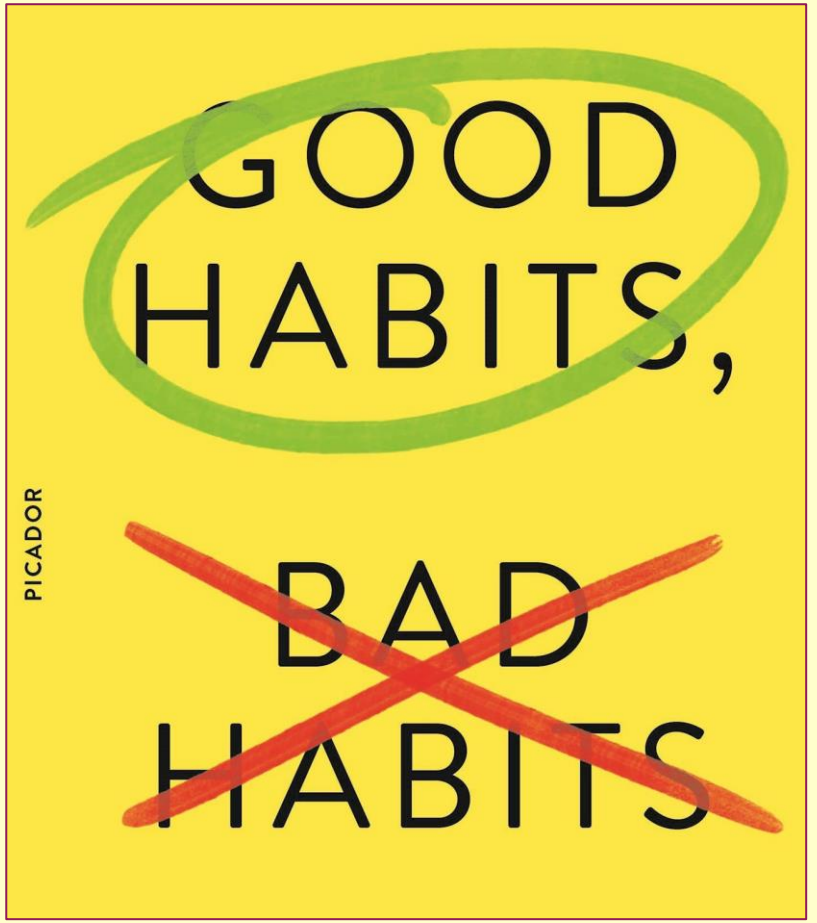
Good Habits


GOOD HABITS,
BAD HABITS
PICADOR


INQUISITIVE


PERSISTENT


COLLABORATIVE


IMAGINATIVE

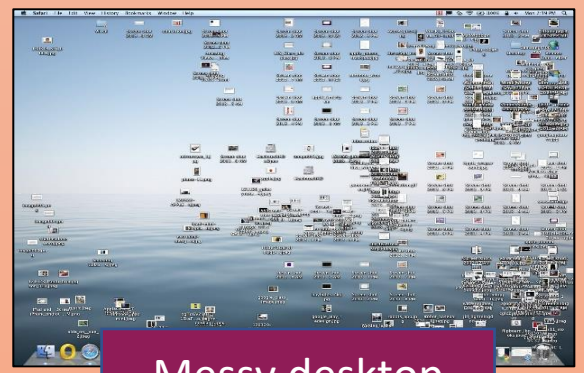

DISCIPLINED

Year 7 Unit 1 – Good Habits

Spend a little bit of time becoming more efficient using the computer and the time saved can be spent down the wreck, playing video games, reading, doing whatever you like! 😊

Developing **good habits**, naming and saving your *stufz* sensibly, learning shortcuts for frequently used tasks really will save significant time in the long run. *Shortcuts are called shortcuts for a reason.*

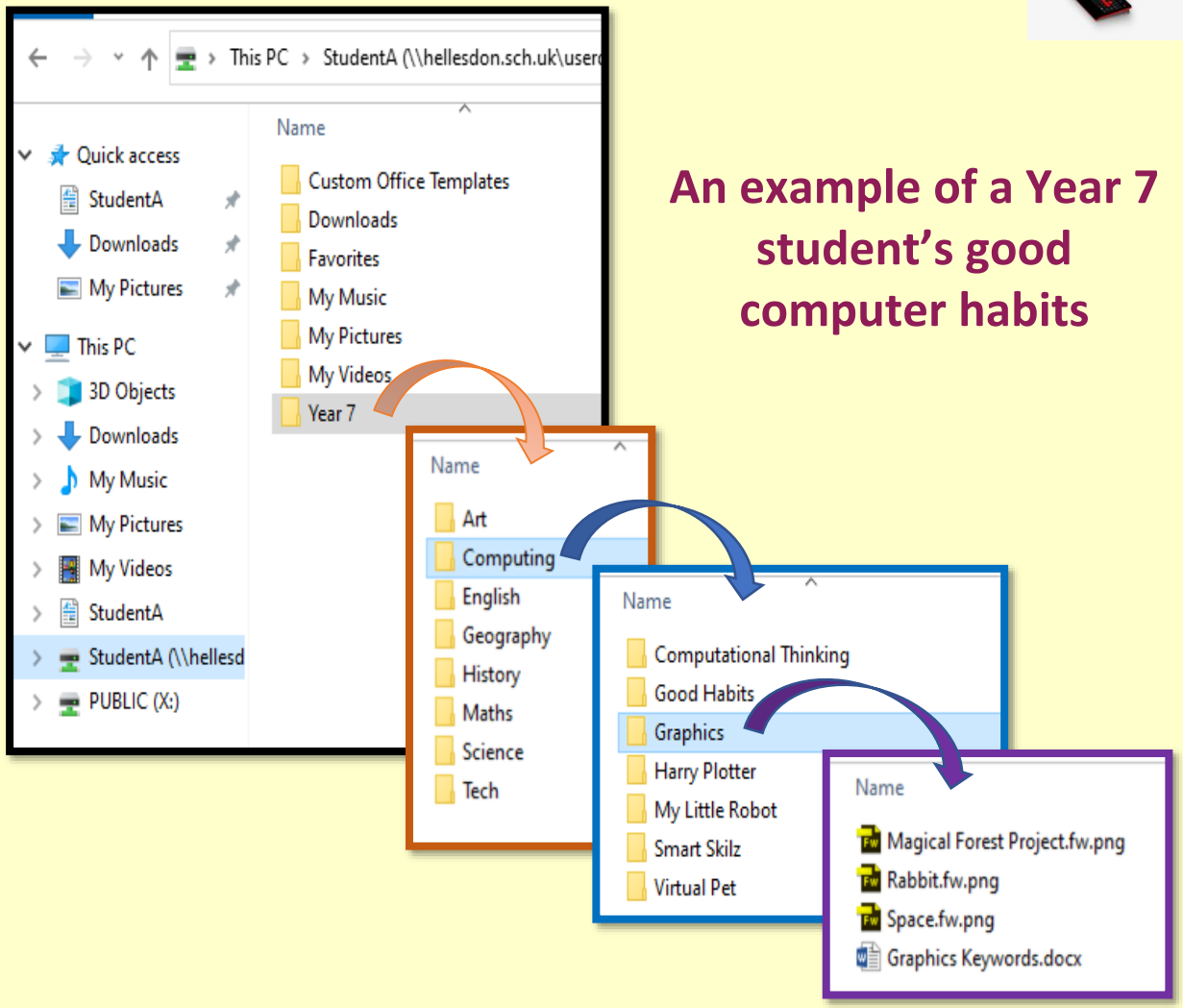
Messy bedroom



Messy desktop

Also, many things are reusable – that means tools used in one software are often found in other software. All of this makes life easier. One only needs to learn it once…

An example of a Year 7 student's good computer habits



At the end of this unit you will know how to do the following:

- Organise your computer files and folders
- Sensibly name your files and folders
- Use shortcuts for common computer tasks

Year 7 Unit 1 – Good Habits

Your Keywords	
HHS IT Code of Conduct	A Code of Conduct is a set of rules around behaviour for all students to follow when using IT within school. Anyone who fails to follow the Code of Conduct could loose access to the school computers
Files	A computer file is a 'container' in a computer system used for storing information. Most applications have their own special file types e.g. **docx** for Word and **py** for Python etc.
Directory	A directory is the location for storing files on the computer.
Directory Tree *including Root Directory and Subdirectory*	How someone organises their directory is often referred to a Directory Tree because the ***structure*** of the directory starts at the 'root', where there is nothing beneath, and the other directories (called sub-directories) branch from the root – *like an upside-down 'tree'*
Directory Structure	The directory structure is how someone has organised their the files and folders in their directory.
Shortcut Keys	Shortcut keys are key combinations for common IT tasks used to make the process quicker and easier e.g. **CTRL + c** and **CTRL + v** - *for copying and pasting things* **CTRL + z** and **CTRL + y** - *for undoing and redoing something* **CTRL + s** - *for quickly saving what you are working on*

How do you create a new folder in your directory?

