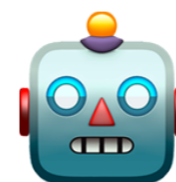# My Knowledge Organiser

Computer Science

Information Technology
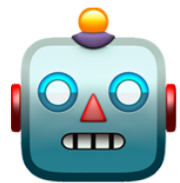
Digital Literacy

Computing Knowledge Organiser for Year 6

Name:

Computing in Year 6

Computing is full of important skills and it helps us understand the digital world around us. Computing has three parts.

Computer Science

Computer Science teaches us about problem-solving, how computers work and coding languages.

Information Technology

Information Technology teaches us about how to use devices and apps to be creative and make digital content.

Digital Literacy

Digital Literacy teaches us about online life and how to stay safe and healthy when using technology.
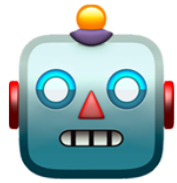
Year 6's Important Person:

Marc Hannah

- A computer scientist who was one of the founders of a special effects company.

- His work created the life-like special effects we see in films today, like Jurassic Park.

- He was instrumental in the design of the early gaming system Nintendo 64.

Learn More About these 28 Scientists for Black History Month

Computer Science

My Learning Objectives:

I can design, plan & create a complex programs.

I can test, debug and modify a program to improve it.

I can write a program using a text based programming language.

I can use logical reasoning to detect and correct errors in algorithms and programs.

I understand how computer networks work, including the internet.

I can talk about the way search results are selected and ranked.

Question 1:

Data is stored in computers using binary code. Binary is composed of which two numbers?

1 & 5   8 & 5   1 & 0   8 & 0

Question 2:

If you wanted to make a website, what would you use?

Scratch   HTML   PERL   Java

Question 3:

In computing what does the acronym URL mean?

Unidentified Resource Level   Uniform Resource Locator   Unlinked Resource Line   Unliked Resource Line

Question 4:

Which one best describes a variable?

Part of a program that does not work correctly.   A placeholder for a piece of information that can change.   A placeholder for a piece of information that cannot change.   I DON'T KNOW.

What Should I Already Know Checklist:

Can you problem solve using decomposition?

Can you plan, write and test algorithms?

Can you create complex programs and debug as needed?

Can you control / simulate physical systems using sensors that have multiple outcomes?

Can you create a complex game?

Can you use logical reasoning and the correct computing terminology?

Can you discuss software, hardware and types of connected computers?

Do you know how data travels via the internet including binary?

Do you know about the different parts of the Internet and services?

Can you create a basic web page using HTML?

Do you know about the key skills required for using a search engine?

We will learn:

About creating complex algorithms and turning them into programs.

About complex programs and are encouraged to persevere when solving difficult problems even if the solution is not obvious.

About using a text-based language.

About using logical reasoning to correct errors in an algorithm and program.

In-depth knowledge about how information/data is transported on the Internet.

About how computer networks can be used for communication and collaboration.

About advanced features within search engines.

About how search results are selected and ranked by algorithms.

Have you heard of Machine Learning?

Computers are all around us; laptops, tablets, phones, smart watches and smart speakers etc… these are all different types of computers and they are all very good at following commands. However, Machine learning allows computers to perform tasks without you having to tell the computer how to do it. The computer can learn and improve itself!

Machine learning is already all around us and it's one of the most important technologies of today. We all use machine learning systems every day - such as spam filters, recommendation engines, language translation services, chatbots and digital assistants (Siri and Alexa), search engines and fraud detection systems.

It will soon be normal for machine learning systems to drive our cars and help doctors to diagnose and treat our illnesses.

Watch Vide:
Machine Learning Explained in 5 Minutes

What do you think?

What is a Drone? Drones are devices which fly without a pilot on board – they are remotely controlled, either manually (perhaps from a mobile smartphone or tablet) or through programmed instructions. They can be very large and heavy (often carrying cameras, with a big battery capacity to enable long range in the air), or small, lightweight and able to be carried in the hand (with very limited battery capacity and air time but more suited to indoor use in a classroom).

What are drones used for?

Drones can be used for a whole host of uses and applications. Some of these include:

- Attack drones: This type of drone is only used by the military and is equipped with weapons, which can be used for controlled airstrikes.
- Delivery drones: Used by some big shipping companies such as Amazon, delivery drones are a new way of delivering items to customers.
- Surveillance drones: Equipped with cameras, surveillance drones can be used across a number of industries, such as law enforcement, sports, forestry and farming.
- Photography and videography drones - Before drones, aerial photographs had to be taken above from a helicopter or airplane. However, as technology has evolved, drones can now take high-quality images and videos without the expense of hiring a manned aircraft.

Important Words:

Abstraction: Taking the detail out of a 'problem' to make it easier to solve.

Algorithm: Steps or instructions to follow to achieve a task.

Application (App): A program such as a game or drawing app that performs a task on a computer.

Bugs: Mistakes or errors in code.

Code/Coding: Lines or blocks of instructions (see program).

Computer networks: Connected devices that make it possible to transfer data using an agreed method ('protocol').

Command: A step or line of programming (instruction for younger children).

Conditional: Something that is either true or false

Data: Numbers and information that can be represented by images, video, text and sound.

Debug: Finding and correcting errors (bugs).

Decomposition: Splitting things into smaller parts.

Event: Code that runs when something happens, such as a button being clicked.

Execute: Play or run code in a program.

Input: A method of computers receiving data (Eg. keyboard, mouse, touch, sensors etc).

Logical Reasoning: A systematic approach to solving problems.

Object: An item on screen, such as an image, a button or some text.

Output: The information produced by a computer system for its user, typically on a screen, through speakers or on a printer, but possibly though the control of motors in physical systems.

Prediction: Make a guess about what happen in a program or how a problem might be solved. Also know as logical reasoning.

Program: A series of instructions written in a computer language (Code).

Repeat (Loop): Instructions that can be repeated.

Selection: A way in computer programs to make choices (e.g. IF..THEN)

Sequence: A set of instructions that are followed in order.

Sprite: (in Scratch) an object that can be controlled by programming.

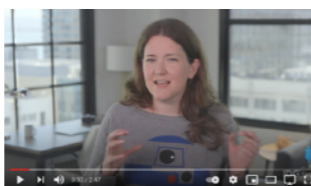**Testing:** Checking if a program works how it should.

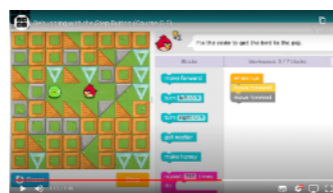## Videos to watch:

What makes a good video game. Watch video.
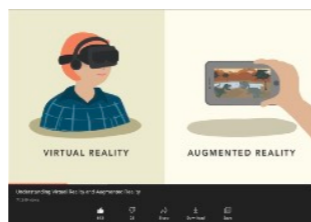
Understanding Virtual Reality. Watch video.

