# Year 2 Computing Progression Planning

Knowsley CLCs Primary Computing Scheme of Work

Inspire a lifelong love of play, design, code, and invention with technology.





# Year 2: Objectives

Assessment & Computing POS

# Knowsley CLCs Primary Computing Scheme of Work

Inspire a lifelong love of play, design, code, and invention with technology.



<b>Essential (MS):</b> Age appropriate skills for the use of core devices and applications within their setting.	<b>Computer Science (CS):</b> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.	<b>Information Technology (IT):</b> Use technology purposefully to creor organise, store, manipulate and re- digital content.	
(MS) I can save, share and retrieve my digital work.	(CS) I can plan out an algorithm with a sequence of commands to carry out specific tasks.	(IT) I can use design and formate enhance my digital work.	(DL) I can give examples of how technology is used to communicate beyond school.
(MS) I can use technology to organise and present my ideas.	(CS) I can identify 'bugs' in computer programs and use the term debug in context.	(IT) I can create with technology Video, animation, 3D	7. E.g. (DL) I understand that somethings online may upset me and that I cannot trust everyone online. (Self Image)
	(CS) I can create a simple repeat loop.	(IT) I can collect and record dat purposefully.	a (DL) I can use online services to communicate safely. (Online Relationships)
	(CS) I can create a simple game program.		(DL) I understand that once something it posted you lose control if it and know how to get help if I need to. (Online Reputation)
	(CS) I can predict the outcome of a sequence of blocks in Scratch.		(DL) I can give examples of online bullying behaviour, I understand the impact it may have and I know where to go for support. (Online Bullying)
			(DL) I can use a search engine and I am aware that not everything I read online is true. (Online Bullying)
The <b>'My Online Life'</b> activity sup (Digital Literacy) of supporting ch	(DL) I know the rules of using technology at home or in school. (Health well being)		
	elop effective strategies for understanding roduced by the UK Council for Child Interr		(DL) I can explain what personal information is and understand the need for passwords to protect it. (Privacy and Security)
			(DL) I am aware that content online is owned by the person that created it. (Copyright)

#### **Knowsley CLCs**

#### Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.



Mandatory Skills

2

1 I can save, share and retrieve my digital work.

I can use technology to organise and present my

# Year 2 Activities

Digital Literacy	Computer Science	Information Technology	Byte Size & Fun		ideas.	
Digital Literacy			byte Size & Full	Co	omputer Science	
<b>Y2.1 Online Buddies:</b> This activity will explore what	<b>Y2.2 Code a Story:</b> The children will write a basic	<b>Y2.3 Story Land:</b> The children take the role of	<b>Y2.4 Heads Up!:</b> The children play a computing focused game of charades and then create their own	3	I can plan out an algorithm with a sequence of commands to carry out specific tasks.	
friendship means online. The children will learn about the	story with illustrations. They will then turn this into an	authors to write the sequel to popular children's stories.		4	I can identify 'bugs' in computer programs and use the term debug in context.	
do's and don'ts of communicating over the	animated story using visual coding. The activity will	They then create illustrations for their story and record them	version.	5	I can create a simple repeat loop.	
internet.	introduce new concepts such	self reading it in order to	Assessment:	6	I can create a simple game program.	
Assessment:	as conditional language, repeat loops and debugging.	create an audiobook to publish online.	1, 2, 9	7	I can predict the outcome of a sequence of blocks in Scratch.	
11, 13, 14, 15	Assessment:	Assessment:		Inf	formation Technology	
	1, 3, 4, 5, 6, 7, 8, 9, 17, 18	1, 2, 8, 9		8	I can use design and formatting to enhance my digital work.	
				9	I can create with technology. E.g. Video, animation, 3D	
Y2.5 My Online Life:	<b>Y2.6 Making Games:</b> Using Scratch the children will create a hero versus villain game. They will create sprites and learn the basics of using	<b>Y2.7 Presentations &amp; Typing</b> The children will learn to use presentation software and develop their keyboard skills. Assessment: 1, 2, 8, 9, 10	Y2.8 Maths Madness:	10	I can collect and record data purposefully.	
This activity takes place over the course of the term. It			The children take part in a maths scavenger hunt and then create their own version by creating QR codes and maths videos. Assessment: 1, 2, 9, 10	Digital Literacy		
covers all the DFE statutory requirements for digital literacy				11	I can give examples of how technology is used to communicate beyond school.	
and online safety.	Scratch coding.			12	I understand that somethings online may upset me and that I cannot trust everyone online. (Self Image)	
Assessment: 12, 13, 14, 15, 16, 17, 18, 19	Assessment: 1, 2, 3, 4, 5, 6, 7, 8, 9			13	I can use online services to communicate safely. (Online Relationships)	
				14	I understand that once something it posted you lose control if it and know how to get help if I need to. (Online Reputation)	
		Y2.15 Stop Motion Studio In this activity the children will create stop motion animated		15	I can give examples of online bullying behaviour, I understand the impact it may have and I know where to go for support. (Online Bullying)	
		films. They will create their own characters, script,		16	I can use a search engine and I am aware that not everything I read online is true. (Online Bullying)	
		backgrounds and learn how to animate and edit footage. Assessment: 1, 2, 8, 9, 10, 16, 19		17	I know the rules of using technology at home or in school. (Health well being)	
				18	I can explain what personal information is and understand the need for passwords to protect it. (Privacy and Security)	
				19	I am aware that content online is owned by the person that created it. (Copyright)	