What shortcut key would you use to copy text in a document?

What are the steps to add an image to a document?

What is a root directory?

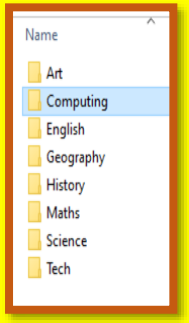
Why is sensible file naming important?

"Being organised helps you to thrive!" - Jacque McLeod

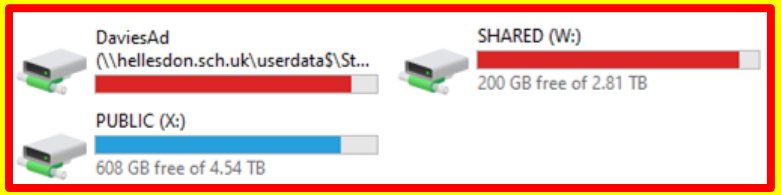
Key knowledge

Understand what a main folder (root directory) and subfolders are.

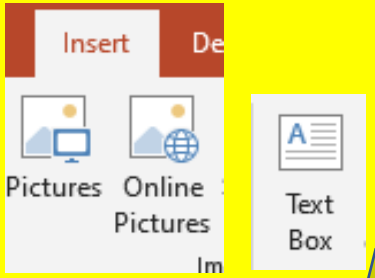
Subfolders



main folder (root directory)



What are the steps to add an image to a document?



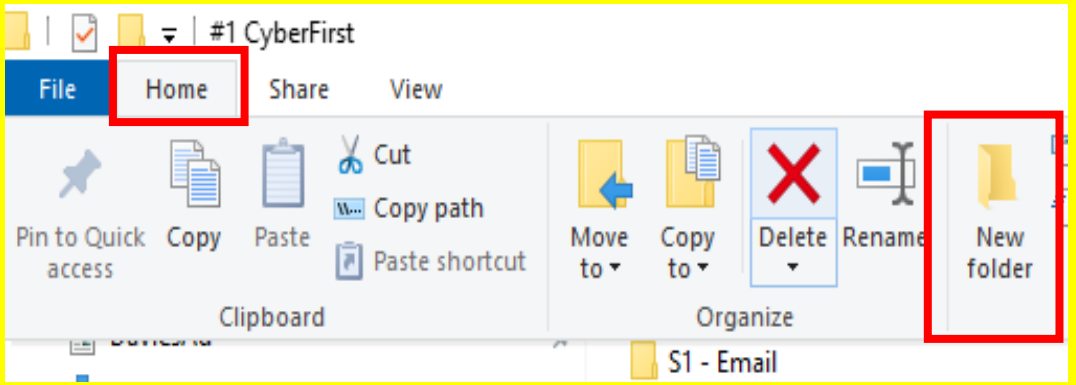
Why is sensible file naming important?

List of tasks for computing lesson.txt

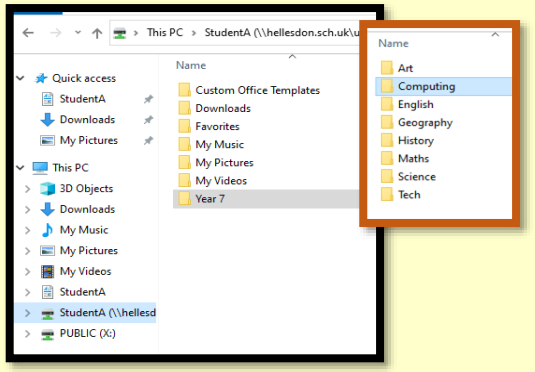
untitled1.txt

What shortcut key would you use to copy text in a document?

How do you create a new folder in your directory?



Print screen your directory structure below (see example):



Print screen the results of your end of unit quiz here:

Cyber: First


INQUISITIVE


PERSISTENT


COLLABORATIVE

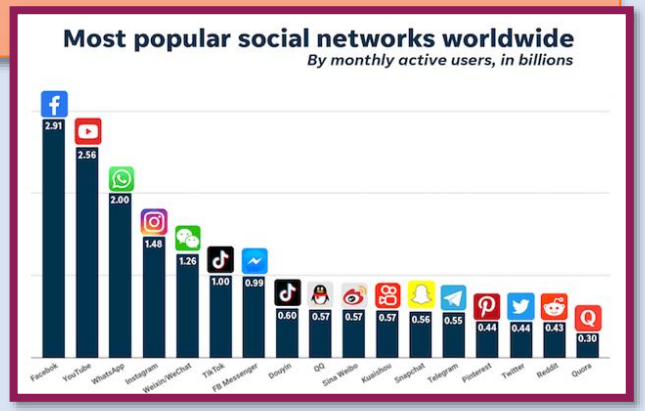

IMAGINATIVE


DISCIPLINED

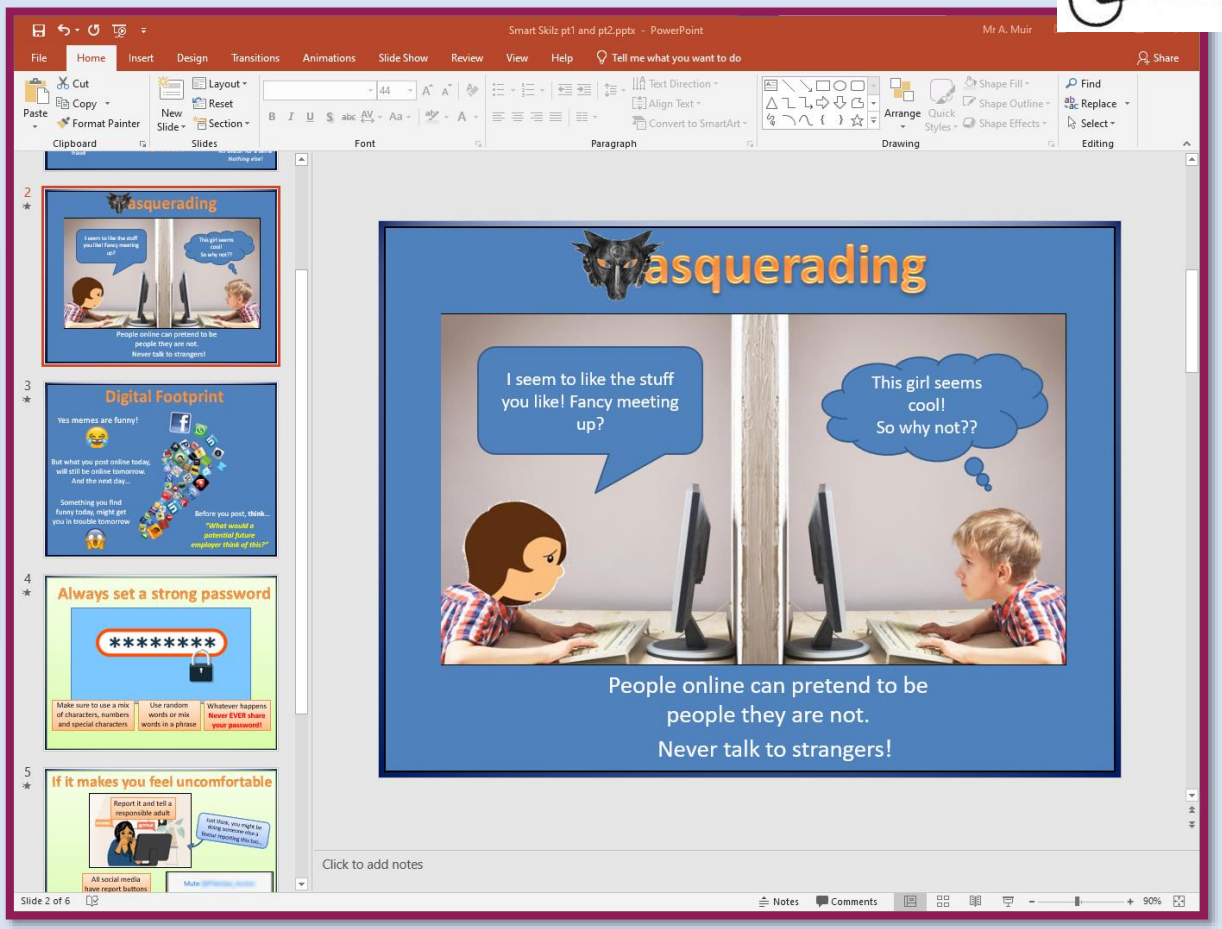
Year 7 Unit 2 – CyberFirst

It used to be said, 'today's news is tomorrow's fish & chips wrapping paper.' In other words, what happens today will be forgotten tomorrow. But that was before the internet. Now, because of the internet, this is no longer the case. Your history is remembered… forever.

