New Mexico Broadband Program

Selecting and Maintaining a Computer

Module 2
Setting up and connecting to the Internet
ISPs and broadband options
Learning Outcomes

• Know how to set up a computer
• Know how to connect to the Internet
• Know how to select an Internet Service Provider
First, we’re going to consider how to set up a new computer.
Begin with common sense considerations. Consider the locations of electrical outlets and windows. Consider the locations in which you like to work.
Not all locations are conducive to computer use. Try to be realistic.
Carefully remove all components from the box or boxes.

If the room where you’re unpacking the components is carpeted, be aware that you may be generating static electricity.
Use the packing list or setup guide included in the box to take an inventory of each component.

Make sure that you have all the components and all the necessary cables.
If you have a desktop, position the system unit on your table or desk.

You can also position the system unit underneath the desk.

Leave at least a foot of space behind the system unit for ventilation.
Before you start plugging things in, take a moment to familiarize yourself with the ports on your computer.

Ports are the locations at which you will plug in the peripherals.
On a desktop model, PS/2 ports are sometimes used for a mouse and a keyboard.

Note that PS/2 ports are color-coded: the mouse is green and the keyboard is purple.

Most of these ports have been replaced by USB ports, but a parallel port is sometimes still used for printers.
Laptop ports can look a bit simpler, depending on the model.

Laptops use USB ports for connecting a separate mouse and monitor.
Connect your mouse and keyboard to the tower first. Be sure to match the green plug with the green port, and the purple plug with the purple port, if you do not have USB plugs.
Next, hook the monitor to the system unit using the VGA port.

On laptops, you will see mini-VGA ports.

Use these if you want to plug your laptop into a larger screen.
Connect the monitor to the computer with the video cable.

Be sure to tighten the hand-screws on the monitor cable’s connector to secure it firmly to the monitor port.
Sometimes you will see other kinds of ports and plugs used.

A USB-A plug may be seen on cables that connect a keyboard or mouse to the computer.

A USB-B plug may be seen on some printers.

Symbol for a USB port or plug
Power connectors connect the power cord to the computer's power supply, and are also used to connect many monitors, printers and other peripherals to the electrical wall outlet. Connect power cords to each piece of equipment.
A surge protector is an important device to have at hand when hooking up your laptop.
Connect power cords to each piece of equipment and plug them into the surge protector before turning it on.
Turn on the monitor.
The power button is on the bottom right of the screen.
Turn on the computer last.

On a desktop, the power button will be a round button on the face of your computer.
At this point, the computer will begin to “boot up,” the term we use for the computer turning on.
You’ll see various things being displayed on the monitor.

All new computers will go through a special setup sequence the first time that the computer is turned on, so you’ll want to watch the monitor carefully for instructions.

Images courtesy of stuff.seans.com

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You might need to allocate a bit of time for this process and you may need to answer a few questions about the setup as the machine goes through the process.
If you already have a printer, connect it after you have the computer up and running.

Most printers use one of the computer’s USB ports.
If all goes well...

Congratulations!
The computer is running!
Connecting to the Internet

To take advantage of the many assets that computers offer, you will need to connect your computer to the Internet.
The Internet is accessed through large computers known as servers. These large servers provide the backbone of the Internet. The servers are directly connected to the Internet, through wires, cables, or satellite. These servers act as intermediaries between the smaller networks and the Internet.
In order for you to connect to a server, you will need to go through an Internet Service Provider (ISP). The Internet Service Provider links your personal computer to a server, which allows you to access the Internet.
Modems look a bit different depending on what kind of Internet service you choose.
Modems change the signal carried between computers into one that can travel through airwaves easily.
Once the signal is received by your computer, you will be able to access the Internet easily using a web browser.
Originally, signal information between computers was transmitted through a dial-up connection using ordinary phone lines.
Dial-up systems are not fast enough to allow access to most of the information available on the Internet.

Instead, these dial-up connections are being replaced around the world by higher speed connections.
Providing Broadband access is currently a prominent issue in initiatives around the world.
In New Mexico, the state Broadband Program, the National Telecommunications and Information Agency, and other organizations and businesses, are working to make broadband connectivity available to all residents of the state.
According to the FCC, “Broadband can provide access to a wide range of resources, services, and products that can enhance your life in a variety of ways.”
To connect to broadband, your Internet signal will most likely be carried using one of several different kinds of systems:

- DSL
- Cable
- Wireless
DSL  This “digital subscriber line” transmits signals over a specially augmented phone line, using different frequencies than those of the phone conversation.
Cable  This option uses television cable to transmit Internet signals by utilizing the unused bandwidth.
**Wireless** This option uses e-m waves in the radio frequency to transmit Internet signals. It requires a source, such as a wireless tower, and a modem receiver.
Unless you choose to install a satellite dish, you likely will not need any additional equipment except a browser system on your computer. Your ISP will supply the modem. Satellite service requires a dish, a modem, wires, and installation fees.
Which transmission system you use will mostly depend on what is available in your area and several other considerations:

• Cable service tends to be more expensive than DSL.
• Wireless broadband access requires proximity to a cell tower or Broadband signal source.
• DSL service generally requires that you are also signed up for a telephone landline.
Once you know the services available, it’s time to select an Internet Service Provider.
When you are ready to choose an ISP:

• Ask people you know about their ISP.
• Look for DSL and cable broadband providers in your area.
• Make some phone calls and ask potential broadband providers about package deals.
• Cable companies generally discount Internet access if you have or purchase TV service.
• Phone companies sometimes offer DSL-telephone packages.
Consider other options:

• Consider getting and sharing satellite broadband if you live in a rural area.

• Consider sharing an Internet connection with neighbors through a common wireless router.

• Consider accessing wireless Internet through your cell phone.
What do you do if there is no Broadband service in your area?

Consult the map on the State Broadband Program site: http://www.doit.state.nm.us/broadband/
Review

• Setting up a computer
• Reviewing your Internet options
  • Connecting to the Internet
  • Finding and choosing an ISP
We appreciate the time you spent with us. We hope to see you at the next training!

These materials were created collaboratively by the New Mexico Department of Information Technology, Fast Forward New Mexico, and the New Mexico State Library, under grants provided by the National Telecommunications and Information Administration. These materials are not to be used for profit.

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