions by raising your hand.

How many have used computers before, either at work or at home?

How many of you have computers at home?

How many are planning to buy a computer in the near future?

How many are on the internet? or use E/mail?

Computers have become a very important part of lives. Their ability to sort through massive amounts of data and quickly produce useful information for any user makes them indispensable in a society like ours. Without computers, the government couldn't sort and record the data it collects for the census every ten years. Banks would be overwhelmed by the job of keeping track of all the transactions they must process. The telephone service we are used to would be impossible.

Today we will familiarize you with today's computers and technology and to identify some of the practical uses for computers in your home.

At the end of our session, we give you an opportunity to ask questions. We will attempt to answer your questions or give you information where you can find the answers. Remember, we are just users of computers like you, we are not experts. Everyone is forced to learn about computers today and to use them at work, at home, in the library, at the bank, almost everywhere.

A Computer is....

Handout #2

If you need one definition of what a computer is, you could say it is a data processer. You input data, the computer processes it and either stores it or prints it out. There are two components that are needed to help with that work, they are called **hardware** and **software.**

Computers require people to tell them what to do. Input devices are for putting information into the computer. The **keyboard** is a hardware device that allows you to put information into the computer as text, numbers and symbols. The **trackball**, or a **mouse**, allows you to control the movement of the cursor on the screen. You do this by rolling the ball and by clicking the button on the mouse. Other kinds of input devices are a scanner, drawing tablet, and video camera.

The part of the computer that handle the logical operations is called the processor. The **ROM-BIOS** (Read Only Memory - Basic Input Output system) chip gets the computer going when the computer is turned on. The Rom stores the program used to start the computer, checks all of the connected devices, and assists the microprocessor with basic operations.

The **microprocessor**, which is also called the central Processing Unit or CPU is like the brain of the computer. It is where most of the computer program's instructions are executed.

An **AV card** (Audio Video) allows you to input and manipulate audio, graphics video and TV signals. The AV card sends images to the monitor and sounds to the speaker.

All of the above processors, plus other components, are connected to the mother board, which is like the computer's floor. The mother board is a multi-layered circuit board that holds the computer's essential components, supplies them with power and provides the wiring which are called **buses** - for them to communicate with one another.

Output is the information the computer returns to you after processing the information you input. This information can be in the form of images, sounds, text, or other feedback.

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The output device that is used almost all the time is the **monitor.** It displays the images that the computer generates, and projects a visual representation of the work being done on the computer.

When you have output that needs to be heard, you need a speaker to project the sound being generated by the computer.

A **printer** outputs computer-generated text and graphics onto paper -- so you can show off your work. There are different types of printers like ink-jet, dot matrix printers and laser printers.

All of these parts are called hardware, but a computer needs software in order to work. Software are the instructions that tell the computer what to do. They are also called computer programs. A program can be a game, a word processing application, a database or an internet browser.

Handout #2A

Software is written in a computer language called binary code - that works with the computer. The smallest unit of information in binary code is called a bit.

A bit can be set to be:

1 (on) or **0** (off)

Eight bits make a byte and a byte can make a letter of the alphabet. Add up many bits to make a word.

Here's how you would spell DOG in binary:

off on off off off on off off
0 1 0 0 0 1 0 0 = D

off on off off on on on on
0 1 0 0 1 1 1 1 = O

off on off off off on on on
0 1 0 0 0 1 1 1 = G

Turn back to handout #2

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Computers need places to store programs and files. There are many types of storage or memory, that the computer uses. Some act as temporary memory, some as permanent memory, some you can change and some you can't.

The **RAM** (Random Access Memory) is the temporary storage for the files and programs that are currently in use by the computer. I call this the working memory or workspace. It is used for holding information while you work on it before you put it in permanent storage. When the lights go out or your computer is turned off, all the files in the RAM are erased.

When you buy a program or application it is usually stored on a **floppy disk** or a **CD-Rom disk.** These are portable kinds of storage. You might also use these disks to store back-up copies of your work.

The floppy disk stores information in magnetic patterns that coat the flexible disk inside the hard plastic case. You can read and write information to a floppy disk using a hardware device called the **floppy drive**. Information stored on a floppy disk is permanent until you decide to erase it. The information on a CD-Rom disk is read by a **CD-ROM player**, using laser light.

When you copy a program from a floppy disk onto your computer, the information is stored on your **hard drive.** A hard drive has a lot more storage room than a floppy disk. It stores your system's software, application programs and files. You read and write information to your hard drive, which is then stored permantly. The information is saved even when you turn off the computer.