Going online is fun and is increasingly becoming part of everyday life; it is therefore important that we become future-thinking and responsible web-citizens, who understand the dangers of going online as well as know how to avoid them.



An example of what you will produce by the end of the unit



At the end of this unit you will know how to:

- Recognise the dangers of going online and using social media
- Limit the possibility of bad things happening to you when you use the internet
- Report any concerns you have because of what you see or hear when going online

Year 7 Unit 1 – CyberFirst

Your Keywords	
Social Networks	Social Networks are dedicated websites, or applications, which allow people to communicate with each other by posting information, comments, messages, images, etc.
Digital Footprint	Digital Footprint is the 'trail' of data you create whenever you go online and share content.
Cyberbullying	Cyberbullying is a criminal offence that includes sending, posting, or sharing negative, harmful, false or mean content about someone else.
Identity Theft / Identity Fraud	Identity Theft is when someone steals your personal information or possessions so they can use your identity to commit crimes
Strong Secret Passwords	Passwords are used to protect your online information. Passwords need to be unguessable and kept secret.
Stranger Danger	You should never talk to strangers and this includes online.
Reporting	Reporting is where you inform a social media site, usually by clicking a 'Report Button' of inappropriate content. Reporting content will automatically block the site for you too. Reporting should also involving letting a responsible adult e.g. parent / teacher/ HoH know if something online has made you feel uncomfortable
Blocking	Blocking is where you can tell an application that you no-longer want the person you are blocking to be able to contact you. Blocking can also prevent the person blocked from being able to see your content too.
Privacy Settings	Privacy settings on social networks sites allow you to control what content you have posted on the site different groups of people can see. It is important to make your profile as private as possible to stay safe

How do you keep your personal information safe online?

What is two-step verification?

What are the signs of an online scam?

What is the difference between hacking and social engineering?

What do you do if your security is breached?

"Once you see something, you can't un-see it"

"Think before you click!"

Key knowledge

Phishing is a Social engineering attack.

Use two-step verification to protect your accounts.

Hacking

Key knowledge

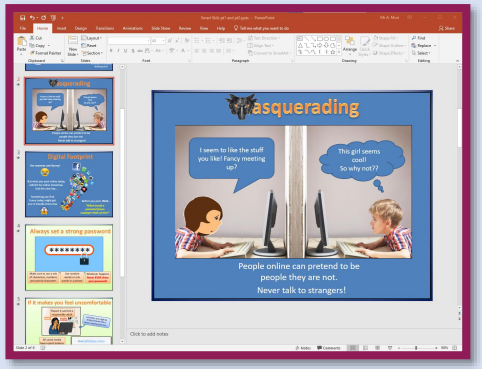
What should you do to keep your data secure?

What do you do if your security is breached?

What are the signs of a scam?

Print the results of your first attempt of the e-safety quiz below:

Print screen your e-safety presentation below (see example):



Print the results of your second attempt of the e-safety quiz below:

Programming Essentials in Scratch – Part 1

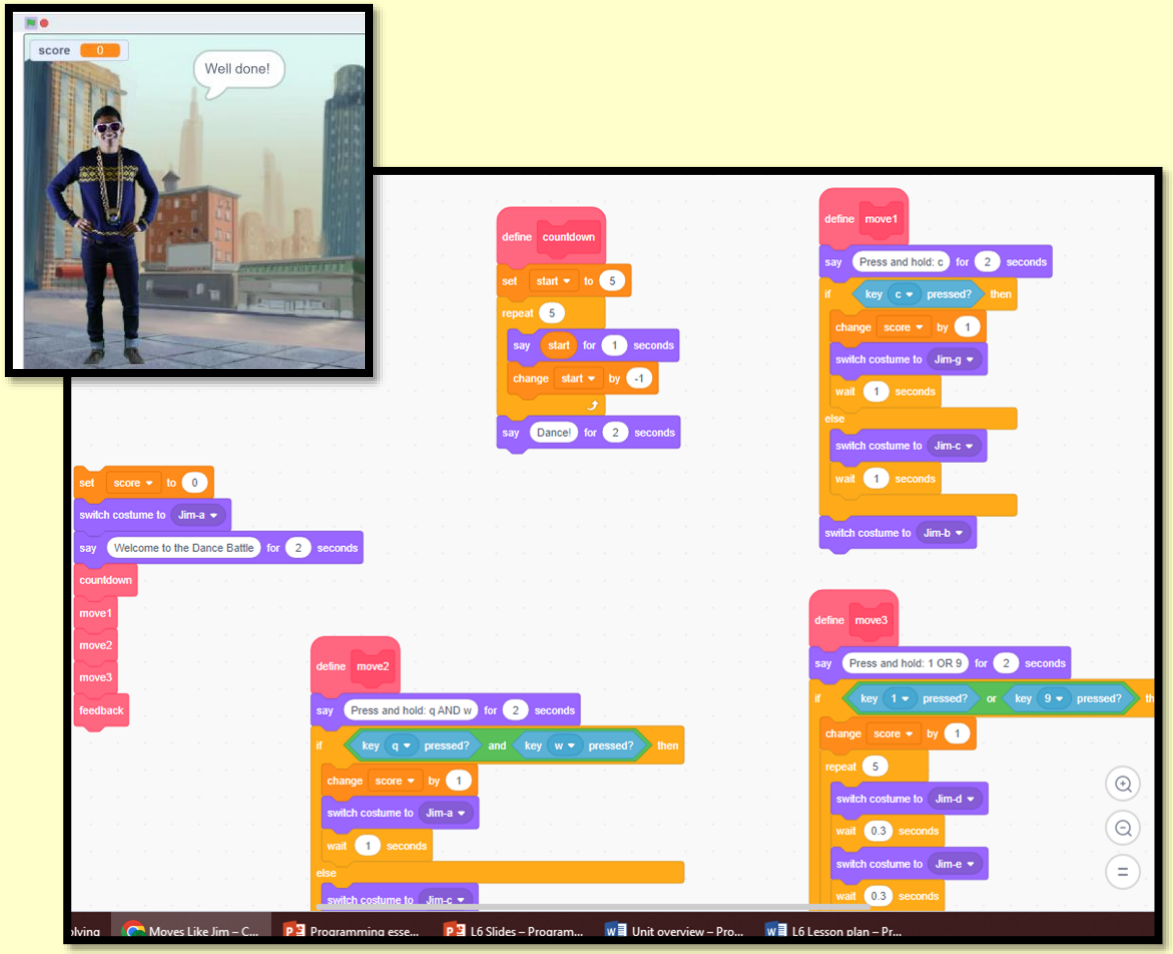
Year 7 Unit 3 – Programming Essentials

Programming is your passport to a world of endless creativity and problem-solving. It's like being the author of the digital era, where you can build games, apps, and tools that impact people's lives.

Beyond the **thrill of coding**, it's a launchpad to future opportunities. Whether you aspire to create ground-breaking games, design cutting-edge websites, or explore the frontiers of artificial intelligence and robotics, programming equips you to shape the tech landscape.

Programming is your gateway to becoming a digital architect, influencing and moulding the future, one code at a time.

An example of what you will produce by the end of the unit



At the end of this unit you will know how to:

- Understand how computers follow instructions and predict what they will do.
- Use variables and make choices in programs to control what happens.
- Repeat actions and solve problems in computer programs.

Year 7 Unit 3 – Programming Essentials

Your Keywords	
Program	A program is like a list of instructions you give to a computer to make it do different things, like playing a game or showing pictures on a screen.
Algorithm	An algorithm is a set of step-by-step instructions that tells a computer what to do to solve a problem or complete a task.
Sequence	Instructions performed in order, with each executed in turn
Selection	Making choices
Iteration	Doing the same thing more than once
Variable	A variable is a name that refers to data being stored by the computer
debug	Looking through a programme carefully to find mistakes
Sub-routine	A mini program within a program. Subroutines are called from the main program

Which blocks do you use for selection?