Getting started with Swift Playgrounds Watch video.

Computer Networks: Crash Course Computer Science. Watch video.

Debugging code, step-by-step. Watch video.

How do computer programs use variables?

Computer programs use variables to store information.
Variables could be used to store the score in a game, the number of cars in a car park or the cost of items on a till. They work in a similar way to algebra, where a letter in your code can stand for a number.

What can be stored as a variable?

Lots of things can be stored as variables. Most people think of variables as numbers. They can be but they can also store text or values such as 'true' and 'false'.

Variables in computer games.

If you were programming a computer game, you could make a variable called 'score'. This would store information about the number of points you have won during a game.
When the character in your game collects a coin or piece of treasure, you could tell the program to increase the variable 'score' by one. As you collect points through the level this variable will keep changing.

What do we use variables for?

Variables are needed to run all but the most simple computer programs. As a program runs, it needs to hold information in its memory. This may be a number, the answer to a question or something else. Variables allow us to store, change and access this information as the program runs.

Find out more about variables and how they can be used to store information. BBC Computing.
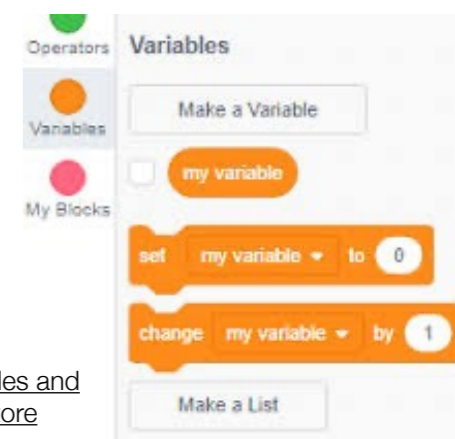
How to Fix Common Computer Problems

Sometimes things on a computer don't work as they should. Here are some quick tips that might help you fix things when they go wrong.

Hardware issues:

- If it's a laptop or tablet, is it charging? If not, try switching power lead before assuming the device is broken. Is the plug socket on?
- If you're experiencing slow internet speeds, make sure your wifi router is working. Try the internet on another device, is that slow too? Try turning your devices wifi off and on. Restart the router. Speedtest.net can help you figure out whether your internet service provider is the source of slow speeds.
- Try turning the computer or iPad off and on again. This helps fix a lot of problems.

Software can have millions of lines of computer code, and can interact differently with various devices. Unfortunately, sometimes things go wrong.

Software and app issues:

- Often the best software solution is simply to quit and restart Word, Chrome or whatever other program you're running. If that fails, restart the entire device.
- Make sure your device is running the most up-to-date version of its operating system and other installed software/apps. Turn on auto-update options to keep your operating system, device drivers and all other software current.
- Google it. Figuring out where to start is often half the work. Search for solutions to your problem posted on message boards, manufacturers' websites, troubleshooting indexes and so on.
- If all else fails, delete the app and try re-installing it.

Controlling physical systems

Computers can only interact with the world if they are connected to input and output devices.

These devices allow them to respond to the world around them and to act according to their programming.

A computer can be programmed to respond to input devices like sensors. For example in a water heater, sensors are used to react to a drop in temperature and tell an output device, like a heating element, to heat up the water.
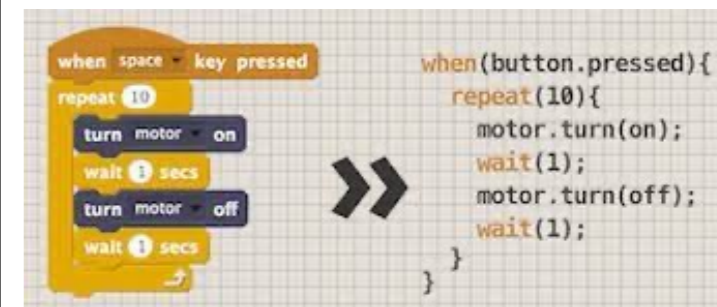
Read more and watch video.

Different Types of Sensors
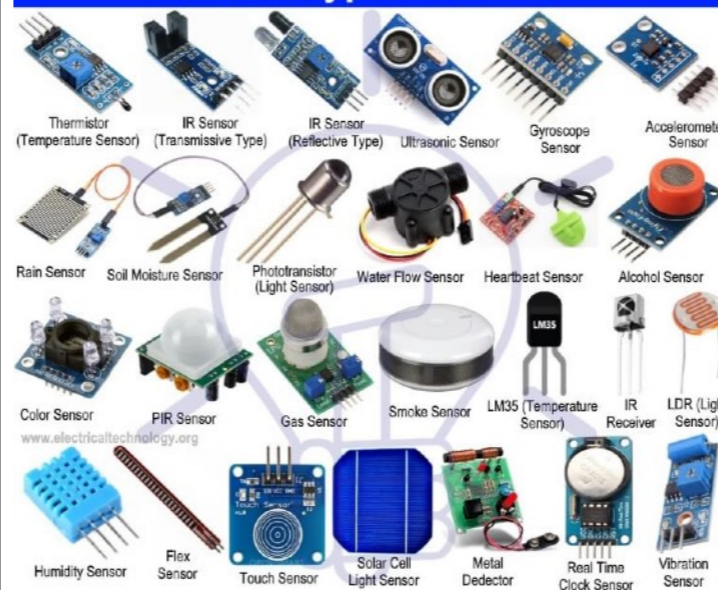
Text Based Programming

These are languages that are typed using a keyboard and stored as text files. Previously we have used Scratch, which is a graphical or visual language, that uses drag and drop rather than typing.
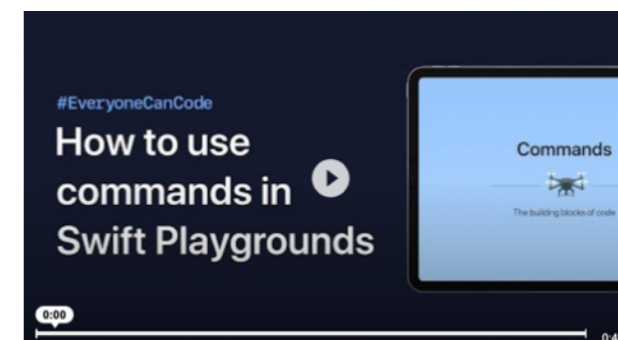
Swift Playground

Swift Playgrounds is a text based programming game that helps you learn to code by introducing concepts that build on each other as you progress. Swift code is used to create iPhone and iPad apps.

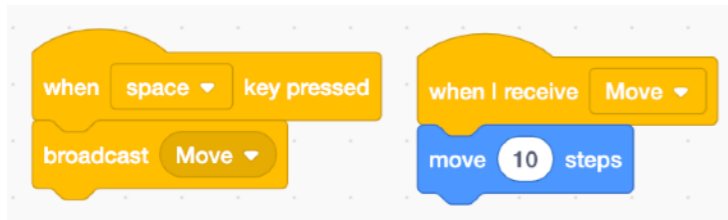The first chapter tackles commands, the basic building blocks of code. The Swift Playgrounds app: Download here.