# Example Curriculum Map for Computing



			1						
Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	Programmable Toys / Devices	Examples of possible technology experiences	Two effective learner objectives to be the focus for the year
Approximate Length of half term	7 Weeks	8 Weeks	6 Weeks	6 Weeks	5 Weeks	7 Weeks	N/A	N/A	N/A
Computing Subject	Digital Literacy	Information Technology	Compter Science	Digital Literacy	Information Technology	Compter Science			
Year 2	Y2.5 My Online Life: This activity takes place over the course of the term. It covers all the DFE statutory requirements for digital literacy and online safety. Assessment: 12, 13, 14, 15, 16, 17, 18, 19	Y2.7 Presentations & Typing The children will learn to use presentation software and develop their keyboard skills. Assessment: 1, 2, 8, 9, 10	Y2.6 Making Games: Using Scratch the children will create a hero versus villain game. They will create sprites and learn the basics of using Scratch coding. Assessment: 1, 2, 3, 4, 5, 6, 7, 8, 9	Y2.1 Online Buddies: This activity will explore what friendship means online. The children will learn about the do's and don'ts of communicating over the internet. Assessment: 11, 13, 14, 15	Y2.3 Story Land: The children take the role of authors to write the sequel to popular children's stories. They then create illustrations for their story and record them self reading it in order to create an audiobook to publish online. Assessment: 1, 2, 8, 9	Y2.2 Code a Story: The children will write a basic story with illustrations. They will then turn this into an animated story using visual coding. The activity will introduce new concepts such as conditional language, repeat loops and debugging. Assessment: 1, 3, 4, 5, 6, 7, 8, 9, 17, 18	Remote control toys Code-a-Pillar Bee bots Blue Bots Dash Robots	Legoland Technology / STEM themed play centre Apple Store Visit with Workshop	Resilience and Challenge Academic Progress

# What the children learn in Year 2

# **Knowsley CLCs**

That once something is posted others can read the post and share it.



<b>Essential:</b> Age appropriate skills for the use of core devices and applications within their setting.	To create a range of simple digital documents that represents their learning during a topic and then save/share their digital work.
<b>(CS) Computational Thinking:</b> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	To write algorithms that can be turned into programs. To implement their algorithm as a program on a digital device or programmable toy/robot.
(CS) Coding: Create and debug simple programs.	To independently identify and fix a 'bug' in multiple programs. To create a simple program that includes a repeat x times loop. The difference between inputs and outputs.
<b>(CS) Logical Reasoning:</b> Use logical reasoning to predict the behaviour of simple programs.	To offer accurate predictions of programs and then create their own simple program to check if they were correct.
(CS) Networking:	About multiple services use the internet e.g. email, web and streaming.
(CS) Online:	The basic skills of searching and navigating the results in a search engine.
<b>(IT) Harnessing Technology:</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	To create a presentation or basic digital book that is well designed, contains formatted text, images and presents information. To read a simple database to find information. About organising the data they collect. To create digital content using more than one app or piece of software. To independently save and open files on the device they use.
(IT) Online:	The basic skills of searching and navigating the results in a search engine to answer questions.
<b>(DL) Technology in the Real World:</b> Key Stage 1: Recognise common uses of information technology beyond school.	About the numerous methods of online communication and how it is used in the world around them. To explore their own use of the internet and why it is important to stick to the rules.
(DL) Media & Content:	Where different types of media content can be found online. Including; sound, images, books, podcasts/audiobooks and video via the web.
<b>(DL) Online Safety:</b> Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	About safe and unsuitable sites/apps. e.g. PEGI rating. To talk to a trusted adult before sharing personal information online and using strong passwords. That the characters and people they interact with may be computer generated / including games. The differences between the Internet and the physical world. Sending a message and why it is important to communicate in a polite manner. That login details and passwords should only be shared with trusted adults. That copyright is something that projects people stealing others work (content). What personal information is and that they need to talk to a trusted adult about before sharing online. How some information may be inaccurate or untrue. To independently use a search engine, navigate a website, use favourites, bookmarks or typing the URL. That you can be connected to many people in your life (real life and online). To ensure a trusted adult is aware of who they are interacting with online.

# What digital skills will the children learn in Year 2?

#### Knowsley CLCs Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.



# Technology in your setting These are Bronze skills. The children should be secure with bronze and increasing demonstrating silver skills.