Which blocks do you use for iteration?

In programming, what does sequence mean?

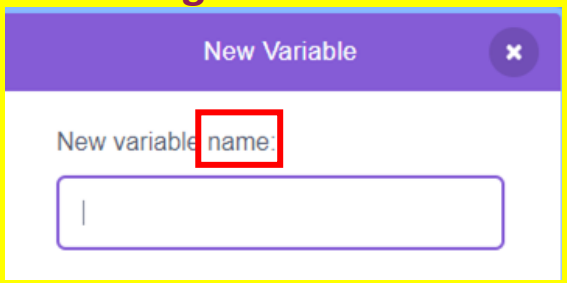
What does it mean to debug a programme?

What must you do before using a variable?

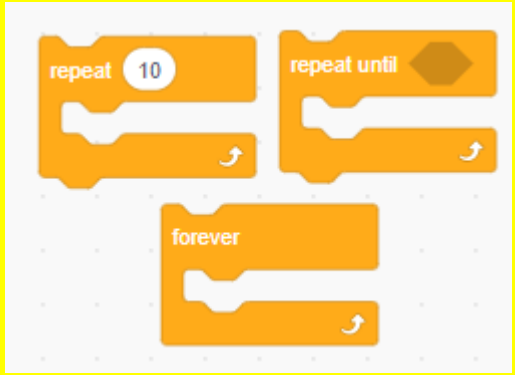
"Programming is how you get computers to solve problems"

Key knowledge

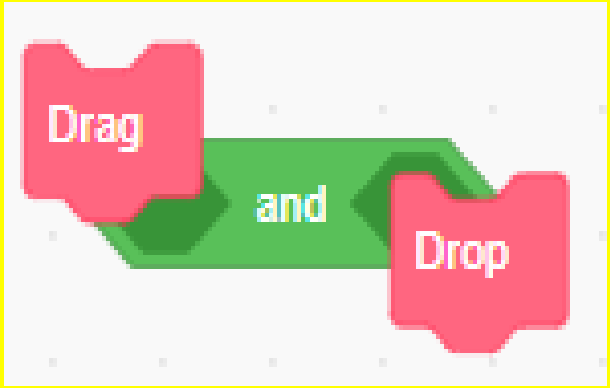
What must you do before using a variable?



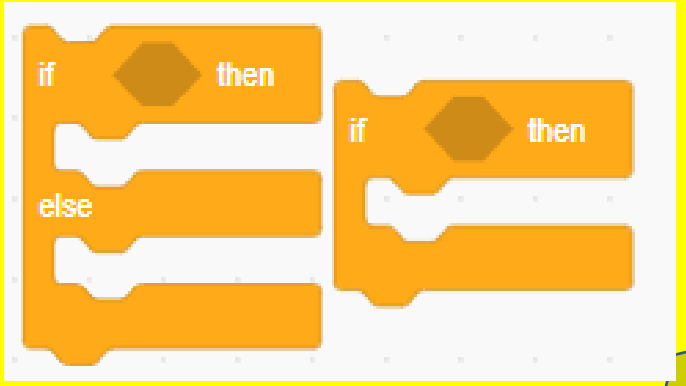
Which blocks do you use for iteration?



How do you modify a simple sequence in scratch

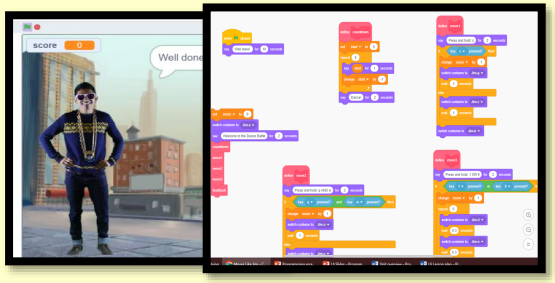


Which blocks do you use for selection?



Print the results of your first attempt of the Scratch quiz below:

Please paste screenshots of your program an code below. See example:



Print the results of your second attempt of the Scratch quiz below:

Modelling data using spreadsheets

Year 7 Unit 4 – Spreadsheets

Spreadsheets might not sound exciting at first, but think of them as your very **own data superpower**. These magical grids can help you organize everything you can imagine! You can track your video game scores, allowance, and even sports team stats. It's like being a data detective, and you don't need a cape for it. You can ditch those boring manual calculations because spreadsheets can do the math for you. With **formulas and functions**, you'll have **math magic at your fingertips**.

Do you ever dream of having more control over your allowance? Want to plan your savings for that awesome gadget you've had your eye on? Spreadsheets can make money management a breeze. Create budgets, set goals, and watch your savings grow. Plus, if you're a gamer, spreadsheets can help you keep track of levels, in-game items, and even high scores. Your gaming experience just got a whole lot cooler!

What's even cooler is that the skills you learn with spreadsheets today will be **incredibly handy as you grow up**. When it's time to find that dream job, many cool careers require spreadsheet expertise. So, while you're having fun with data and numbers now, you're also building skills for a fantastic future. Spreadsheets can be the ultimate friendship builder, the science sleuth's toolkit, and a canvas for your inner artist, all rolled into one. So, start your adventure with spreadsheets and become a data superhero! 💻🚀

RANK	GRADE	DISPLAY NAME	VIDEOS	SUBSCRIBERS	VIEWS
1	A++	T-Series	13,694	107,566,269	78,644,221,095
2	A+	PewDiePie	3,916	98,676,231	22,632,253,697
3	A+	5-Minute Crafts	3,412	59,337,958	15,069,859,766
4	A++	Cocomelon - Nursery Rhymes	446	53,793,367	34,214,512,261
5	A++	SET India	31,919	52,967,189	37,433,981,397
6	A+	Canal KondZilla	1,120	50,884,733	25,678,754,466
7	A+	WWE	42,676	46,883,085	34,561,137,762
8	B+	Justin Bieber	134	46,084,462	626,754,957
9	A	Dude Perfect	210	44,338,231	8,504,715,831
10	A+	Badabun	4,485	41,558,212	13,534,926,318
11	A+	Zee Music Company	4,140	41,381,422	18,994,562,165
12	A+	Ed Sheeran	151	41,210,557	17,609,857,376
13	B+	HolaSoyGerman.	137	39,620,014	3,981,831,901
14	B	EminemMusic	117	38,524,091	729,125,080
15	A	Marshmello	334	37,477,864	6,633,512,712

Number 1	Times	Number 2	Answer
2	*	1	2
2	*	2	4
2	*	3	6
2	*	4	8
2	*	5	10
	*	6	12
	*	7	14
	*	8	16
	*	9	18
	*	10	20
	*	11	22
	*	12	24

"The global economy is built on two things: the internal combustion engine and Microsoft Excel. Never forget this."
— Kevin Hector

At the end of this unit you will being able to confidently model data with a spreadsheet. You will also perform **simulation experiments** in order to filter and manipulate data.

Skills you will be practicing from previous units:
- Understanding of reading tables

Year 7 Unit 4 – Spreadsheets

Your Keywords	
Spreadsheet	A spreadsheet is a computer program that can be used to display and manipulate data arranged in rows and columns.
Spreadsheet Model	A spreadsheet model is a real-life scenario or problem that can be represented / simulated using spreadsheet software.
Cell	A cell is a small rectangular area formed where the rows and column of the spreadsheet intersect. Cells are used to hold a piece of data required by the spreadsheet.
Active cell	This is the cell that you are currently working on, where data / values can be added to or formula can be written.
Cell reference / cell name	A cell reference refers to a cell (or a range of cells) on a spreadsheet.
Data	A single piece of information. The information could be the cost / name / date / quantity / etc. of something
Formula	An expression telling the computer what mathematical operation to perform upon a specific value.
Function	Functions are ready-made formulas that perform calculations on selected data e.g. SUM, COUTA, MAX and MIN.
IF function	The IF function allows you to make *logical comparisons* between two or more values; this allows you to get the spreadsheet to do more than one thing in each cell
Chart	A visual representation of data. Charts are used to show how data fits together or how different pieces of information may relate.
Conditional formatting	Conditional formatting is a feature that lets you make your data look different based on specific rules you set, like changing cell colours in a spreadsheet if a test score is below a certain value.

How do you reference a cell in a spreadsheet?

Write a formula to sum the values in cells A1 to A5.

How do you apply conditional formatting to highlight cells greater than 50?