Show you know!

Scratch Blocks Guide

What are Broadcast and Receive blocks?

Broadcast is a message that is sent through Scratch activating receiving scripts.

when space key pressed
broadcast Move

when I receive Move
move 10 steps

What are Hide and Show blocks?

You can also hide and show your sprites in Scratch by using these blocks. A hidden sprite cannot be touched.

when 🏴 clicked
hide

when space key pressed
show
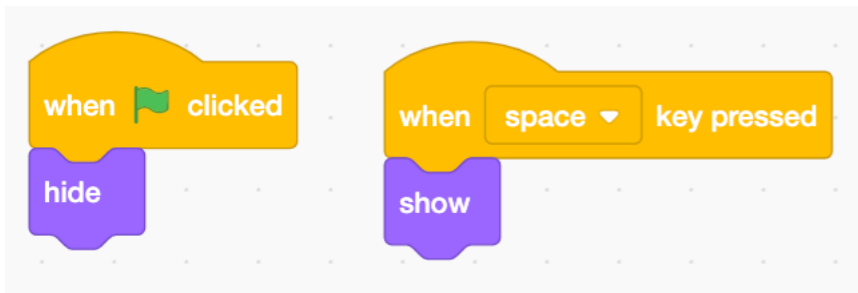
These blocks can be used for a number of different purposes. One of the most common ways is simply to hide a sprite.

Audio and Sound
Audio and sounds can be added to your codes on scratch.
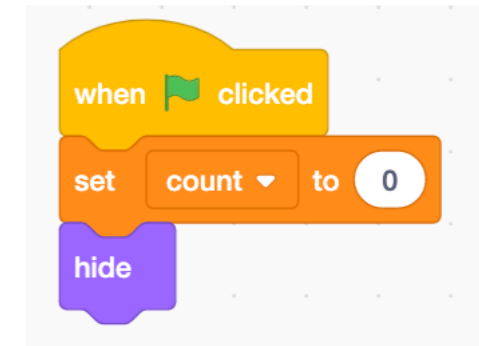
when 🏴 clicked
play sound Meow until done

Sound Meow
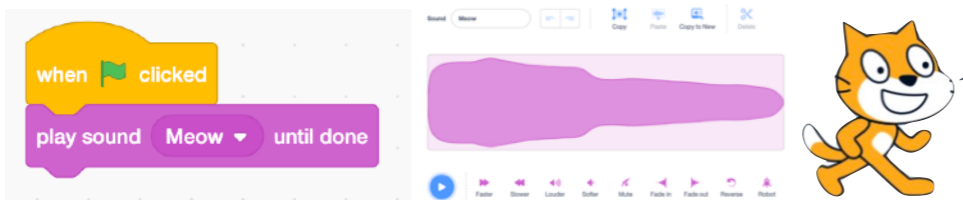
You can upload new sounds, record new sounds or use the preloaded ones. Once you have chosen your audio you can then edit it to suit your purpose.

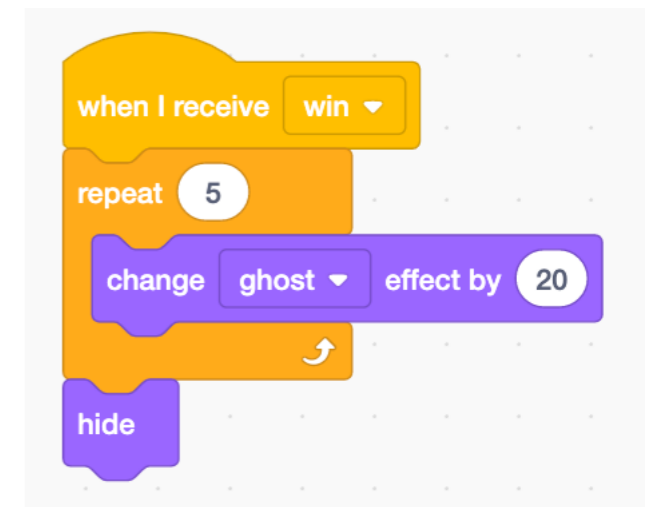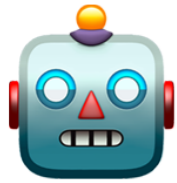## Can you Make Predictions About Programs in Scratch?

1 Easy!

when 🏴 clicked
set count to 0
hide

2 Hard!

when I receive win
repeat 5
change ghost effect by 20
hide

Computer Science

Post Knowledge Quiz

My Learning Objectives:

I can design, plan & create a complex programs.

I can test, debug and modify a program to improve it.

I can write a program using a text based programming language.

I can use logical reasoning to detect and correct errors in algorithms and programs.

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I can talk about the way search results are selected and ranked.

Question 1:

Data is stored in computers using binary code. Binary is composed of which two numbers?

1 & 5   8 & 5   1 & 0   8 & 0

Question 2:

If you wanted to make a website, what would you use?

Scratch   HTML   PERL   Java

Question 3:

In computing what does the acronym URL mean?

Unidentified Resource Level

Uniform Resource Locator

Unlinked Resource Line

Unliked Resource Line

Question 4:

Which one best describes a variable?

Part of a program that does not work correctly.

A placeholder for a piece of information that can change.

A placeholder for a piece of information that cannot change.

I DON'T KNOW.

Information Technology

Pre Knowledge Quiz

My Learning Objectives:

I can create and combine a range of media in order to produce digital content.

I can improve the quality and presentation of my work using editing and formatting techniques.

I can create a digital storyboard to plan a project or investigation.

I can use a search engine and I am aware that not everything I read online is correct and that other people may be attempting to influence my opinions.

I can collaborate to create digital content.

I can create a consistent design for my presentation, and present to others.

Question 1:

Dave is creating an assembly about online safety where he wants to show a video and some important facts. What software/app would be best?

Google Chrome   Microsoft Word   Microsoft PowerPoint   Google Draw

Question 2:

Sarah wants to edit a video on her iPad. Which of the following apps would be appropriate to use?

GarageBand   iMovie   Clips   Apple Pages

Question 3:

Which of the following types of information could you store in a database?

Information about different products, including descriptions and prices

Information about all of the pupils in a school, including name, date of birth and address

Information about different countries, including population, climate and language

All of the them.

Question 4:

What is a 'Keyword'?

A word relevant to the information being search for.

A link to a website.

A type of search engine.

A password.

What Should I Already Know Checklist:

Can you produce digital content in various formats/media?

Do you know how to plan projects?

Can you create content using unfamiliar technology?

Can you use a spreadsheet or database to collect, record data and use simple formulae?

Can you use complex searches and advanced tools to find, select and use information?