What can you do with a computer.

Handout #3 page 1

Using a word processing application program you can write and edit all kinds of documents. You can easily move text around with cut and paste. When you follow your creative impulses, word processing programs do some tedious tasks, like proofreading, You can make changes without having to retype the entire page. There is usually a spell checker and a grammar checker with your application program that is a tremendous help in proofreading.

Storing addresses and phone numbers or a large quantity of data is easier when you have a **database** application like Filemaker . It does not have to be written in text or lists for it to be a database. You might have pictures and icons stored where you can find them easily.

A paint program lets you create and experiment with graphic images. Desktop publishing programs let you move graphics and text around the screen and create newsletters, postcards, signs and books.

Accounting programs can help you organize your check book or do the family budget. There are tax programs to go along with them that will print out the right forms to use.

Designers use **CAD Computer-Aided Design** to create 3-D models that they can examine from any angle. **Virtual reality** lets you become part of an artificial or "virtual" world on a computer. You can buy programs to design your own house or that dream kitchen you have always wanted.

You can use a computer to compose and edit music. **MIDI** (Musical Instrument Digital interface) is the most common language used for creating music with computers. You can compose songs using a computer and a **sampler.** Pop musicians and rappers use short, digital samples or songs to add to their own songs. Sampling is also a way to reproduce instrument and voice recordings for playing on a keyboard.

Communicating through electronic mail allows people to send and receive messages though a computer at another location. This useful way of exchanging information with other people is called **networking.** The **Ethernet card** allows your computer to connect to a local area network or **LAN** by cables. It is used for sharing information between computers that are located near one another. You can connect all of the computers in the house, and then share only one printer.

To send information to a computer that's outside your house or office, you must use a **modem--** a hardware device that allows you to use your computer to share information through phone lines with other computer users with modems. You would also use a modem to connect to the internet.

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Purchasing Tips.....

Handout #4

1. Define your needs.....
   Make a list of what you want to do with your computer. If you just want to write letters, you will not want a very sophisticated system. If you want to work with graphics or photos you will need more memory than the computer off the shelf. With games you need speed.

2. What is your budget? Consider all options for paying for your computer. The more memory, the greater the speed, the more components added, the greater the cost.

3. If you are inexperienced.....
   Check with a friend or neighbor and find out what they suggest about buying your system. Maybe you can find an technical person that will help you install it.

4. Consider the software.....
   It should be easy to learn, easy to use, and be able to handle routine operator errors. If the user interface is bad, you'll be hard pressed to get the system to do anything but confuse you.

5. Make sure the system you buy can be upgraded as your needs expand. Sometimes a system that looks like a bargain is only a bargain in the short run. Technology is changing so fast, tomorrow there will be something new that you might need or like to have added to your system.

6. Carefully investigate possible areas of hardware and software compatibility. Not every piece of hardware you may need can be plugged into the system you are thinking of buying. Likewise, not all applications of software can be run on the operating system you may acquire.

7. Take a class on computers or on the software you want to use. Visit a couple of User Groups. It will be fun meeting new people and they can help with the decisions you have to make. Read computer magazines. Send for computer catalogs. Their prices are sometimes lower, but you need to know exactly what you want.

The "Internet" or the "World Wide Web"

What is it anyway?.....

handout #6

The Internet is a loose association of thousands of networks and millions of computers across the world that all work together to share information. Like many complex systems, the Internet is easiest to explain through the use of metaphors, and the Net has inspired its fair share. The one that has stuck is the "information superhighway" and while it has become a clické, the transportation analogy really does hold up pretty well. All kinds of different computers that contain different information can communicate on the Internet because they all use an agreed-upon set of rules - called protocols - to communicate. This information travels primarily over the infrastructure of the telephone system.

The Internet originally started out in 1969 as the Arpanet, a computer network built by the US Department of defense for scientists and the military to exchange information. The Arpanet was supposed to be used to transfer data between scientists,, but one feature of the Arpanet quickly became the most popular;-**electronic mail or e-mail.**

The Arpanet was designed as a decentralized network. If part of the network was destroyed, information could still travel over the rest of the remaining network, it still functions that way today. The networks grew as universities and other organizations got online. By connecting to each other, these networks create a superfast pipeline that crisscrosses the United States and extends to Europe, Japan, mainland Asia, and the rest of the world. The internet backbone or the main lines that carry the bulk of the traffic is formed by the biggest networks in the system, owned by major **Internet Service Providers or *ISP's*** . such as **GTE**, **MCI**, **Sprint, UUNet** and America Online's **ANS.** They use high-speed networking equipment to connect the backbone to other networks. These networks are owned by smaller regional and local ISPs. These companies and commercial Internet providers make the Net more easily available to the average person. They can provide special services.