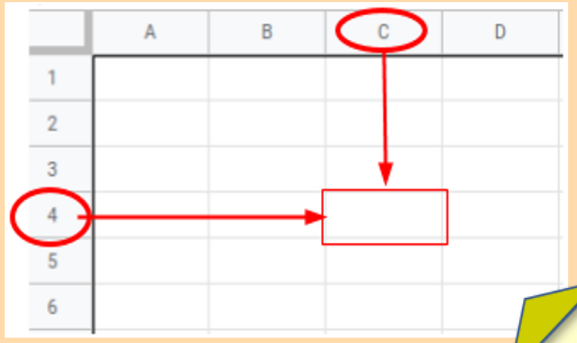
What is the difference between data and information?

How do you sort data in a spreadsheet?

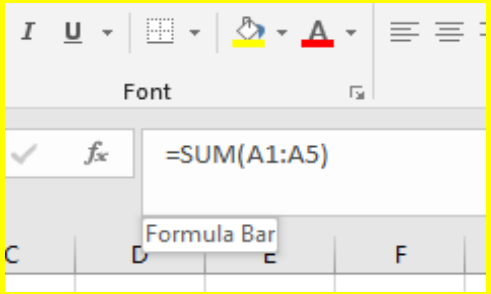
Key knowledge

How do you reference a cell in a spreadsheet?

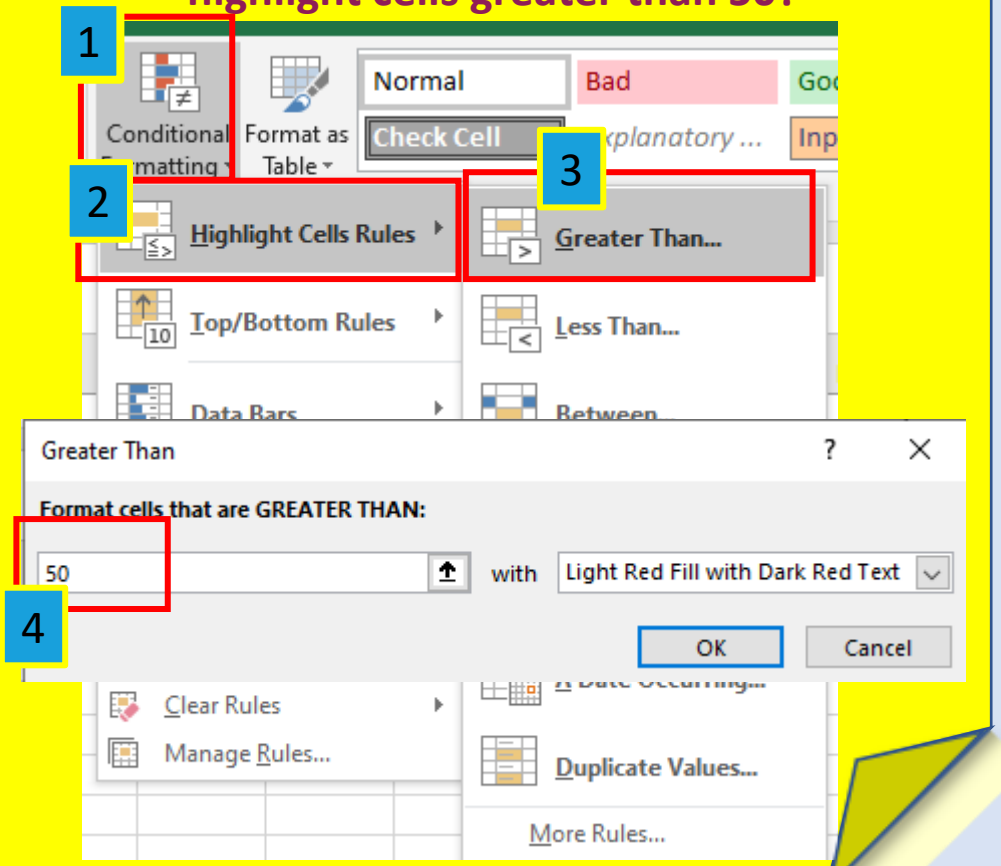
This is cell C4



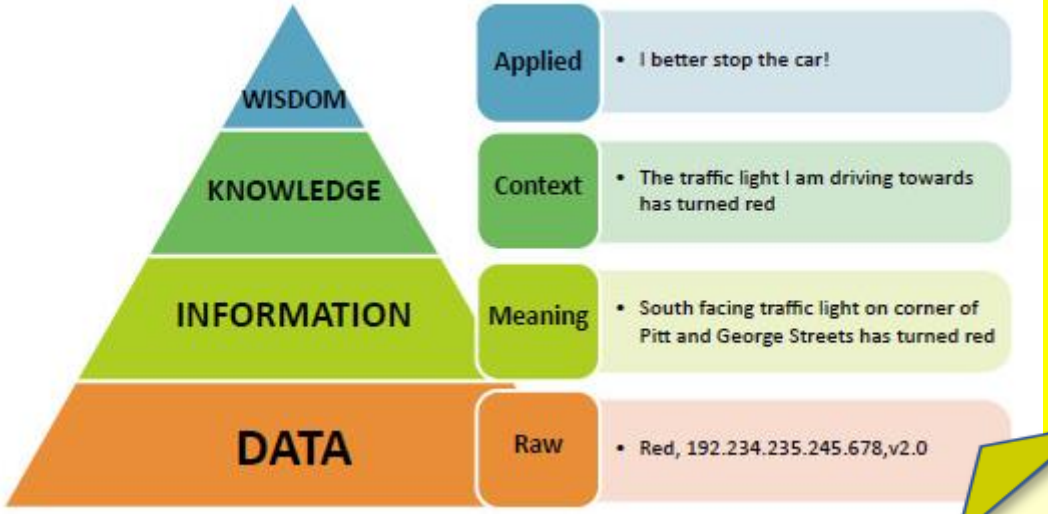
How do you write a formula to sum cells a1 to a5?



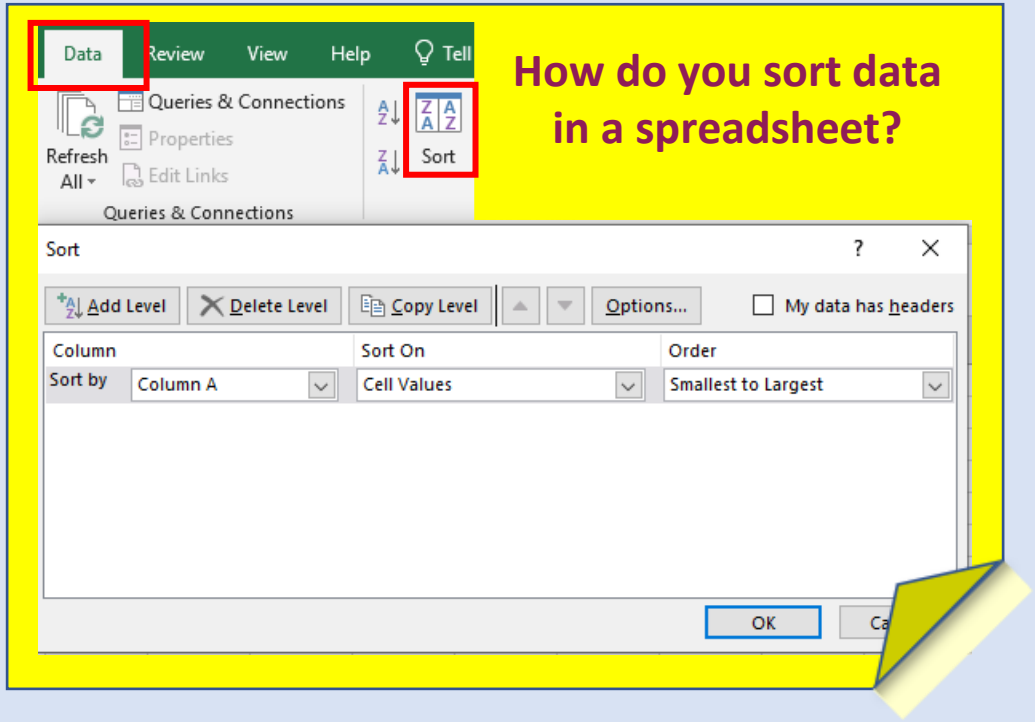
How do you apply conditional formatting to highlight cells greater than 50?



How do you reference a cell in a spreadsheet?