Can you check the reliability of information on the internet?

We will learn:

About creating digital storyboards with a complete narrative of the project.

About confidently identifying the potential of unfamiliar technology to increase their creativity.

About how to source and use copyright free images from the internet.

About how to independently select, use and combine the appropriate technology/app tools to create effects that will have an impact on others and tell a story.

About how to use complex searches, filters and advanced tools to find, select and use information.

Did you know?

35% of the internet uses <u>WordPress</u>. As of 2020, over 455 million websites use WordPress as their CMS. Meaning that the WordPress market share is 35% of all websites in the world! What is Wordpress? The Wordpress platform lets you create **blogs** and **websites** for free. It's popular because it's very easy to use and, works on all devices.

Fun with art apps & websites

Tate Paint   Street Art   Art Parts
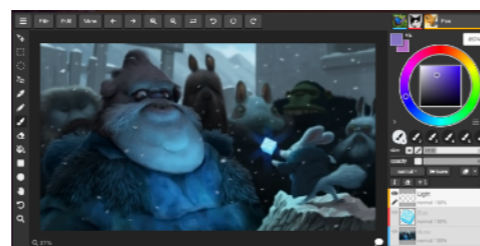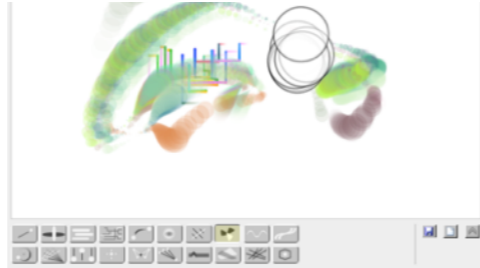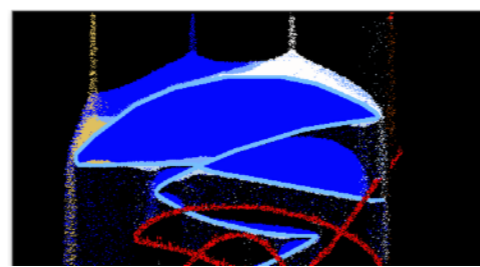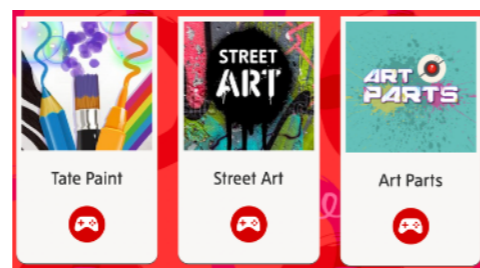
What do you think?

How good are you at art? Now, you can create art on a computer too. Many times, the posters and ads you see have been created on a computer using art software like Photoshop. Practicing creating basic art on a computer can be the first step to learning how to create more detailed art. Try some of these apps and websites.

Do you know the classroom technology?

What is a spreadsheet? A spreadsheet lets you present data neatly and solve calculations quickly to find out statistics.

They are good for:

- Organising & analysing data.
- Finding totals of lots of numbers.
- Working out budgets.
- Doing maths conversions.
- Creating graphs & charts.

Microsoft Excel

Google Sheets

Apple Number
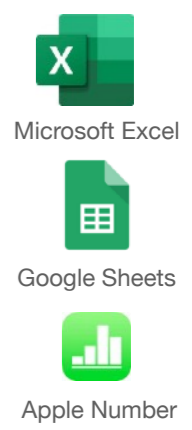
# What type of COMPUTER are you using?

Basic Windows & PC Skills

Have you ever made a big mistake while doing work on a computer and wished it hadn't happened? Don't worry, there's a feature that can help.

Most programs have an Undo command that reverts back to the last change you made to your current project. If your last change was adding or pasting text into a document, Undo will delete it. If your last change was deleting something, Undo will restore it. This can come in handy when you accidentally overwrite a big chunk of a document, and just knowing this feature is available can be a big relief.

The Undo function is most commonly found in the Edit menu.

File	Edit	View	Image	Layers	Adjustments

Undo   Ctrl+Z
Redo   Ctrl+Y
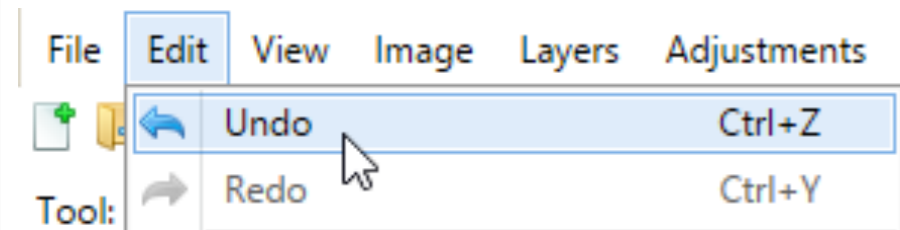
Many programs have an Undo button on the toolbar that usually resembles a curved arrow pointing left, like this one in Google Docs.

Undo (⌘Z)

Ctrl   Z

Ctrl+Z (or Command+Z on a Mac) is a common keyboard shortcut for Undo.

Many programs also have a Redo function, which will undo your last undo. If you use Undo but then realise you didn't want to Undo your most recent change, Redo will restore it.
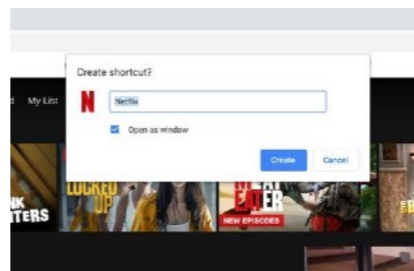
Basic Chromebook Skills

Using a Chromebook is a bit like using a Windows computer, but there are a few things you might find confusing at first.

Set up your shelf! When you first open your Chromebook, you'll see several app icons sitting at the bottom of the screen. This area is called the Shelf and it mimics the Windows taskbar. The Chrome OS Shelf shows which apps are running and provides an easy way to launch apps.

To make the Chromebook your own you'll want to add your commonly used apps to the Shelf and remove the ones you don't use. To get rid of something, hover your mouse pointer over the app icon in question, tap the touchpad with two fingers (the equivalent of a right-click), and select Unpin from the context menu that appears.

Adding web apps.   Learn new Chromebook skills.

The easiest way to add web apps is to open the site you want in the browser. Next, right-click the webpage tab—it looks like three vertical dots—and select More tools > Create shortcut.... A small pop-up window appears asking you to confirm that you want to add the web app. If you want a desktop-like experience for the web app, check the box that says Open as window and then click Create.

To rearrange apps on the shelf, click and drag them to the desired position.

Basic iPad Skills

Using an iPad is all about touching the screen and the way you touch the iPad screen is called gestures.

The iPad's virtual keyboard includes several features that make typing on your device faster and easier.

