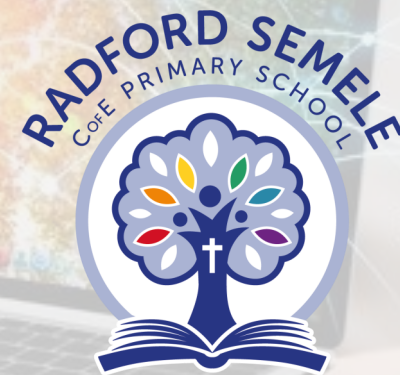


Year 6 Computing Knowledge Organisers



Computing Knowledge—Year 6—Autumn 1 - Programming

Online Safety and Digital Literacy

It is important to understand effective ways of managing passwords, as well as what to do if one is shared, lost or stolen. It is also important to keep software and apps up to date.

Privacy and security settings can be altered on apps and services to provide more security. Online services also have terms and conditions that govern their use.

Online content can target people to gain money or information illegally but there are strategies to help identify such content.

Vocabulary

Algorithm	A clear set of instructions for a computer to follow
Sprite	An object or figure that moves on Scratch
Variable	A number or text that changes each time, depending on the input
Loop	A repeated sequence of events either for a set number of times or infinitely.
Persuasive design	An area of design that tries to influence our behaviour



- Scratch can be used to build programs using algorithms built from blocks of code.
- These blocks can be used to create loops, in order to repeat actions or sequences for a purpose such as a game.
- We can also use Scratch to change variables, such as the score in a game.
- Sprites on Scratch can 'sense' input, such as a mouse click or being near another object.
- Micro:bits can use similar coding blocks to Scratch and can also be used to sense input or changes to their environment.
- Micro:bits use 'if, then, else' programming to make selections based on the input from their sensors.

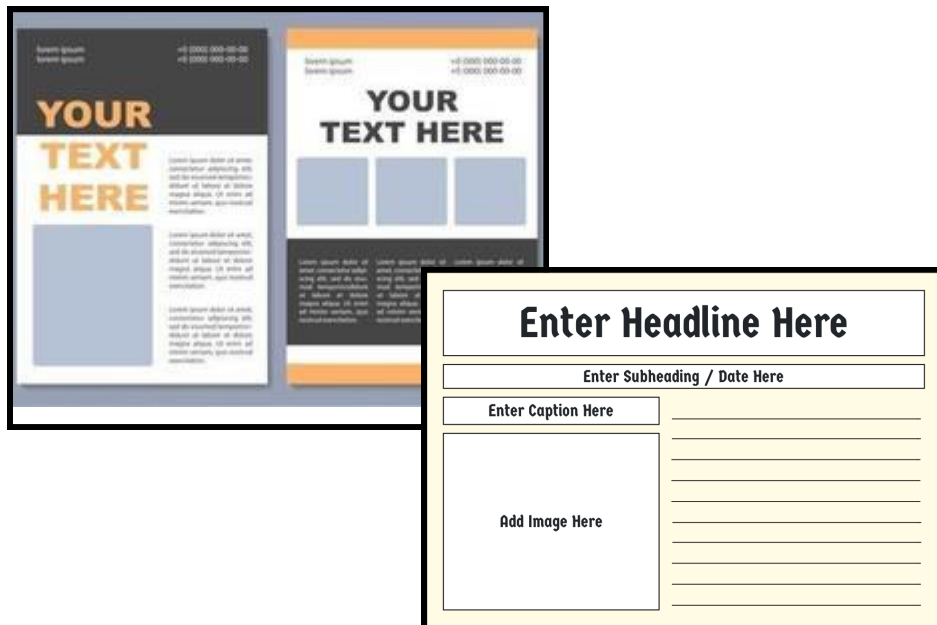
Computing Knowledge—Year 6—Autumn 2 –Layout

Online Safety and Digital Literacy

Search engines select and rank results before displaying them. It is important to know how to use search technologies effectively. Some online information can be opinion and others are fact. An opinion that is popular does not necessarily make it true, fair or legal. We might encounter 'manipulation' or 'persuasion' online. Persuasive design can be used to influence people's choices.

Vocabulary

Layout	The way that text and images are organised; looks appealing to the audience
Placeholder	Boxes that show where the images and text are going to be in the document
Template	Pre-designed layouts to help with designing different documents
Content	The information and media contained in something
Mock-up	A model of something; a plan to show the intended layout



- There are lots of different templates available for different purposes.
- These templates can help when designing a document as the user doesn't need to start from a blank page.
- When creating a layout, it's important to consider which way round the page will be and where the images and text are going to go.
- Placeholders show where the content is going to be and can be useful when creating a mock-up of the layout.
- Common types of media such as magazines or websites can use similar layouts that users will find familiar
- When editing layout, it's important to consider what will be useful and appealing to the audience

Computing Knowledge—Year 6—Spring 1— Spreadsheets

Online Safety and Digital Literacy

If online bullying is taking place, it is important to capture evidence through screen-grabbing or a user's profile to share with others who can help. It is also important to know how someone would report online bullying in different contexts.