Can you use an iPad?	I know how to turn an iPad on/off/ sleep	I know how to use home button, open, close & quit an app	I know how to adjust the volume / mute / plug in headphones	I know how to search the iPad	I know how to take a good quality photo & edit in the Photo app E.g. crop it	I know how to use mark up on an image / annotate	I know how to check the battery and charge the iPad	I know how to use double-tap to reveal the recently used apps / quit apps	I know how to use the keyboard & add special characters/ emojis	I know how to take a screenshot and edit/crop in the Photo app
Can you use a Chromebook?	I know how to turn a Chromebook on/off	I know how to sign into your Chromebook for the first time / lock and/or Sign out of the Chromebook	I know how to adjust the volume / mute / plug in headphones	I know how to launch the Chrome browser from the Shelf	I know how to use the Touchpad / mouse (including right click)	I know how to use the Chrome browser / search the web	I know how to check the battery and charge	I know how to explore and open the Chrome Apps within the Launcher	I know how to use the keyboard & add special characters/ emojis	I know how to print a page
Can you use the Cloud / Files & Folders / Seesaw?	I know how to sign in using a QR code / sign out (Using Seesaw app)	I know how to take and upload a photo / video (Using Seesaw app)	I know how to create a drawing (Using Seesaw app)	I know how to add a note / like / comment (Using Seesaw app)	I know how to record my voice (Using Seesaw app)	I know how to access my cloud / shared area for the first time	I know how to create a folder(s) and add a colour to a folder	I know how to delete a folder/file	I know how to upload an image & video	I know how to search for a file or folder
Can you use a browser?	I know how to identify & launch the browser on my devices	I know how to point and click to navigate on existing links / website shortcuts	I know how to use the tool bar and can explain it's features e.g. home button or back button	I know how to play and pause video or audio on a website	I know how to do a basic keyword search using an internet browser	I know how to enter a URL to access or open a specific website	I know how to adjust the volume of content being played	I know how to sign in to an online account	I know how to refresh or reload a web page in an internet browser	I know how to open multiple windows / tabs in a browser
Can you use a word processing app?	I know how to open or create a new document / select a theme	I know how to type in basic text, using capital letters and spaces	I know how to save my document in my folder	I know how to print my documents	I know how to change the text colour	I know how to bold, italicise and underline text	I know how to change the font & size	I know how to insert a shape & edit shape	l know how to add an emoji or symbol	I know how to insert an image / word art
Can you use a presentation app?	I know how to open or create a new document / select a theme	I know how to insert a new slide with different layouts and move slides	I know how to add text content to slides / delete parts of a layout	I know how to insert an image / clip art	I know how to change the background image/ colour / change the text colour	I know how to change the font & size / bold, italicise and underline text	I know how to duplicate a slide / delete a slide	I know how to insert a new text box	I know how to add transitions to a slide / animate an object on a slide	I know how to insert a shape/ change the fill colour of a shape
Can you use a spreadsheet app?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Can you use a drawing app?	I know how to select and open a drawing application	I know how to use a mouse / trackpad to draw lines	I know how to use different colours	I know how to use different drawing tools/pens/ textures/eraser tool	I know how to print my drawings	I know how to zoom in and out on parts of my drawing / move the canvas	I know how to rotate a shape / drawing	I know how to insert an image or shape	I know how to use fill colour tools	I know how to change the line weight/thickness
Can you fix problems?	I know how to respectfully use technology	I know how to check the volume if the sound isn't working	I know how to ask the person next to me before asking the teacher	N/A	N/A	N/A	N/A	N/A	N/A	N/A

# What digital skills will the children learn in Year 2?

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Technology in your setting	These are Silver skills. The children should be secure with bronze and increasing demonstrating silver skills.						
Can you use an iPad?	I know how to transfer pictures/video via Airdrop/ Classroom app	I know how to access the control centre	I know how to cut, copy & paste text and images from the web	I know how to connect to a display / airplay	I know how to create a screencast video with the microphone enabled		
Can you use a Chromebook?	I know how to cut, copy & paste text and images from the web	I know how to make the Chrome browser window full screen / minimise the Chrome browser window	I know how to insert usb peripherals e.g. camera or usb drive	I know how to use tabbed browsing	I know how to take a photo using the Webcam		
Can you use the Cloud / Files & Folders / Seesaw?	I know how to access your files from another / multiple devices	I know how to upload a folder to a specific place	I know how to download a various file types (Excel, Word, PowerPoint files etc)	I know how to upload a various file types (Excel, Word, PowerPoint files etc)	I know how to rename / move a folder or file		
Can you use a browser?	I know how to cut, copy & paste text and images from the web	I know how to save / download files from the web to your device	I know how to adjust the text, image and video sizes	I know how to conduct research, analyse and interpret the information I locate	I know how to perform a keyword search within a web page		
Can you use a word processing app?	I know how to right, centre and left align text	I know how to create a numbered/bulleted list	I know how to insert a link	I know how to insert a table & graph	I know how to use the spell checker		
Can you use a presentation app?	I know how to play and present from the presentation	I know how to copy/paste URL to insert a link to a website	I know how to insert a video / or embed via URL	I know how to insert a chart/ graph & table	I know how to use spelling and grammar checker		
Can you use a spreadsheet app?	N/A	N/A	N/A	N/A	N/A		
Can you use a drawing app?	I know how to duplicate, copy and paste shapes or layers	I know how to resize drawings	I know how to add text, stickers or emojis	I know how to add shadows / experiment with colour	I know how to alter transparent / alpha		
Can you fix problems?	I know how to quite an app if it crashes	I know how to restart my device if it crashes	I know how to keep check the battery life	I know how to reload a webpage	I know how to make sure I'm connected to the wifi		



We believe there are core digital skills that children must possess.