The iPad will offer suggestions for certain words as you type. When typing, simply tap the spacebar to use a suggestion. In the example below, we used the suggestion to change **agreem** to **agreement**. To dismiss a suggestion, just ignore the suggestion and continue typing.
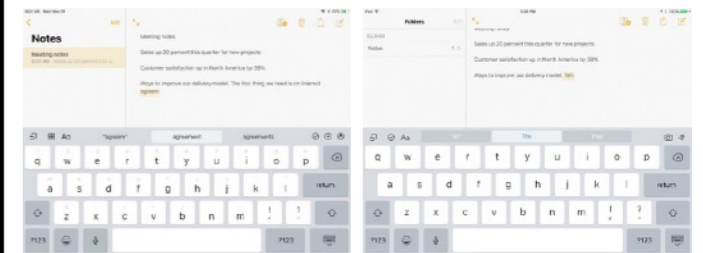
Auto-Correction. The iPad will correct commonly misspelled words automatically. For example, **teh** will be corrected to **the**.

Spell check. In addition to Auto-Correction, the iPad will note spelling errors as you type. Any misspelled words will be underlined in red. To view possible suggestions for a spelling error, tap the word. A list of possible spellings will appear. Simply tap a suggestion to replace the existing word.

Important Words:

Application/App: An application, also referred to as a mobile app or simply an app, is a computer program.

Attachment: An email attachment is a computer file sent along with an email message.

Audio: Music or sound recording or file.

Blog/Blogging: A blog (a shortened version of "weblog") is an online journal or informational website.

Data: Numbers that represent images, video, text and sound.

Digital Content: Any content that exists in the form of digital data. Also known as digital media.

eBook: A digital book that can be read on a computer.

Emoji: Images that show a mood, feeling or actions.

Font: A font is the specific style of text that's printed on a page or displayed on a computer screen.

Format: Changing or editing the look of your digital work.

Frame: Single image in a film or animation.

GigaByte: A unit of computer information consisting of 1,000,000,000 bytes.

Hyperlink: A way of connecting different Web pages together on the Internet. A hyperlink is a word or graphic display on one Web page.

Icon: Small image that can be used instead of words.

Illustration: Drawings showing ideas or characters.

Illustrator: A person who draws or creates pictures for magazines, books, advertising, etc.

Information: Data such as numbers, text, images presented in a meaningful way.

MegaByte: A unit of computer information consisting of 1,000,000 bytes.

Menu: A set of options when using a computer or app to help find information or do a task.

Multimedia: Different types of media. For example images, text, video and sound.

Palette: The range of colours available to the user of a computer.

Save: Keep and store your work on a computer.

Screenshot: An image of what is shown on a computer screen

Screencast: To broadcast a device's screen on another device e.g. TV.

Shortcut: A combination of keys that is a quicker way of doing something in order to save time or effort.

Soundtrack: the sounds, especially the music, of a film/movie, or a separate recording of this.

Storyboard: a series of drawings or images showing the planned order of images.

Tool: An item in an app that helps you do something on a computer. For example the pen tool can be used to draw.

Word Processor: An application for writing text on a computer.

Creating Spreadsheets:

A spreadsheet is a powerful tool for organising information. They are used to carry out calculations quickly and to store large amounts of information for a range of purposes.

Cells are the tiny boxes in the Rows and Columns. The Cell name can be found just above the Spreadsheet. For example, the Cell highlighted below is named Cell A87:
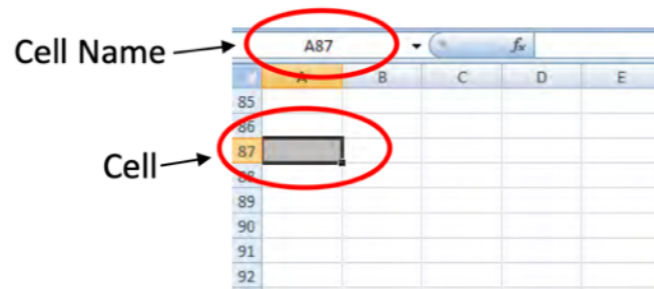
Making calculations using spreadsheets

Average—this function aids in finding the central or typical value in a set of data.

Min—the lowest value in the cell range used

Max—the highest value in the cell range used

Formulae—an expression telling the computer what mathematical operation to perform.

One advantage of spreadsheets is the ability to do calculations quickly.

Basic Spreadsheet Formulas

＊ Multiply	→	To multiply two Cells, the formula would look like this. = (A2*A4)
/ Divide	→	To divide two Cells, the formula would look like this. = (A2/A4)
= Equal	→	Formulas always begin with =
− Subtract	→	To subtract two Cells, the formula would look like this. = (A2-A4)
+ Add	→	To add two Cells, the formula would look like this. =(A2+A4)

Creating slide transitions and animations in presentations:

Slide transition animation in PowerPoint is the animation that occurs when you advance from slide to slide within the presentation. You have many options for controlling the effects. For example, you can often set the speed and direction of many transition animations.
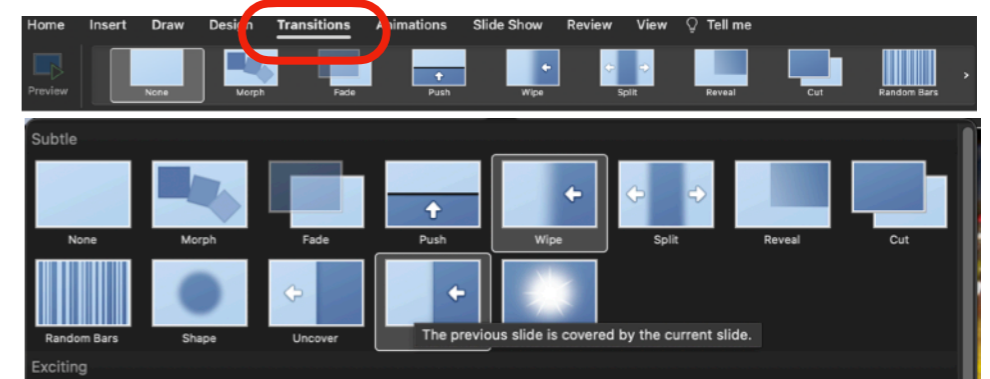
Tips for making effective presentations:

Plan carefully—have an idea of exactly what you want to include before you begin creating.

Do your research—presentations are made to be seen by other people, you will therefore want to ensure you have all your facts correct.

Know your audience—consider your target audience carefully and try to ensure the content is appropriate.

Get feedback - Self and peer assessment are one of the best tools you can use to help you evaluate your presentation.

It is always worth going back to evaluate the effectiveness of your work, whether that is checking your facts are accurate, ensuring there isn't too much information to read or making sure you have used transitions effectively.

Shooting Digital Video:

There are a lot of things to consider when making a movie. A lot goes into making movies and here are a few things to consider when planning and making your own:

What is the content of your movie? What genre does it fall into?

Location—where will your film be set?