Search tools can be used to find and access online content which can be reused by others. It is important to make references to and acknowledge sources that we have used from the internet.

Vocabulary

Spreadsheet	An electronic document which allows for data to be recorded
Cell	A box where data is recorded in the spreadsheet, where a column and row intersect
Screenshot	Taking a picture of what is on screen at the time; also known as a screen-grab or screen-capture
Cell reference	The column and row letter/number combination that allows users to identify the relevant cell.
Viral	Something circulating rapidly online

Cell

	A	B	C	D	E	F	G	H	I	J	K
1											
2			Hockey League Table								
3											
4			Team	Matches	Won	Drawn	Lost	Points	Goals For	Goals Against	Goal Diff
5		1	Sheffield		11	1	1		56	14	
6		2	Birmingham		10	1	3		52	17	
7		3	Cardiff		7	0	4		40	19	
8		4	Doncaster		6	2	4		43	31	
9		5	Brighton		5	0	7		32	38	
10		6	Cambridge		4	1	8		25	31	
11		7	Exeter		2	3	9		14	49	
12		8	Wimbledon		3	0	8		16	45	

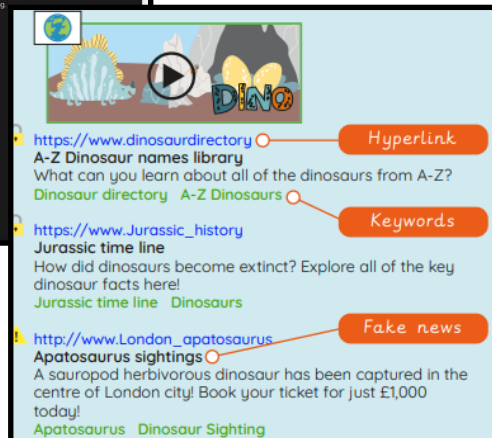
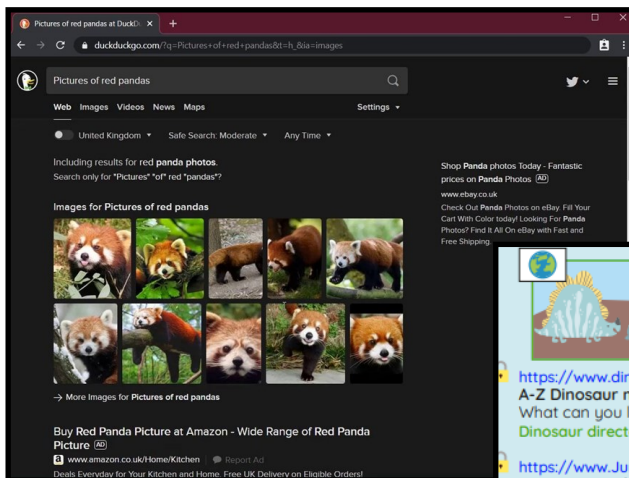
- Spreadsheets use cells to store data, similar to a box in a grid.
- Each cell has a reference based on the column and row that it is in e.g. cell B2.
- Cells can be formatted to show the data more clearly or to make it more interesting.
- Spreadsheets can solve calculations quickly and are useful for interpreting data.
- Spreadsheets can also display the data in a chart format, allowing for clearer representation.
- Data can be ordered in a spreadsheet depending on the needs of the user.

Computing Knowledge– Year 6—Spring 2—Communication

Online Safety and Digital Literacy

It is important to recognise and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, as well as explain why it is important to challenge and reject inappropriate representations online. There are issues online that could make anyone feel sad, worried, uncomfortable or frightened and we need to know how to get help. It is important to keep asking for help until we get the help needed.

There are ways in which anyone can develop a positive online reputation. There are also strategies anyone can use to protect their digital personality and online reputation, including anonymity.



Vocabulary

Search engine	A way to search the internet's database of information
Sponsored result	When a search result appears higher in results because a company has paid for it to do so
Crawlers	'Crawl' websites for searchable content and store their findings in an index
Index	Indexes allow search engines to find information quickly and efficiently
Ranking	The ordering of results based on relevance

- Search engines enable us to find the information or the webpage that we're looking for on the World Wide Web
- We need to use keywords or short phrases to ensure that our results are as relevant as possible
- Crawlers find searchable content from websites and store findings in an index
- Indexes are stores in data centres around the world
- Search engines use indexes to find information quickly and return results to the user
- Search engines order their results in 'rankings', based on relevancy or whether a company has sponsored the result
- This ranking is created using keywords on the websites