- 'All children must have a basic understanding of coding and how the web works.'
- 'All children must able to evaluate online information and be social media savvy.'
- 'All children must understand online safety rules and know how to report and block.'
- 'All children must be proficient with word processing and able to use cloud storage.'
- 'All children must be able to create visually engaging content/presentations in order to present learning to others.'
- 'All children must have experience of online collaboration and using communication tools.'
- 'All children must be taught the concept of personal archiving and possess their own digital portfolio of work.'

We also encourage schools to go beyond these essential digital skills and the computer program of study. When teaching computing, please include at least two effective learner objectives to be the focus for the year. These are in addition to the specific objectives in each Computing activity. Choose learners who exemplify these qualities to receive the end of unit certificates and computing wow moment cards.

Objectives for all pupils: As you observe and converse with the children about their use of computing you may wish to hand out wow moment cards. These can be found on the following page.

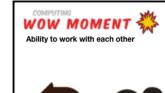
Ability to work independently	Ability to work with each other	Resilience and Challenge	Creativity	Academic Progress
I do not rely on the teacher or other children for support.	I am willing to work with others. I share thoughts and ideas	I attempt any task and try hard. I ask relevant questions of	I can come up with ideas and use these ideas to help myself.	I am enthusiastic about the lesson and happy to contribute.
I can take independent notes or photographs at appropriate times to support my learning.	with the rest of the group or class. I communicate appropriately	the teacher. I engage in different activities and small	I am keen to express my ideas in different ways. I take other's ideas into	I am keen to improve my knowledge and understanding.
	and put forward my ideas within a group.	competitions, accepting and embracing challenges.	account alongside my own.	I understand how to improve.
	I can give others constructive feedback on their ideas.	I see difficult tasks as a challenge, something I must work at and learn from.	I use a wide variety of sources effectively.	







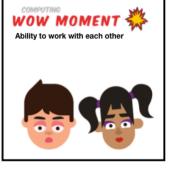




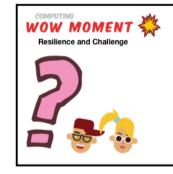














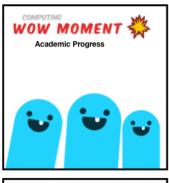


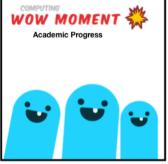
















Print and cut out - Wow Moments

# Year 2 Progression - Mandatory Skills



Computing			What to Observe in Learning	
Strand: Mandatory Skills	Statement	Working towards expectations	Meeting expectations	Exceeding expectations
	I can save, share and retrieve my digital work.	The child can with support save and share their digital work. The child knows their work must be saved but needs support to do so. This could be a photo or document that is saved to a shared drive, cloud folder or pupil portfolio like Seesaw. On an iPad the child could use Airdrop, Seesaw, Email, Cloud etc.	The child when prompted can use digital technologies independently to save or share their work. The child can with support retrieve their digital work and open it in the appropriate app. The child understands where work can be saved and can do it independently. The child with support can retrieve their work from a folder to continue editing or to present.	The child can use digital technologies independently and can save or share their work when required. The child can support other children with saving work. The child can retrieve their digital work and open it in the appropriate app. The child understands there are different methods of saving work depending on the digital device used. If required the child can explain their actions and help others.
	I can use technology to organise and present my ideas.	The child can with support use digital technologies to create a presentation or basic digital book that represents an idea or learning during a topic. The child can use simple editing and formatting techniques in a document such as bold or different fonts. The child can combine a set of photographs and basic text to tell a story or present an idea.	The child can use digital technologies independently to create a presentation or basic digital book that represents an idea or learning during a topic. The child can answer questions about their design choices. The child when typing text on a computer keyboard can use the "shift" key independently to add capital letters and symbols. The child can insert an appropriate emoji to use as a graphic and explain its relevance. The child chooses to apply formatting, effects, filters and transitions to enhance their work.	The child can use option keys and basic shortcuts/gestures on an iPad to enhance work flow e.g. copy and paste. The child can answer questions about why they have used the enhancements.

