

Grade 3 Summary Sheet November

Store

Save your data

Your computer stores data in an internal hard disk drive usually called the "C: drive". If your data is too large, you can use an external data storage device.

Some data storage devices are the hard disk drive, CD I DVD, USB flash memory and Memory card.

Disk Drive

The external hard disk drive is the most common data storage device. It also has the biggest storage space available: it can store a thousand movies or a million songs!

CD/DVD

You can store whatever you want on a CD (Compact Disc) except for movies, because it doesn't have enough space. DVDs (Digital Versatile Discs) are the evolution of CDs, and look almost the same, but have much more space. You can store about 5 movies on just one DVD. You can also use it for large programs. Remember: you must be careful not to scratch their surface, or your data will be lost!

History

In the 70s and 80s, the main storage device for personal computers was the floppy disk. Floppy disks are thin, flexible magnetic disks. Nowadays they are out of date and useless, as their storage space is very small.

You can also use the following storage devices to transfer data from one computer to another or between a computer and a smartphone.

USB Flash Memory

With a USB flash memory, you can store or transfer data easily. They are very cheap, resistant to damage and they come in different sizes. You can carry a USB flash memory on your key chain.

We often call the USB flash memory a "memory stick"; because of its shape.

Memory Card

Memory cards are very thin and small. You can use them with smartphones, digital cameras, MP3 players and game consoles. You can also use a memory card to transfer data from these devices to your PC/laptop.

Print

From screen to paper

Did you know that whatever you see on your screen can be printed on paper? You can print text, numbers, images and photos. The device that can do all this is called a printer. The printer is usually connected to the computer with a USB cable.

You can print on paper of different sizes.

Apart from plain paper you can also print on stickers or envelopes.

To protect the environment and save some money, refill your empty ink cartridges.

Printers

There are five main types of printers.

Inkjet

The most common type is the inkjet printer. It uses four different inks, each one for a different color: cyan, yellow, magenta and black and it sprays ink drops onto the paper. With just these four colors, the printer can print anything. Inkjet printers are very cheap. If you want to print perfect photos, you need special photo paper.

Laser

This printer uses laser rays to print on paper. The speed and quality of printing is very high. In the past, there were only black-and-white laser printers, but nowadays they can also print in color. Laser printers are more expensive than the inkjet printers.

With a laser printer, you can print hundreds of pages very fast.

Thermal

You can find thermal printers in shops, kiosks, supermarkets and restaurants, which use them to print receipts. A thermal printer uses a special kind of paper that is long and narrow. It usually prints text in black ink.

Some other types of printers used for professional use are the following:

Dot Matrix

Dot Matrix is the oldest type of printer available and is hardly used anymore. With this printer you could print many copies simultaneously, but the quality was very low.

Plotter

The plotter is the biggest type of printer available. In the past, it had pens which drew lines on large pieces of paper, but now it uses inkjet technology. This device is used for architectural plans and large advertising banners.

Capture

Microphone

A microphone is a sound capture device. It collects sound waves, such as your voice and converts them to a digital form so that your computer can understand them. You can connect a microphone to your computer and your voice recordings will be stored as audio files. This way, you can listen to these files at any time or email them to a friend.

Microphones have many applications, such as in telephones and smartphones, video recorders, karaoke systems, movie production, and radio and television broadcasting.

When you chat with a friend you can use a microphone to speak and headphones to listen to what your friend will say.

Web camera

A web camera, or webcam, is a video capture device which feeds videos or images into a computer in real time. You can also record images or clips and save them on your computer, send them by email or upload them to the Internet.

The Webcam got its name from the World Wide Web, because we mostly use it when we are online.

Webcams are now very popular because their video quality is much better than before. Most of them have an integrated microphone and some are also wireless. Nowadays, notebooks and desktop monitors have built-in webcams.

Using the webcam of your computer or your smartphone, it's easy to make a video call. To do this, you can use Skype or any other video calling program.