Even though we have to pay for access to the Net, not one organization or company owns, controls, or maintains the net, and chances are that none ever will. In fact, if anyone actually owns the Net it's us , the users. Whoever generates the content, in a sense, owns that content - and the Net is nothing if not a network of content providers. The Internet exists because thousands of people and organizations make their computers' files -their content - available to others over the network.

Why get on the Internet?.....

Even if you don't regularly use computers, *you* are connected to computer networks. Do you have a social security number? A library card? A bank account number? A driver's license? A school record? A telephone number? If you do, then you are connected to computer networks, each with information about a part of your life. Everyday activities now depend on computer networks like newspapers, airlines and the weatherman. Cash machines are part of a large network of bank computers. When you withdraw money from one of these machines, it contacts your bank's computer to get information about your bank account.

Why bother with the internet? Because it is very exciting to find all the information in the world at your beck and call. Any subject you want to know about is available to you. The Internet is a communication medium of unparalleled scope. We can share information, ideas, and experiences in a community. Call it a virtual community, even if the connection is a digital one. You form relationships that can be quite substantial. Set up your own web page and let the world know who you are. Find other internet travelers with the same interests.

handout #7

Here is a list of things you can do on the internet:

Automotive:
Used Cars *New Cars*Tips*Find a Buyer

Classifieds:
Real Estate*Personals*Tickets

Computing:
Tech News*Game Downloads*Software

Employment:
Job Search*Job Postings

Entertainment:
Movies*Celebrities*TV*Restaurants*Music

Health:
Health Tips*Medical News*Virtual Hospital

Learning:
Colleges*Government*Sciences*Nature

Living:
Lifestyle*Recipes*Parenting

Local:
Business*Newspapers*Area #

Money:
Quotes & News*Mutual Funds

News:
Business News*Weather

Shopping:
Online Stores*Software*Books*CDs

Sports:
Scores and Stats*Outdoor Sports*

Travel:
Hotels*Guides*Trips*Air Fares
Order Tickets-

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What will you need to get on the World Wide Web?

Give this as handout #8

Computer, with 8 megabytes of RAM and 250 to 500MB hard drive

28.8 Modem

Phone line -- an extra phone line would be great if you get a lot of calls. This can be connected to your computer or modem permanently and also used as a fax line.

Speakers and a Sound card with your computer

SLIP or PPP Account with an (ISP) **Internet Service Provider**
Preferably with a local Telephone number

Connect Software, usually provided by your Service Provider
Browser Software
E/Mail Software
Virus Control Software

Plug-ins like Quicktime and Real Audio, you can download, once you are on-line.

SUMMARY

QUESTION AND ANSWER PERIOD

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HANDOUTS

FOR

Computers Don't Byte

COMPUTERS DON'T BYTE

AGENDA

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COMPUTER BASIC TERMS

HARDWARE

SOFTWARE

KEYBOARD

TRACKBALL OR MOUSE

ROM-BIOS (Read Only Memory-basic input output system)

MICROPROCESSOR

AV CARD (Audio Video)

BUSES

OUTPUT

PRINTER

BYTE

RAM (Random Access Memory)

CD-ROM DISK AND CD-ROM PLAYER

FLOPPY DISK AND FLOPPY DRIVE

HARD DRIVE

DATABASE

CAD (Computer-Aided Design)

VIRTUAL REALITY

MIDI (Musical Instrument Digital Interface)

ETHERNET CARD

NETWORKING

LAN (Local Area Network)

MODEM

handout #2

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off on off off off on on on
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POPULAR SOFTWARE PACKAGES