#### Knowsley CLCs

# Year 2 Progression - Computer Science



Computing Strand:	Statement	What to Observe in Learning						
Computer Science		Working towards expectations	Meeting expectations	Exceeding expectations				
(CS) Computational Thinking: Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	I can plan out an algorithm with a sequence of commands to carry out specific tasks.	<ul> <li>The child can explain what an algorithm is e.g. a set of instructions.</li> <li>The child can create a basic set of instructions (algorithm) to carry out a specific task.</li> <li>The child can give instructions to a friend that might get them from point A to point B using forward, backwards and turn. They can also physically follow instructions themselves.</li> <li>The child can with support program a robot to travel from point A to point B following their algorithm.</li> </ul>	The child can explain what an algorithm is with an example e.g. the child can tell you the order (sequence) I need to do things in order to make something happen and talk about this as an algorithm. The child can create, read and follow written sequence algorithms that include commands with additional detail to carry out a specific task. The child can give instructions to a friend to get them from point A to point B using commands with additional detail such as forward 3, backward 1 and right 90° to solve the problem. They can also physically follow instructions themselves. The child can implement their algorithm as a program on a digital device or programmable toy/robot so it travels from point A to point B by following their algorithm.	The child will test, edit, correct and refine a set of given instructions until they get the correct outcome. The child can recognise that there is more than one algorithm to do the same thing e.g. they can identify two routes to go from A-B.				
(CS) Coding: Create and debug simple programs.	I can identify 'bugs' in computer programs and use the term debug in context.	The child can explain the term 'debug' e.g. fix bugs, things that don't work in programs. The child with support can fix a simple 'bug' in a program.	The child can independently identify and can fix a 'bug' in multiple programs. e.g. the child can problem solve and correct errors to achieve the correct outcome to make a robot/app to do a particular task. Then explain what was wrong and how they fixed it while using the term debug in context.	The child can watch a program execute and spot where it goes wrong so that they can debug it. The child can offer improvements to a program.				
	l can create a simple repeat loop.	The child with support can create simple repeat x times loop e.g. the child using Scratch Jr or Scratch can add an event block with a repeat loop to make a character (sprite) move repeatedly x times.	The child can independently create a simple program that includes a repeat x times loop. E.g. The child using Scratch Jr or Scratch can create a simple program that includes an event block with a repeat loop to make a character (sprite) move repeatedly x times. The child can suggest other uses for the repeat loop command e.g this simple repetition could be used to create a dance for a character.	The child can create a program that includes a repeat x times loop and several other blocks of their own choice to add improvements. The child can explain the repeat command and why it can be a benefit when creating programs.				
	l can create a simple game program.	The child can with support follow a simple set of instructions in a tutorial to create a game/program e.g. the child can recreate a sequence of simple instructions in a tutorial and add code blocks in Scratch or Scratch Jr.	The child can add small non critical adaptations to improve the game/program e.g. the child can add extra movement or audio. The child understands the difference between inputs and outputs.	The child can improve the game/program by making significant changes e.g. create multiple sequences running concurrently. The child is happy to tinker and play with the program and can explain why their ideas and changes using the correct vocabulary.				
(CS) Logical Reasoning: Use logical reasoning to predict the behaviour of simple programs	I can predict the outcome of a sequence of blocks in Scratch.	The child can describe the outcome of a sequence of blocks with some success e.g. the child can look at a friend's program and tell you what will happen.	The child can offer accurate predictions of the commands required to move a sprite (character in Scratch) from x to y and then create a program to check if they were correct.	The child can spot simple patterns in the program or algorithm e.g. if the program is drawing a square the angles and sides are the same.				

# Year 2 Progression - Information Technology

**Knowsley CLCs** 



Computing Strand:		What to Observe in Learning					
Information Technology	Statement	Working towards expectations	Meeting expectations	Exceeding expectations			
Technology: Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	I can use design and formatting to enhance my digital work.	The child can use basic word processing skills in a range of situations and with support can change elements such as font size, colour and style to enhance their work. The child can use the keyboard on a device to add, delete and space text for others to read. The child when creating a piece of digital work (presentation, digital book or poster etc) is beginning to consider the layout and design.	The child can create a presentation or basic digital book that is well designed and has images included. The child can resize images inside a document. The child can use a wider range of punctuation, editing and formatting skills to improve their work. The child can use capital letters, delete key, symbols, numbers and correct grammar such as full stops. The child should be able to discuss how they have changed their work and discuss audience e.g. if they are creating a piece of work about technology does it look like it is about technology. Appropriate images, font, emojis, style etc.	The child in addition may attempt to create digital content by using more than one app, filters or effects or piece of software to enhance it e.g. the child may attempt to include their own illustrated pictures. The child is proficient at using a computer keyboard and using keys like "shift" and basic short cuts like copy and paste.			
	I can collect and record data purposefully.	The child with support can create a digital tally chart or bar chart. The child can talk about the different ways they could use technology to collect information, including a camera, microscope or sound recorder. The child can organise the data they collect. The child understands that a database can store data such as names and addresses. The child can make and save a chart or graph using the data they collect.	The child can explain what kind of information could be used to help investigate a question. The child can read a simple database to find information. The child can organise the data they collect. The child can make and save a chart or graph using the data they collect and show understanding through answering and asking questions.	The child understands that a database is a set of information organised by fields of information. The child is starting to understand a branching database. They can add information to a database.			

#### Knowsley CLCs

# Inspire a lifelong love of play, design, code, and invention with technology.

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# Year 2 Progression - Information Technology

Computing Strand: Information Technology

#### (IT) Harnessing Technology: Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

I can create with technology. E.g. Video, animation, 3D

Statement

Working towards expectations
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The child with support can create digital content using one app.