Webcams can act as a "magic mirror" to allow for example an online shopper to view a virtual item. They can also encourage telecommuting, which means enabling people to work from home via the Internet, rather than traveling to their offices. They are also used as security cameras.

Digital camera

A digital camera is an image capture device Which you can use to take high-definition photos. This camera doesn't use film and can display photos on a screen the minute you take it. It uses a memory card to store the photos.

By using a digital camera's memory card, you can transfer the images from your digital camera to your computer and store them safely. There are a lot of free programs that help you edit your photos on your computer and make them look cool.

Nowadays, digital cameras are integrated into mobile devices such as tablets and smartphones. Digital cameras are designed for casual and "snapshot" photography, but they can also capture video and audio with sufficient quality for everyday use.

Video camera

A video camera is a recording device which is used to capture motion pictures.

For many years, video was captured and stored on videotapes, and later optical discs. Today we use memory cards which make it very easy to transfer and save videos onto a computer.

The first video cameras were big and heavy, and the resulting video was of low quality. Modern video cameras are very small and easy to use. They can record hours of video on a tiny memory card and some of them support night recording, too.

Don't forget to keep copies of your photos and videos!

We use video cameras almost everywhere to capture our daily moments, a celebration or even for television and film production. Also, they are used by scientists to examine a scientific event and astronauts to equip a spacecraft.

John Logie Baird created the first video cameras, and the BBC used them in experimental broadcasts in the 1930s.

Interact

You can use the keyboard and the mouse to work with a computer, but there are also many other ways to interact with it. Some of them are fun!

Touchpad

A touchpad has a special surface that can understand the position of your fingers as the position of the cursor on the screen. It can replace your mouse.

You can find touchpads on notebooks and other mobile devices, like media players. Some of the new touch pads can detect more than one finger and you can give commands like zoom in and out with just a gesture.

Touchscreen

Nowadays, you can use a computer without a keyboard, mouse or touchpad. That's right you can give commands just by touching its monitor! This special monitor is called a touchscreen.

In the past, touchscreens were very expensive and were used in hospitals and factories for special purposes. Now they are everywhere: from our everyday devices such as mobile game consoles to tablet computers, and smartphones.

Some tablets or smartphones come with a small object that looks like a pen. It is called stylus and you can select something or draw on your screen with it.

Touchscreens are sensitive to fingers and a special pen called

a stylus. Nowadays, styluses have precise tips on one end and digital "erasers" on the other.)

You can install a transparent plastic screen protector to protect your touchscreen from scratches.

Graphic tablet or digitizer

A graphic tablet or digitizer is an input device that allows you to hand-draw images and graphics, just like with a pencil and paper. This device is very popular among graphic designers.

Trackball

A track ball is an input device that looks like an upside-down mouse with a big ball in the middle. You can roll the ball with your fingers or palm. Although it's not a very popular input device, it's very comfortable to use.

Gamepad

A gamepad is a type of game controller.

A gamepad comes in different forms. For example, a driving wheel is a special gamepad just for car driving simulations.

Gamepads are also called joypads or control pads.

Joystick

Joysticks are very common as game controllers for flight simulators or action games.

Nintendo Wii Remote

Wii Remote was a revolution in the gaming world.

Wii is very realistic, and it feels like you are holding a racket or a baseball bat. The game console can understand the direction of your movements (Up, down, left, right, in and out) and even the rotation of your hand.

VR Headset

Virtual Reality is a "reality that is not real". We can use a headset that makes us think we are in a different place or world.

A VR Headset includes all the buttons that are mounted to the side of the headset and motion controls. It is used in everyday gaming situations.

VR glove

A VR glove looks like a simple glove.

It delivers fast response, pinpoint accuracy and plug-and-play convenience for transporting your hand into-the VR environment.

It makes tactile sensing and fine-motion control easier, in Virtual Reality and robotics.

To prevent players from accidentally dropping or throwing the Wii Remote, a wrist strap can be used. There is also the Wii Remote Jacket, to prevent the Wii remote from being damaged or broken.