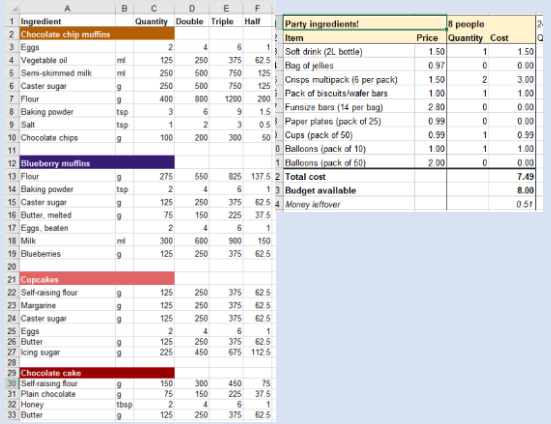
Key knowledge



Print the results of your first attempt of the Spreadsheet quiz below:

Please paste screenshots of your cake recipe and party models below.

See examples:



	A	B	C	D	E	F
1	Ingredient		Quantity	Double	Triple	Half
2	Chocolate chip muffins					
3	Eggs		2	4	6	1
4	Vegetable oil	ml	125	250	375	62.5
5	Semi-skimmed milk	ml	250	500	750	125
6	Caster sugar	g	250	500	750	125
7	Flour	g	400	800	1200	200
8	Baking powder	tsp	3	6	9	1.5
9	Salt	tsp	1	2	3	0.5
10	Chocolate chips	g	100	200	300	50
11						
12	Blueberry muffins					
13	Flour	g	275	550	825	137.5
14	Baking powder	tsp	2	4	6	1
15	Caster sugar	g	125	250	375	62.5
16	Butter, melted	g	75	150	225	37.5
17	Eggs, beaten		2	4	6	1
18	Milk	ml	300	600	900	150
19	Blueberries	g	125	250	375	62.5
20						
21	Cupcakes					
22	Self-raising flour	g	125	250	375	62.5
23	Margarine	g	125	250	375	62.5
24	Caster sugar	g	125	250	375	62.5
25	Eggs		2	4	6	1
26	Butter	g	125	250	375	62.5
27	Icing sugar	g	225	450	675	112.5
28						
29	Chocolate cake					
30	Self-raising flour	g	150	300	450	75
31	Plain chocolate	g	75	150	225	37.5
32	Honey	tbsp	2	4	6	1
33	Butter	g	125	250	375	62.5

Party ingredients!		8 people	
Item	Price	Quantity	Cost
Soft drink (2L bottle)	1.50	1	1.50
Bag of jellies	0.97	0	0.00
Crisps multipack (6 per pack)	1.50	2	3.00
Pack of biscuits/wafer bars	1.00	1	1.00
Funsize bars (14 per bag)	2.80	0	0.00
Paper plates (pack of 25)	0.99	0	0.00
Cups (pack of 50)	0.99	1	0.99
Balloons (pack of 10)	1.00	1	1.00
Balloons (pack of 50)	2.00	0	0.00
Total cost			**7.49**
Budget available			**8.00**
Money leftover			*0.51*

Print the results of your second attempt of the Spreadsheet quiz below:

Programming Essentials Part 2

Year 7 Unit 5 – Programming Essentials - part 2

Programming is your passport to a world of endless creativity and problem-solving. It's like being the author of the digital era, where you can build games, apps, and tools that impact people's lives.

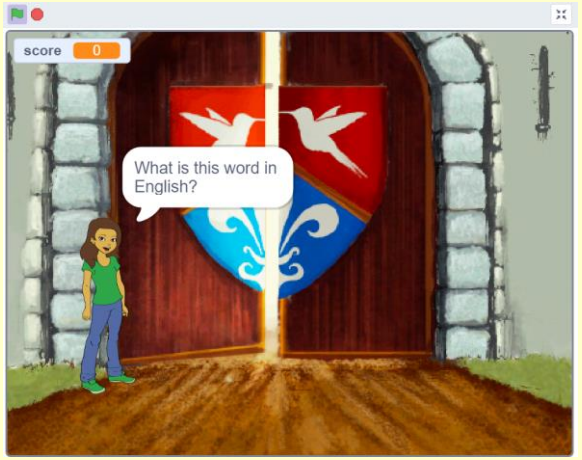
Beyond the **thrill of coding**, it's a launchpad to future opportunities. Whether you aspire to create ground-breaking games, design cutting-edge websites, or explore the frontiers of artificial intelligence and robotics, programming equips you to shape the tech landscape.

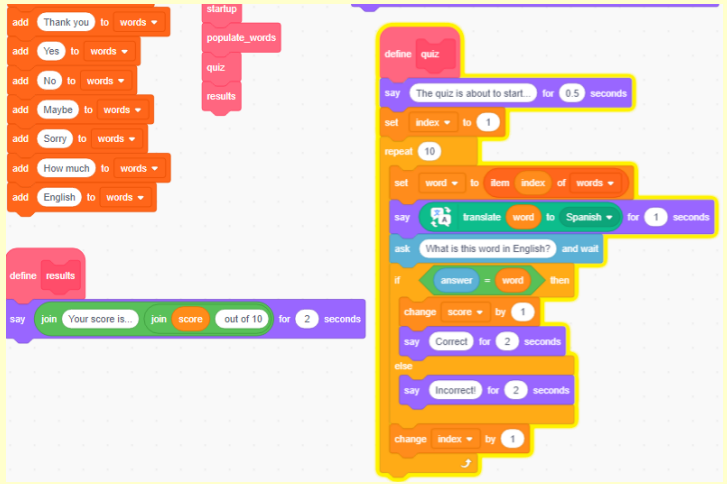
Programming is your gateway to becoming a digital architect, influencing and moulding the future, one code at a time.

At the end of this unit you will know how to:

- Understand how computers use lists
- Use decomposition to solve problems
- Use subroutines to break your problems into smaller more manageable chunks

An example of what you will produce by the end of the unit





Year 7 Unit 5 – Programming Essentials - part 2

Your Keywords	
Program	A program is like a list of instructions you give to a computer to make it do different things, like playing a game or showing pictures on a screen.
Iteration	in computing is the process of repeatedly executing instructions
List	a collection of related elements that are referred to by a single name
Condition controlled iteration	Condition-controlled iteration will execute the commands until the condition you set is no longer being met. **Example:** "Write out lines until 4pm"
Count controlled iteration	Count-controlled iteration will execute the commands a set number of times **Example:** "Write out lines 100 times"
decomposition	Break down problems into small manageable chunks.
Sub-routine	A mini program within a program. Subroutines are called from the main program

How do you create a subroutine in Scratch?

What is condition-controlled iteration?

How would you break down a larger problem into smaller parts?

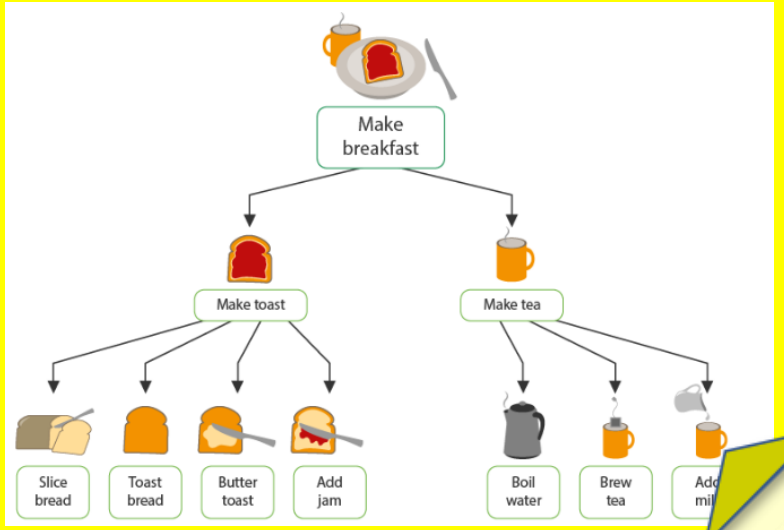
What is a subroutine?

How do you create a list in Scratch?