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Meeting expectations

#### For example when creating with technology:

The child can produce a short video/Stop Frame Animation showing a sequence of events or telling a story e.g. recording a weather report presented by another pupil, interview a teacher linked to a news story.

The child can with support create an electronic game (without coding) e.g. Boxel, Sketch Nation or Floors. Including demonstrating some basic IT skills e.g. use the mouse to paint pictures on a computer/iPad. Draw a basic sprite and explain what a sprite is.

The child can use an app/software to create a 3D model.

The child can create digital content using more than one app or piece of software. The child puts thought into their use of technology and how to organise and present ideas in different ways. The child is starting to be more discerning and can discuss design, method and use of tools. The child can save and open files on the device they use.

What to Observe in Learning

For example when creating with technology:

The child can produce a short video/Stop Frame Animation showing a sequence of events or telling a story. They can use simple editing and formatting techniques to improve the quality of their content e.g. recording a weather report presented by another pupil, interview a teacher linked to a news story. The child is starting to be more discerning when taking video, framing image, zooming in before filming as appropriate and move the camera carefully. They can play back a video recording to look for improvements. They can explain the process of creating content.

The child can create an electronic game (without coding) E.g. Boxel, Sketch Nation or Floors. Including demonstrating some basic IT skills e.g. use the mouse to paint pictures on a computer/iPad. Draw a basic sprite and explain what a sprite is. The child will explore new or advanced features to see if they will improve their content creation. Save work on computer/ iPad to a cloud and understand that work can be retrieved later.

The child can use an app/software to create a 3D model. They will consider the use of a variety of materials and shapes. They will investigate new tools and settings to achieve better results.

The child can take feedback and improve their work accordingly. The child can help and support other children by explaining how to use digital tools.

Exceeding expectations

#### For example when creating with technology:

The child can produce a short video/Stop Frame Animation showing a sequence of events or telling a story. They can use simple editing and formatting techniques to improve the quality of their content e.g. recording a weather report presented by another pupil, interview a teacher linked to a news story. The child is starting to be more discerning when taking video, framing image, zooming in before filming as appropriate and move the camera carefully. the child will consider advanced elements like sound quality and music. They can play back a video recording to look for improvements and will correct any errors. They can explain the process of creating content.

The child can create an electronic game (without coding) e.g. Boxel, Sketch Nation or Floors. Including demonstrating some basic IT skills e.g. use the mouse to paint pictures on a computer/iPad. Draw a basic sprite and explain what a sprite is. The child will explore new or advanced features to see if they will improve their content creation. Save work on computer/ iPad to a cloud and understand that work can be retrieved later.

The child can use an app/software to create a 3D model. They will consider the use of a variety of materials and shapes. They will investigate new tools and settings to achieve better results.

# Year 2 Progression - Digital Literacy

**Knowsley CLCs** 



Computing Strand: Digital Literacy	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
(DL) Technology in the Real World Recognise common uses of information technology beyond school.	I can give examples of how technology is used to communicate beyond school.	The child can identify some benefits of using technology including finding information, creating content and communicating. The child can identify some different ways of communicating online both inside and outside of school e.g. email, Skype or FaceTime (video call) etc. The child can describe the basic idea of email and what it is e.g. that an email is a letter to someone and written using a device such as a computer or phone.	The child can give examples of how online communication is used. E.g. the child might know that adults can share work and discuss how ideas or problems are shared in online communities or that photos can be taken, edited and shared easily using digital technology. The child can list different methods of online communication and may be able to discuss this in terms of apps. The child when explaining different ways of communicating online can talk about the differences between the Internet and things in the physical world e.g. difference between a face to face chat and an email. The child understands that as communication is private it requires 'signing in' e.g. the use of a username and password. The child knows that people use email for a range of purposes and can make comparisons e.g. sending a letter is like sending an email and discuss the advantages of using technology to communicate. The child can discuss sending and receiving messages via email or instant messaging. They can use vocabulary like 'inbox' and 'attachment'.	The child can understand that the web is made up of information shared by people and organisations. The child understands that they can communicate with organisations by leaving feedback or a review of products on their website. The child can discuss the journey an email makes with reference to servers and connected computers. The child understands the need for the SMART online safety rules when using online communication. The child can list the SMART rules.
	I know the rules of using technology at home or in school. (Health well being)	The child can explain how they use technology in the classroom to develop their work e.g. the internet to find out facts or make a presentation. The child can give examples of how technology can be used at home and in the community e.g. their own use of technology, the games they play, the apps they use and why. The child is aware that there are rules when using technology and these rules are there to help keep them safe.	The child can explain the rules for using technology in the classroom and at home. The child can talk about their use of the internet and why it is important to stick to the rules. The child is beginning to understand why they should go online for a short amount of time and that too much time online (screen time) may not be good for them, especially just before bed. The child understands when to ask for help and who to ask for help.	The child can discuss the rules and give examples from their own experiences of how the rules help keep them safe e.g. how there might be adverts on web pages and these can mainly be ignored as these are aimed at adults. That games and apps have age restrictions (PEGI rating) and these are there for a reason. The child understands the need for the SMART online safety rules when using online communication. The child can list the SMART rules.