Props— what costumes, items and objects will you need to create your movie?

Sound—will you have sound effects within your movie? Will you need a soundtrack?

Panning - swivelling a still or video cam- era horizontally from a fixed position.

Tracking - any shot where the camera follows backward, forward or moves alongside the subject being recorded.

Running time—the length of duration of a film.

Genre—a category i.e. comedy, thriller, horror, romance etc.

The purpose of camera angles. Camera shots are the building blocks of film, and shot selection has a huge impact on the way a viewer interprets the action on screen. There are a number of different angles you can consider using when making movies:

Extreme close up—where an object, item or body part fills the frame. This angle can heighten emotion.

Close up—shows the character from the should to the top of the head, good for capturing facial expressions.

Mid shot—shows the character from waist to the top of the head. Used for facial expression and capturing body language.

Long shot—shows the full length of the body from feet to top of head. Used to show the character in relation to their surroundings.

Extreme long/wide shot—establishing shot at the start of a film or scene.

Creating with a computer:

This short film explores the many creative computing tools we have access to, with a focus on how they are used to create new creative content and media.
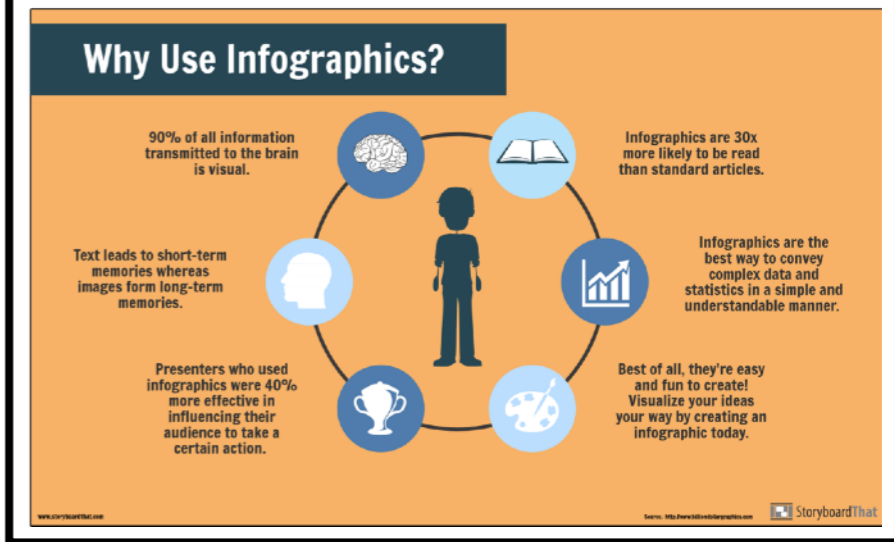
Watch video.

Creating music:

What is Chrome Music Lab? Chrome Music Lab is a website that makes learning music more accessible through fun, hands-on experiments.
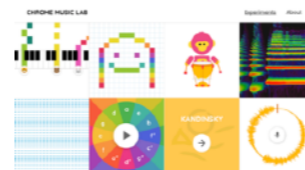
What are info-graphs?:

Infographics are graphic visual representations of information, data or knowledge intended to present information quickly and clearly. They can make large amounts of information easier to understand. Keep in mind that the goal of an infographic is not only to inform, but also to make the viewing experience fun and engaging for your audience.

Why Use Infographics?

Creative Challenge: Jobs and money

Match the correct salary to the jobs below and write your answer underneath.

| £1,144,000 | £33,920 | £42,000 | £82,000 | £142,000 |
| £112,000 | £72,000 | £4,300,000 | £20,000 | £36,737 |

Chief executive of an oil company

Doctor

Postal worker

Train driver

Nurse

Airline pilot

Managing director of a business

Top footballer

Prime minister

Primary Teacher

Post Knowledge Quiz

My Learning Objectives:

Question 1:

Dave is creating an assembly about online safety where he wants to show a video and some important facts. What software/app would be best?

Google Chrome   Microsoft Word   Microsoft PowerPoint   Google Draw

Question 2:

Sarah wants to edit a video on her iPad. Which of the following apps would be appropriate to use?

GarageBand   iMovie   Clips   Apple Pages

Question 3:

Which of the following types of information could you store in a database?

Information about different products, including descriptions and prices

Information about all of the pupils in a school, including name, date of birth and address

Information about different countries, including population, climate and language

All of the them.

Question 4:

What is a 'Keyword'?

A word relevant to the information being search for.

A link to a website.

A type of search engine.

A password.

Question 1:

Which of these could be used to communicate with a class of children living in another country?

YouTube   Email   Zoom   Instagram

Question 2:

How can you protect your computer from viruses?

Never click e-mail links or open attachments from people you don't know.

Don't join public unprotected wifi networks.

Do nothing - your computer will protect itself.

Give it antibiotics.

Question 3:

Your friend tells you that she is talking to a boy online and she is going to meet him at the weekend. What should you do?

Volunteer to go with her.

Let her go on her own.

Tell an adult straight away.

Tell your other friends.

Question 4:

Malware is malicious software used in _____.

Cyber attacks   Cyber bullying   Cyber safety   Cyber dating

What Should I Already Know Checklist:

Do you know how to use the school email?

Can you create a vlog and understand the potential risks of sharing content online?

Can you digitally collaborate with others?

Can you search for individuals online and explore their digital footprint?

Do you understand the need for copyright and the consequences of ignoring it?

Do you understand the different types of online bullying and harassment?

Can you make a positive contribution to an online community?

Do you understand the impact of online bullying?

Do you understand the impact technology can have on health, well being and lifestyle?

Do you understand strong passwords and online scams?

Do you understand how to protect your online identity and personal information?

We will learn:

About viruses and malware programs.

About copyright and referencing.

About staying safe when playing online games, communicating and using technology.

About trusted adults.

About media types and media stereotypes.

About the consequences of not communicating kindly and respectfully online.

About the term 'digital footprint' and what impact it may have on them in the future.

About the consequences of online bullying.

About keep personal data private.

About screen time and the impact this may have on their physical and mental health.

Did you know?

Over 90% of the world's currency is digital. Between credit cards, debit cards, online purchases and **cryptocurrency**, only 8% of global currency is physical money.

What do you think?

Do you think social media is good for you? It's certainly good at trapping your attention, as there is so much to explore. Unfortunately, what's best for capturing our attention isn't best for our well-being. Social media is changing the way we live and socialise.

- **Snapchat** turns conversations into streaks, redefining how our children measure friendship.
- **Instagram** glorifies the picture-perfect life, eroding our self worth.
- **Facebook** segregates us into echo chambers, fragmenting our communities.
- **YouTube** autoplays the next video within seconds, even if it eats into our sleep.
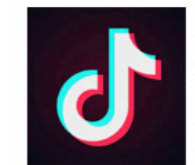
These are not neutral products. They are part of a system designed to addict us, keep us watching and keep us scrolling. That is how social media companies make money.