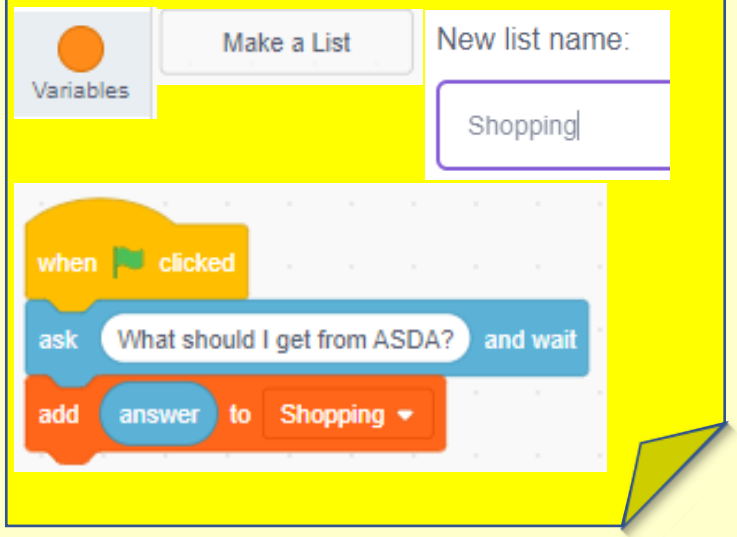
"Programming is how you get computers to solve problems"

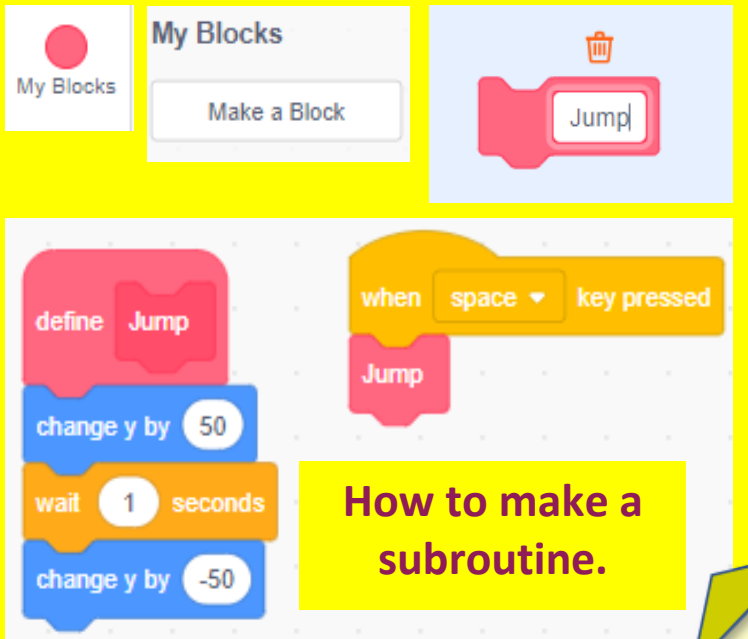
Key knowledge

Decomposition: Break down problems into small manageable chunks.



How to make a list.





How to make a subroutine.

Name:

Paste your stage here

Paste your code here

Clear Messaging

Year 7 Unit 5 – Clear messaging

Clear messaging in digital media is crucial in today's tech-driven world. This unit builds on learners' primary school skills, teaching them to create compelling digital content using various software applications.

Real-world applications include creating marketing materials, designing user-friendly websites, and developing strong brand identities. Learners practice planning layouts, choosing images, and combining text and graphics, which are essential for effective communication. They also learn to search for and evaluate digital content, ensuring credibility.

Collaborative tools and feedback mechanisms prepare them for teamwork in academic and professional settings. These skills equip learners to make a meaningful impact through digital media, shaping information sharing in the digital age.

At the end of this unit you will know how to:

- Create digital posters and presentations with clear messages.
- Develop and modify branding elements like logos and styles.
- Evaluate and use digital content responsibly.

An example of what you will produce by the end of the unit

Clear messaging

Your Keywords	
Digital Media	Electronic media that work on digital codes, including the internet, digital video, and social media.
Poster	A large printed picture or notice used for advertising or decoration.
Branding	The process of creating a unique image and name for a product in the consumers' mind.
Logo	A symbol or design adopted by an organization to identify its products.
Layout	The way in which text or pictures are set out on a page.
Content	Information made available by a website or other electronic medium.
Annotation	A note of explanation or comment added to a text or diagram.
Search Terms	Words or phrases used to find specific content on the web.

How do you create a poster using Canva?

What is an example of a search term?

How do we plan to use colours?

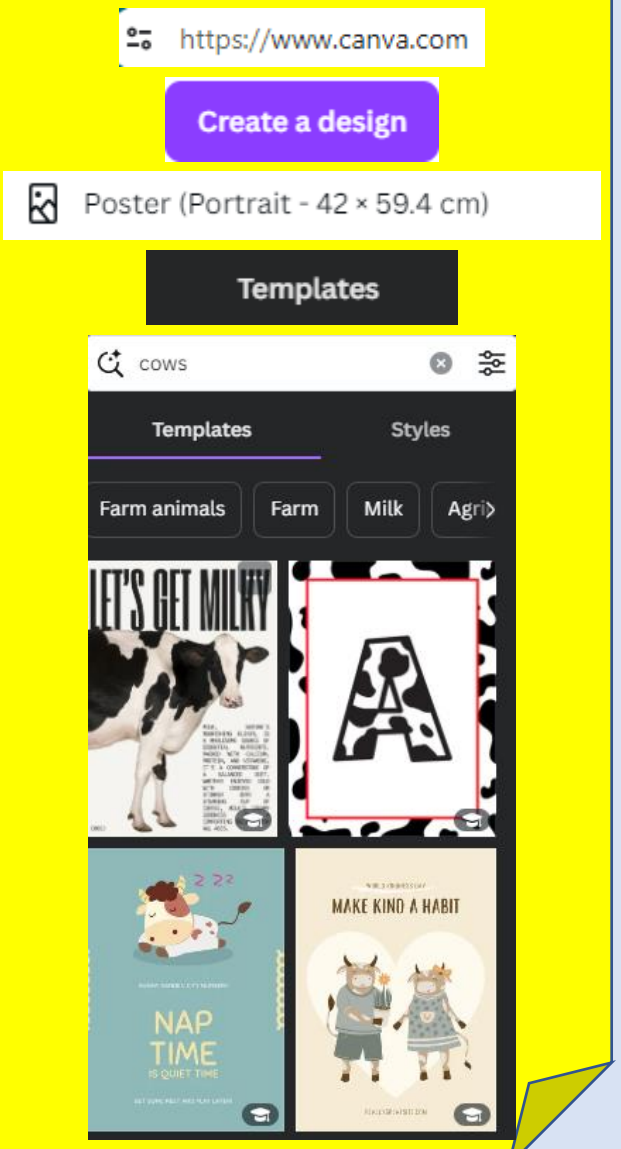
What makes a good logo?

What are annotations?

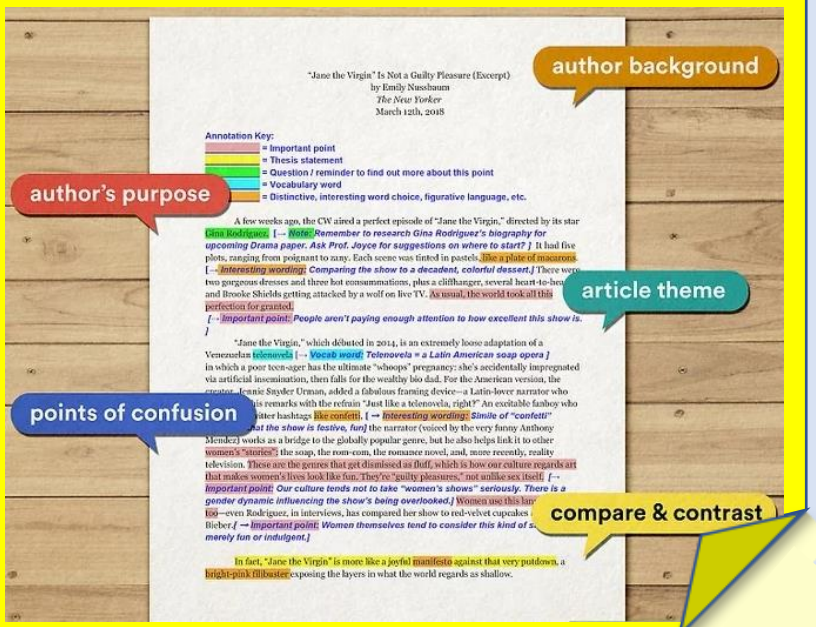
"Programming is how you get computers to solve problems"

Key knowledge

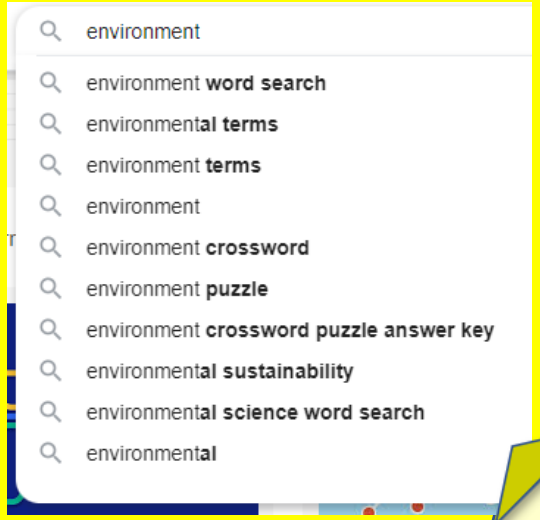
How to create a poster in Canva.