# Year 2 Progression - Digital Literacy

**Knowsley CLCs** 



Computing Strand: Digital Literacy	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
(DL) Online Safety Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	I understand that some things online may upset me and that I cannot trust everyone online. (Self Image)	The child understands that they should only go online or play games that are approved by trusted adults and that if they come across something upsetting to tell a trusted adult immediately. The child can list the people who they can trust and explain why. The child understands that some people online may not be who they say they are.	The child can discuss what safe sites/apps they can use and what sites/apps they shouldn't be using and why e.g. PEGI rating, age requirements, violent/explicit content. The child knows to talk to a trusted adult before sharing personal information online and to protect their information using strong passwords. The child is aware that the characters and people they interact with aren't always real people and may be computer generated. The child can talk about the differences between the Internet and things in the physical world.	The child can explain how to find out the PEGI rating of a game or app. The child understands that when they are playing games or online, the characters they are interacting with could be computer generated characters or real people in other parts of the world and they should be able to identify if they are real or fictitious.
	I can use online services to communicate safely. (Online Relationships)	The child understands that an online service refers to any information and services provided over the Internet e.g. a search engine to find information, a bank to manage money or a social media site to communicate with others.	The child can use an online service to send a message e.g. the child can send an email/ message to a safe contact. The child understands they should always communicate and interact with others in a polite manner. The child understands that you can be connected to many people in your life (real life and online) e.g. email all your friends or chat with friends through social media. The child understands they should always communicate and interact with others in a polite manner.	The child can add an attachment to an email e.g. share a photograph of their work.
	I understand that once something it posted you lose control if it and know how to get help if I need to. (Online Reputation)	The child understands the term 'post' and knows this refers to online services such as social media. The child can explain what is meant by personal information and why it is unsafe to post personal information online were it can be seen by anyone. The child knows to talk to a trusted adult if they accidentally post something they shouldn't or see something that they don't like online.	The child knows to ensure a trusted adult is aware of who they are interacting with online and has approved the interactions because some people online may not be who they say they are. The child can explain some of the potential risks when posting something to the internet. The child understands that once something is posted others can read the post and share it, which means they no longer have control of who sees it. The child knows to talk to a trusted adult before submitting or sharing their full name, address, school name, phone number and date of birth online.	The child is aware posts can be deleted but this might not stop others from seeing it first. The child understands posts can be reported and people can get into trouble for inappropriate posting. The child can list the people they should talk to if something goes wrong online.

# Year 2 Progression - Digital Literacy

**Knowsley CLCs** 



Computing Strand: Digital Literacy	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
Safety Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	I can give examples of online bullying behaviour, I understand the impact it may have and I know where to go for support. (Online Bullying)	The child can explain what is meant by the term cyberbullying / online bullying and can give examples. The child knows to communicate and interact with others in a polite manner. The child knows to tell a trusted adult if others are communicating / interacting with them in an unpleasant manner. The child understands that not everybody online is who they say they are.	The child can identify real and fictitious characters they interact with online or in games. The child can talk about why it is important to be kind and polite online and in real life. The child understands that just because they cannot see the person they are communicating with it doesn't mean that they should communicate differently. The person will still be hurt or upset by things you say or do online that are unpleasant.	The child can discuss examples of appropriate online communication that is polite and respectful. The child understands that passwords should only be shared with trusted adults and describe what might happen if somebody else has their login details e.g. they could post from their account or read all their private messages or information.
	I can use a search engine and I am aware that not everything I read online is true. (Online Bullying)	The child knows what a browser is. The child can explain what a search engine is and why they would use one. The child can find out facts by using a search engine and navigating websites e.g. the child can visit the school website and find information about school dates. The child knows not all the information found on the internet will be accurate or useful.	The child can explain what a web address/URL is. The child can discuss how some information may be inaccurate or untrue e.g. tomato spider. The child can independently use a search engine to find information to answer questions. The child can navigate to a website via favourites, bookmarks or typing in the URL to the address bar.	The child can discuss ways to check the information on a website is true, accurate or useful. The child can name at least two search engines. The child can use the tools button in Google to sort their results e.g. most recently published.
	I can explain what personal information is and understand the need for passwords to protect it. (Privacy and Security)	The child understands that online sites need login details to use the site or service. The child can login to devices / accounts with a username and password and use computing to communicate with others, following instructions on safe use.	The child understands that login details and passwords should only be shared with trusted adults. The child understands the idea of personal information and that this includes their full name, address, school name, phone number and date of birth and why using a nickname is a safer way to interact online. The child can list personal information that they need to talk to a trusted adult about before sharing online.	The child can describe what might happen if somebody else has their login details. The child can explain what makes a good user name and what makes a good password.
	I am aware that content online is owned by the person that created it. (Copyright)	The child is starting to understand that other people have created the information they use and that it is wrong to use it with out permission.	The child understands that content such as text, images and video from websites can not just be download and used without the author's permission. The child understands that copyright is something that protects people stealing others work (content).	The child can search for or use a website to get copyright free images.