Computing Knowledge—Year 6—Summer 1— Programming with Variables

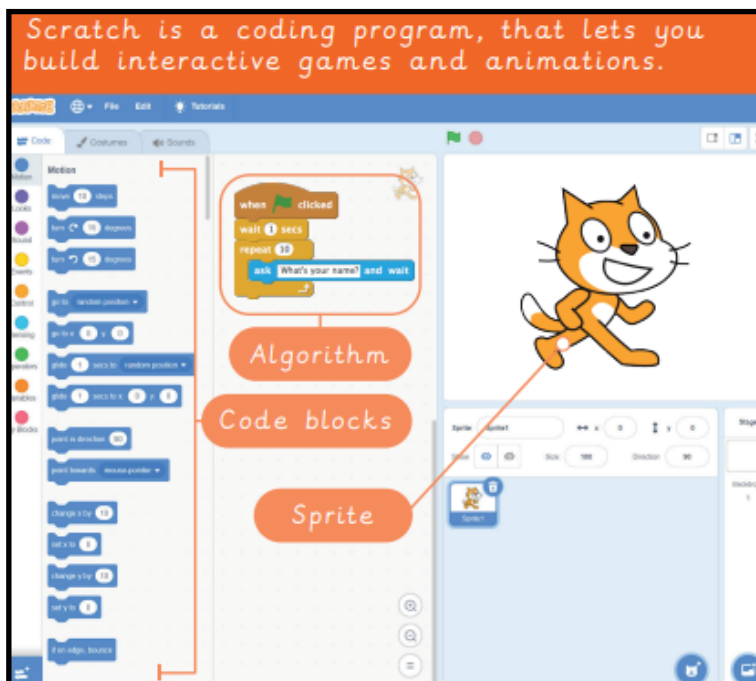
Online Safety and Digital Literacy

Sharing something online can have an impact either positively or negatively. It is important to be kind and show respect for others online, including respecting their boundaries about what is shared about them online. It is also important to support them if others do not respect these boundaries.

Some things which are shared privately online can have unintended consequences for others e.g. screen-grabs. Taking or sharing inappropriate images of someone, even if they say it is okay, can have an impact for the sharer and others.

Vocabulary

Algorithm	A clear set of instructions for a computer to follow
Debugging	Finding and fixing problems in a program
Phishing	Attempts to try and illegally gain private information from people
Privacy settings	Settings that can change the amount of information other users can access.
Variable	Something that is changeable



- Sprites can be given different code from each other to allow for different movement.
- Loops can be used to repeat actions until a set point or indefinitely
- Broadcast and receive functions can be used to make a sprite respond to a particular cue.
- It is important to regularly debug to check that the algorithm is running smoothly.
- 'Show' and 'hide' can be used to make sprites appear at different times.
- A variable can be used in a program and can hold letters or numbers
- The value of a variable can be updated or set as a constant

Computing Knowledge—Year 6—Summer 2 - Filming

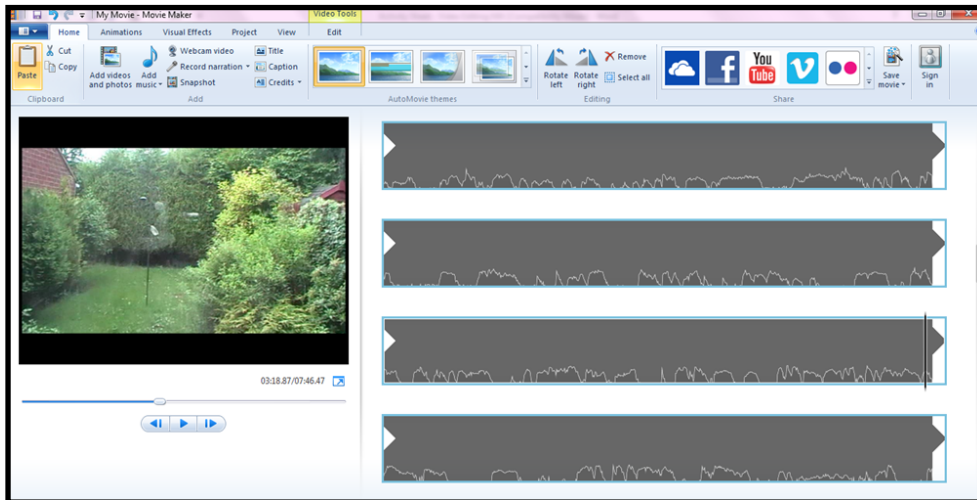
Online Safety and Digital Literacy

There are systems that regulate age-related content for audiences. Technology can place pressures on someone and it is important to recognise how to manage this.

There are features of persuasive design that are used to keep users engaged in current and future use of technology. We can limit the impact of technology on health by using different strategies, such as night-shift mode, regular breaks, correct posture etc.

Vocabulary

Script	The written text of a play, film or television show.
Source	Where something comes from; where information was found
Import	To bring something in from another place e.g. video into editing software
Edit	To make any changes or alterations before the final product
Documentary	A factual report on a subject



- Film making involves several stages, including pre-production, filming and editing
- Documentaries are a factual report on a subject
- It is necessary to plan the script as well as any props that are needed before filming takes place
- Any information that has been researched for a script needs to be credited
- When filming, it is important to be mindful of surroundings and nearby sound
- Filmed clips can be imported into software so that it can be edited
- Clips can be edited in software to make a finished product, including adding sound and transitions