Example search annotations.



Example search terms.



What makes a good logo.

Plan colours with a palette

Name:

Add your presentation below.

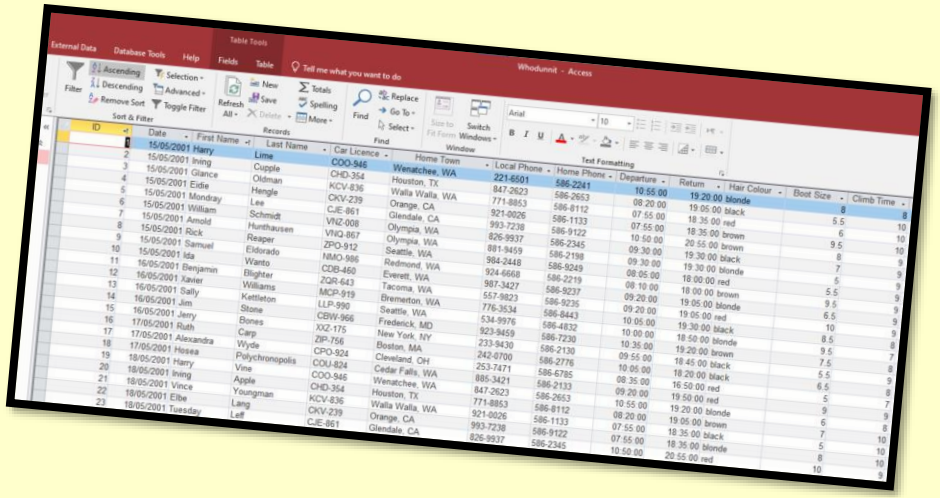
Murder on a mountain

Year 7 Unit 6 – Databases – Murder on the mountains

Databases are important because they help **store**, **find**, and **manage** lots of information easily. Businesses use them to keep track of customer details, manage stock, and handle sales, making things more accurate and efficient. In healthcare, databases keep patient records and treatment histories, which helps doctors give better care.

Scientists use databases to store and analyse their research data. Governments use them to keep public records like census data and tax information, which helps in making decisions. Everyday activities like using social media, shopping online, and searching the internet rely on databases to quickly organise and deliver information. Basically, databases support many important applications and services in our daily lives.

Example of Database



At the end of this unit you will know how to:

- Understand how databases can be used
- Sort, filter and search databases

"Data are just summaries of thousands of stories – tell a few of those stories to help make the data meaningful." - Edgar F. Codd

Year 7 Unit 6 – Databases – Murder on the mountains

Your Keywords	
Database	A collection of organized information that is easy to use and update..
Table	A structure in a database that arranges data into rows and columns, like a spreadsheet.
Record	A single row in a database table that holds all the information about one item or person.
Field	A single column in a database table that holds a specific type of information for every record.
Primary Key	A unique identifier for a record in a table, ensuring no two records are the same.
Query	A way to ask the database to find and show specific information using set criteria.
Data Type	The kind of data that can be stored in a field, such as text, number, date, or currency.
Data	Information that can be stored in a database, like your name, age or what you like to do online.

What is a database?

How do you filter a field?

How do you sort a field in descending order?

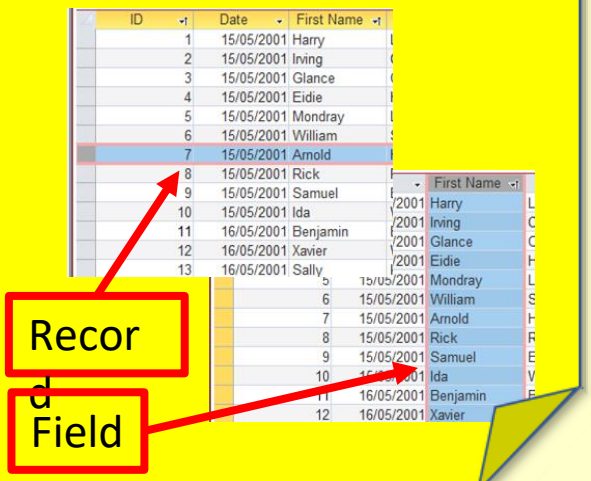
How can you quickly tell how many records there are?

What is the difference between a field and a record in a database?

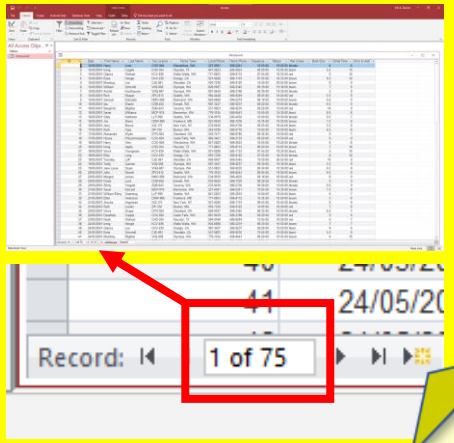
"Using a database is like having a super-organized brain—it remembers everything for you and finds what you need in seconds!"

Key knowledge

A field and a record in a database?

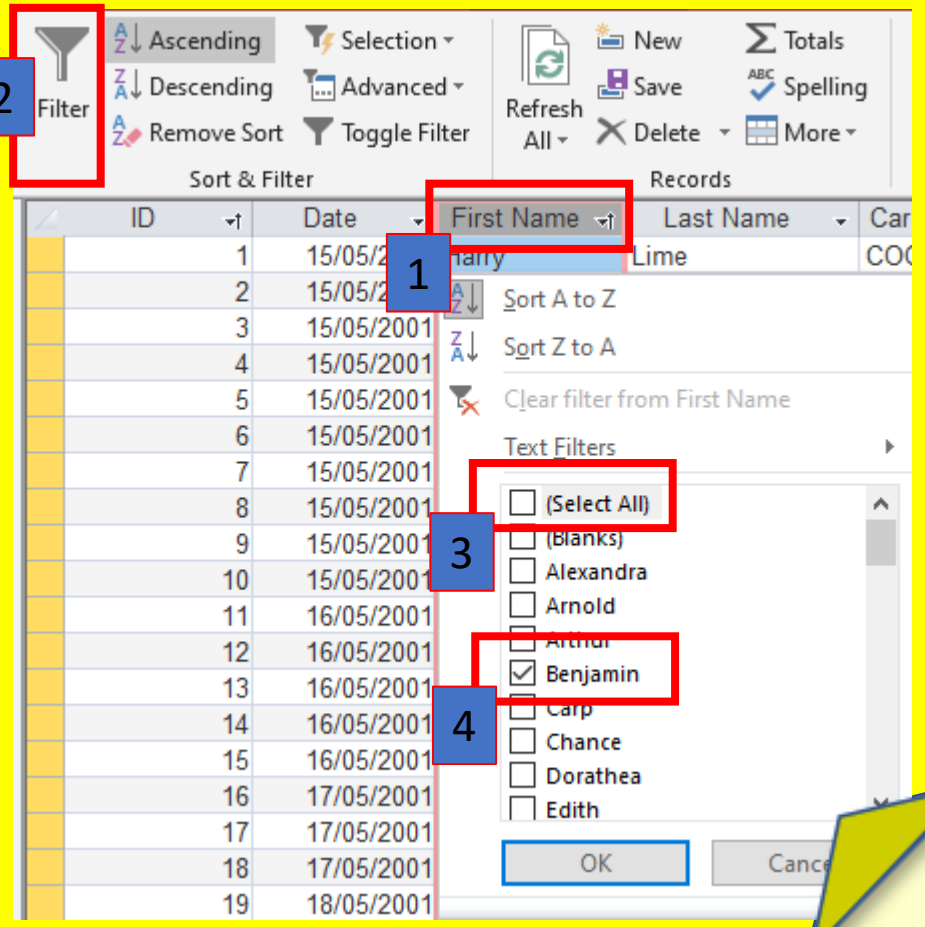


How to quickly tell how many records there are?



How to sort descending.

How to filter a field



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