Have you heard of deep fake?

The term deep fake is now generically used by the media to refer to any video in which faces have been either swapped or digitally altered, with the help of AI (**artificial intelligence**).

You may have already seen or used apps and filters to swap faces in pictures and videos. Like simple Snapchat filters or TikTok videos.

The vast majority of deep fakes circulating the Internet are featuring celebrities and politicians - something that has worried many. Find out more by watching these two short videos.

WATCH: The face-swapping software explained
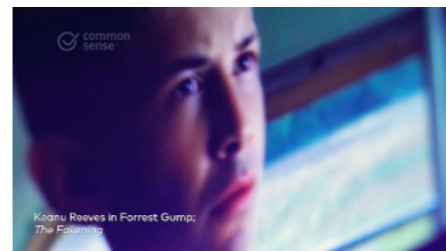
Are you aware of -- or have you thought deeply about -- the phenomenon of deep fake videos?

Do you think social media is good for you?

Tick Yes   Tick No

Do you use these apps?

Tick if you do!

Important Words:

Bluetooth
Is a way of wirelessly exchanging of data over short distances.

Chat
To talk online in a friendly or easy manner.

Communication
To exchange thoughts, ideas, or information online. This could be talking, photos, video or text.

Digital
Storing, using, or sending information electronically in the form of numbers. A computer is a digital device.

Download
A computer file that is sent from one computer to another. She keeps all of her downloads in one folder.

Follow
To make friends with someone online and follow (see) what they share online.

Link
A button with a web address that when clicked will open that web page on your computer.

Online
Another name for using the internet or web.

Online bullying
The abuse and mistreatment of someone online.

Online game
A game that requires the internet. Also game were players can play against others who are not in the same room.

Personal information
Information about you, address, school, age, passwords etc.

Search
To use a search engine to find information online.

Send / Share
To send a message, photo or video using an online communication app to one or more people.

Sign-in / Log in
To join a particular online website or app. When signed in more features are available.

Trusted adult
A trusted adult is someone that you have a good relationship with. It is someone who you think has your best interests in mind. Parents and teachers etc.

Website
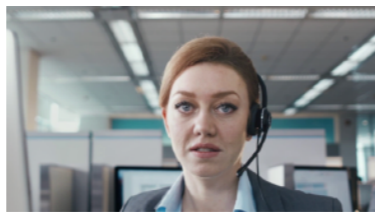An information page online that can only be accessed using the internet.

Wireless (Wifi)
Is a way of connecting computers and digital devices to the internet and each other.

Videos to watch:

Stay Safe from Phishing and Scams. Watch video.

TV AD | Barclays | Digital Safety. Watch video.

What are viruses and malware? Watch video.

How To Google Like A Pro! Top 10 Google Search Tips & Tricks 2020. Watch video.

The best and worst of online life. Watch video.

What are stereotypes?

Stereotypes surround us every day in our interactions with others, in books and other media, and in our own opinions.

A stereotype is a category, or a group, that we put people into.

Stereotypes are a problem when they include beliefs about groups that are not necessarily true.

Learn more about Gender Stereotypes. Watch the video.

What are Hackers?

A hacker is an individual who uses computer, networking or other skills to overcome a technical problem.

The term also may refer to anyone who uses their abilities to gain unauthorised access to systems or networks in order to commit crimes. A hacker may, for example, steal information to hurt people via identity theft or bring down a system and often hold it hostage in order to collect a ransom.

Not all hackers are malicious cybercriminals intent on stealing your data. Find out more about Black Hats and White Hats. Watch video.

Cybersecurity is a set of techniques to protect the secrecy, integrity and availability of computer systems and data against threats. Watch video.

Effects of Online Bullying?

Online Bullying can erode self-confidence and feelings of self-worth, which can contribute to depression and anxiety.

Research suggests that increasing levels of online bullying leads to higher levels of depression. In fact, one study found that 93% of those victimised reported feelings of sadness, powerlessness and hopelessness.

A Story of Online Bullying. Watch the video.

What is a scam?

Anyone who is connected to the internet can be a target of online scams. These scams are common and come in a variety of ways. Scams may be on your smart phone via text, in an email and even in the form of a phone call. The key to keeping yourself safe from getting scammed is to be aware of various methods scammers use to try and trick you. Scams can be hard to spot.

The top online scams today:

Phishing

Phishing happens when a scam is sent to you via email. Most often, a scammer will invite you to click a link to gain access to your personal information. They will pose as a legitimate company, such as a bank, an online streaming service or social media platform.

SMishing

SMishing is when a scammer sends a message to you via text. It is called SMishing because texting is also known as SMS (short message services).

Vishing

The "V" in Vishing stands for voice call scams. We've all received them. We've all been greatly annoyed by these scam phone calls that come from a foreign or strange looking phone number. Worse yet, many calls that are spoofed look like a local number.

Fake online adverts

You'd be forgiven for thinking that the adverts you see displayed on high profile sites such as Facebook or Google must have been through a stringent vetting process, but unfortunately this isn't always the case. If it seems too good to be true, it probably is.

<u>Find out more about scam adverts.</u>

How Do You Shop?

UK online sales accounted for a record 35.2% of all retail in January 2021. If you shop online it's important to spend safely.

How to identify if a website is safe and secure:

It is very easy to clone a real website and it does not take a skilled developer long to produce a very professional- looking, but malicious site. There are many things you can look out for on a website to check whether it is secure.

1. Check that the website's address seems to be genuine by looking for subtle misspellings, extra words, characters or numbers or a completely different name from that you would expect the business to have.

2. If there is no padlock in the browser window or 'https://' at the beginning of the web address to signify that it is using a secure link, do not enter personal information on the site. It is the 's' in https that stands for secure.

3. Websites which request more personal information than you would normally expect to give, such as user name, password or other security details in full, are probably malicious.

4. Beware of malware. Malware is a harmful software programme. Once installed on your computer it can wreak havoc and steal your personal details, like credit card information

5. Update your software. Legitimate companies try to protect their users from malware by creating updates that stop malware from working. Keeping your software up-to-date will protect you. Installing anti-virus software can help too!

Did you know that each year online scammers steal around £500 billion from internet users?

Not a Tiger cub, it's a Toyger kitten. They are a real breed of cat.

Is this Facebook post real or fake? How would you find out, how would you check?

What is plagiarism?

Plagiarism is when you use someone else's words or ideas and pass them off as your own. Plagiarism is a form of cheating, but it's a little complicated so children might do it without understanding that it's wrong. If you directly lift text from a website you must credit the author.

Cyberbullying

is a form of bullying or harassment using online forms of contact such as social media or messenger apps.

Griefing

is the act of irritating and angering people in video games through the use of destruction. An example would be Minecraft and destroying another players buildings.