NAME	MANUFACTURER	VERSION
WORD PROCESSING		
Word	Microsoft	DOS 6.0
		Windows 6.0
		Macintosh 6.01
Word Perfect	Coral	DOS 5.1
		Windows 6.1
		Macintosh 3.5
Spreadsheet		
Excel	Microsoft	DOS
		Windows
		Macintosh
1 2 3	Lotus	DOS
		Windows
		Macintosh
Simple Spread Sheet	Casady & Greene	Macintosh
Desktop Publishing		
Pagemaker	Adobe	Macintosh 6.5
		Windows 5.0
QuarkXPress	Quark	Macintosh 3.32
The Print Shop	Broderbund	Windows
Business cards		Macintosh
Signs & Banners		
Accounting		
Quicken	Intuit	Windows
		Macintosh
M.Y.O.B	Bestware	Windows
		Macintosh

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POPULAR SOFTWARE Continued

NAME	MANUFACTURER	VERSION
Database		
FileMaker Pro	Claris	Macintosh
FoxPro		Windows
		Macintosh
Presentation Graphics		
PowerPoint	Microsoft	Windows
Genealogy		
Family Tree Maker Deluxe	Broderbund	Macintosh
		Windows
Combination Applications		
Claris Works	Claris	Macintosh
Microsoft Office	Microsoft	Windows
		Macintosh
Corel WordPerfect Suite	Corel	Windows
Internet Browsers		
Netscape Navigator	Netscape	DOS
		Windows
		Macintosh
Internet Explorer	Microsoft	Windows
		Macintosh

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COMPUTER BOOKS & MAGAZINES

Computer Basics

The Little PC Book
by Lawrence J. Magid

How Computers Work
by Ron White

PC's for Dummies
by D. Gookin

The Macintosh Bible
by Aker Naiman

The Internet Scares Me: Its okay to Go slow
by John Boyd (Timber Ridge Publications)

Magazines

Computer Life

Computer shopper

MacWorld/MacUser

Mac Week

P.C. Computing

P. C. Magazine

P.C. Week

Mac Today

Yahoo-Internet Life

ZD Internet Magazine (www.zdnet.com/zdimag/)

Glossary

Afraid of feeling like a foreigner? Here are definition of the words you're likely to encounter as you set about finding the information on the internet.

The Internet consists of a mind-bogglingly huge number of participants, connected machines, software programs, and a massive quantity of information, spread all around the world.

Cybermall--a collection of business-related Web pages.

FAQ (Frequently Asked Questions)-- a list of answers to common questions on a given topic; usually posted by newsgroups.

encryption--a coding technique used to secure sensitive data, like credit card info.

home page--the page your Web browser loads at start-up, often used incorrectly to refer to any Web page.

HTML hypertext markup language. The simple codes used to create Web pages.

hyperlink--in a hypertext system, an underlined or otherwise emphasized word or phrase that when clicked on with the mouse, displays another document.

hypertext a method of preparing and publishing text in which readers can choose their own paths through the material by clicking on certain words or phrases.

Internet service provider (ISP) --the company that supplies Internet accounts and server space for your pages.

Java--a sophisticated programming language currently popular for writing applications that run across the Web: unlike HTML, it's fairly difficult to use without a background in programming.

JPEG-- a graphics format used for displaying photographs, realistic artwork and paintings on the Web.

newsgroup-- an electronic discussion group devoted to a single topic, in which users participate by posting, reading and replying to messages.

real time--description of computer processing systems that can analyze data as soon as it comes in.

URL (uniform resource locator)--a string of characters (always beginning with http://) that identifies the location of every page, graphic image, and file on the World Wide Web.

Here is a list of things you can do on the internet:

Automotive:
Used Cars *New Cars*Tips*Find a Buyer

Classifieds:
Real Estate*Personals*Tickets

Computing:
Tech News*Game Downloads*Software

Employment:
Job Search*Job Postings

Entertainment:
Movies*Celebrities*TV*Restaurants*Music*Visit Museums

Health:
Health Tips*Medical News*Virtual Hospital

Learning:
Colleges*Government*Sciences*Nature*Distance Learning

Living:
Lifestyle*Recipes*Parenting*Gardening

Local:
Business*Newspapers*Area Phone #s

Money:
Quotes & News*Mutual Funds

News:
Business News*Weather

Shopping:
Online Stores*Software*Books*CDs

Sports:
Scores and Stats*Outdoor Sports*Golf Courses

Travel:
Hotels*Guides*Trips*Air Fares*Order Tickets-

handout # 7

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SLIP or PPP Account with an (ISP) **Internet Service Provider**
Preferably with a local Telephone number

Connect Software, usually provided by your Service Provider
Browser Software
E/Mail Software
Virus Control Software

Plug-ins like Quicktime and Real Audio, you can download, once you are on-line.