Catfishing

is where someone steals your photos and uses them as your own, usually in a bid to meet other people on the internet or to trick or fool someone.

Cyberstalking

is the repeated use of electronic communications to harass or frighten someone, for example by sending threatening emails or messages.

Exclusion

occurs when an individual is passively ignored or actively rejected by others, and can occur face-to-face (offline) or via the Internet (online).

Dissing

The act of commenting on a status with single liners that insult a specific person.

Flaming

Flaming is the act of posting or sending offensive messages over the Internet. These messages, called "flames," may be posted within online discussion forums, or sent via instant messaging programs.

Fraping

is a combination of 'Facebook' and 'rape' is when someone has used your Facebook account without permission and destroyed comments or pictures, or created new and offensive comments and pictures pretending to be you.

Harassment

This is the act of sending continuously offensive, rude, and insulting messages.

Outing

'Outing' people by publishing or disseminating confidential information online.

Roasting

Girls are ganging up on boys in a new cyberbullying craze called "roasting". The new bullying takes place via mobile apps such as WhatsApp, Instagram or Facebook, where girls pick on a boy and vent the most offensive abuse until the victim "completely cracks".

Trolling

Trolling is when a user anonymously abuses or intimidates others online for fun. One in four teenagers suffered hate incidents online last year, a figure described by experts as a "wake-up call" on the impact of internet trolling.

Internet Shaming

Online shaming is a form of Internet vigilantism in which targets are publicly humiliated using technology like social and new media.

Doxxing

the publishing of an individual's home address or bank details etc.

Blue Whale Challenge

is an Internet "game" that is claimed to exist in several countries. The game allegedly consists of a series of tasks assigned to players by administrators during a 50-day period, with the final challenge requiring the player to commit suicide.

Sexting

is sending, receiving, or forwarding sexually explicit messages, photographs or images, primarily between mobile phones. It may also include the use of a computer or any digital device.

Phishing

Phishing is the attempt to obtain sensitive information such as usernames, passwords, and credit card details (and, indirectly, money), often for malicious reasons, by disguising as a trustworthy entity in an electronic communication

Creeping

To follow someone's social network profile closely: to an excessive degree. Can be known as 'Facebook stalking'. It is not as sinister as it may sound, often creeping is done to catch up with friends,

Fabotage

A slang word, for 'Facebook Sabotage', used to describe hijacking, and meddling with, someone's Facebook account while it is unattended.

Grooming

When a stranger tries to start a relationship with a child for unlawful purposes; this can happen online or offline. Also see online grooming.

Hacker

Hackers are people who gain unauthorised access to data, remotely, using a computer or mobile device.

Malware

Short for 'malicious software'. Programs that damage your computer (viruses), steal your personal information (spyware), display unwanted adverts (adware) or expose your computer to hackers (Trojan horses).

Pharming

Pronounced 'farming', this is a method by which scammers try to get personal/private information from users by directing them to false – or 'spoof' – websites which look legitimate in your browser.

Spyware

A general term for a program that secretly monitors your actions. While they are sometimes sinister, like a remote-control program used by a hacker, software companies have been known to use spyware to gather data about customers.

Trojan

A program that is not what it seems to be. Trojans pretend to be useful programs like word processors but can enter your computer, access files and then pass on information, install spyware or adware or open up your computer to hackers. This is especially a threat when using 'always on' internet connections.

Fake Software

These mostly start with a pop up warning saying you have a problem on your device and to be secure click to download a particular software app.

Internet Predator

People who intentionally access sites that children or teens visit and can search for potential victims by location or interest.

Clickbait

It means what you think it means: bait for clicks. It's a link which entices you to click on it. Usually referring to YouTube videos with 'clickbait' titles to draw users attention to get more views on a video.

Cookie

A cookie is a small file that is sent to a web browser by a server and stored on the user's computer. It can then be read by the server every time the user revisits the same website and is used to keep track of personal preferences, shopping choices and other information.

Cuff or Cuffing

Cuff is the slang term for being tied down into a relationship and telling the whole world that he or she is yours.

Decoy App

Decoy apps can be used to store private information, such as photos, videos, voice recordings, or text messages. They look like everyday apps such as a calculator so offer a secure way to hide certain information.

Ghosting

To 'ghost' means to avoid someone until they get the picture and stop contacting you. 'Ghosting' is when a person cuts off all communication with their friends or the person they're dating, with zero warning or notice beforehand. You'll mostly see them avoiding friend's phone calls, social media, and avoiding them in public.

Hashtag

A hashtag is a word or an unspaced phrase prefixed with the hash symbol #. It is used on social networking sites like Twitter to tag and group messages from different people about a common topic.

Incognito

Incognito browsing is a mode in Google Chrome which allows you to browse without creating a browsing and download history. It also prevents cookies being stored. It is only recommended that children use this on public computers or on any computer they use away from home.

Sadfishing

Sadfishing is a growing social trend where young people make exaggerated comments about their emotional issues to get sympathy from others. It also means that those who are experiencing real emotional distress may be accused of sadfishing and dismissed by their peers without getting the right support.

Circumventor Sites

Parallel websites that allow children to get around filtering software and access sites that have been blocked.

Mouse-trapping

technique used by some websites to keep visitors from leaving their website, either by launching an endless series of pop-up ads or by re-launching their website in a window that cannot be closed

Streaks

A streak is where you send at least one snap to each other within a 24-hour period for at least 3 days. This must be snapping, not chatting..

Bittorrent

A peer-to-peer (P2P) service where people can share files with each other; usually movies, music, and TV shows. Game of Thrones is the most torrented show of all time.

Spoofing

Making a fake version of a real site e.g. PayPal with the intention of stealing someone's personal details.

My Learning Objectives:

I can explain how to protect my computer or device from harm on the Internet.

I understand the need for copyright and the consequences of ignoring it.

I support my friends to protect themselves and make good choices online, including reporting concerns to an adult.

I am aware of the ways in which the media can shape our ideas about gender.

I am aware that if I need help I keep asking for it until I get help.

I am aware of the need for positive online relationships and I am mindful of others feelings at all times.

I understand I need to create a positive online reputation.

I know how to capture evidence of online bullying and how to report it.

I know how to keep my data private and secure.

I understand the impact technology can have on my health, well being and lifestyle.

Question 1:

Which of these could be used to communicate with a class of children living in another country?

YouTube   Email   Zoom   Instagram

Question 2:

How can you protect your computer from viruses?

Never click e-mail links or open attachments from people you don't know.

Don't join public unprotected wifi networks.

Do nothing - your computer will protect itself.

Give it antibiotics.

Question 3:

Your friend tells you that she is talking to a boy online and she is going to meet him at the weekend. What should you do?

Volunteer to go with her.

Let her go on her own.

Tell an adult straight away.

Tell your other friends.

Question 4:

Malware is malicious software used in _____.

Cyber attacks   Cyber bullying   Cyber safety   Cyber dating