# What vocabulary will the children learn in Year 2?

#### Knowsley CLCs



Year Group Key Vocabulary / Comm	only used.	These could be introduced as word of the week.
<ul> <li>(length). 2D shapes are shat Algorithm</li> <li>Steps to follow to achieve Application (App)</li> <li>A program (such as a word important tasks for which a Browser</li> <li>A computer program used Button</li> <li>In computing, the term but provides the user a simple Camera</li> <li>A digital camera is a hardwimage as data on a memor Computer</li> <li>A device that takes input, p Computer networks</li> <li>Connected devices that mimethod ('protocol').</li> <li>Control</li> <li>In general, control refers to computer.</li> <li>Data</li> <li>Numbers that represent im Debug</li> <li>Finding and correcting error Emoticon / Emoji</li> <li>The use of icons or text to and :( when sad.</li> <li>Google</li> <li>Is one of a number of seared Information</li> <li>Data processed and/or present instructions are Internet</li> </ul>	A processor or a spreadsheet) that performs one of the a computer is used. to access the World Wide Web. ton refers to any graphical control element that way to trigger an event. vare device that takes photographs and stores the y card. orocesses it, then produces output. ake it possible to transfer data using an agreed of the ability to manage, organise, or run something on a lages, video, text and sound. ors. portray mood or facial expression, e.g. :) when happy ch engines that help us find information on the web. esented to users in a meaningful way. a set of steps. mputer networks and their connections, all using	<ul> <li>iPad/tablet The iPad and tablets are a type of hand held computer. </li> <li>Input A method of computers receiving data (Eg. keyboard, mouse, touch, sensors etc.). Keyboard A board of keys. One of the primary input devices used with a computer. 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. Also an action performed by the computer e.g. switching on a light, moving a turtle or sprite across the screen. Printer A printer is an external hardware output device that takes the electronic data stored on a computer or other device and generates a hard copy of it. Program A sequence of instructions written to perform a specified task on the computer. QR Code A QR code (short for "quick response" code) is a type of barcode that contains a matrix of dots. It can be scanned using a QR scanner or a smartphone with built-in camera. Repetition (Repeat / loop) Instructions that can be repeated until a condition is met – i.e. a loop. Sometimes referred to as "iteration". Robots have a reprogrammable brain (a computer) that moves a body. Save Save is the process of writing data to a storage medium, such as a floppy disk, CD-R, USB flash drive, or hard drive. Sequence A set of instructions that are followed in order. Sharing is the practice of sharing or offering access to digital information or resources, including documents, multimedia (audio/video), graphics, computer programs, images and e-books. Technology Technology Technology is the skills, methods, and processes used to achieve goals. Zoom To cause text or other graphics in a window or frame to appear larger on the screen.</li></ul>

Knowsley CLCs Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.



#### Year Group Key Vocabulary: When should words be introduced. This is a guide to key computing vocabulary for year groups or Key Stage.

Foundation	Algorithm, sequence, instructions, camera, robot, QR code, sequence, share, technology, control, Google, information, internet, algorithm, computer, iPad/tablet, app (application), keyboard, button, printer, save, zoom.
Year 1	3D, program, debug, design, emoji, search, selection, website, personal information, link, menu, icon, trusted adult, online, sign in, game, wireless (Wifi), online bullying, landscape, portrait, Bluetooth, download, frame, processor, green screen, hard drive, illustration, log in, tool, send, follow, digital, communicate.
Year 2	Browser, computer networks, data, computational thinking, execute/run, input, output, software, World Wide Web (WWW), password, username, interact, images, facts, scan, chat, post / re-post, copyright, backdrop, repeat / loop, characters, avatars, fictitious/fake, evaluation, publish, trust, stroke, template, reputation, identity, digital book (eBook/ePub).
Year 3	Block, palette, code/coding, command, decomposition, sprite, stage, condition, control block, costume, digital content, simulation, hyperlink, attachment, URL, blog/blogging, consequences, illustrator, untrusted, cyberbully, cyberbullying, reliable, MegaByte, GigaByte, report, sceptical, verify, fake news, soundtrack, VR (virtual reality), font, shortcut, shots, 360° Video, authenticate, multimedia.
Year 4	Logical reasoning, audio, selection, page ranking, hacker, repetition (sometimes referred to as 'iteration' in upper KS2), script, scripts area, secure (https), PEGI, netiquette, conditional, scene, filters, griefing, storyboard, cloud computing, positive online communication, online persona, digital footprint, animation, age restrictions, social network, screenshot, screencast.
Year 5	Abstraction, vlog, YouTuber, IP address, pixels, vector, HTML, CSS, services, ISP, LAN, TCP/IP, variables, hub, peripheral, bandwidth, CEOP, ChildLine, cache, harassment, plagiarism, infringe copyright, illegal downloads, streaming, blocking, victim, cookie, junk mail, RAM / ROM, USB, ZIP, augmented reality, bit & bytes, upload, score, podcast, edit.
Year 6	Antivirus, new media, collaboration, visual coding, text based coding, adware, trojan, feedback, bot, boolean, checksum, server, firewall, generalisation, security updates, plug in, pop up blocker, scams, phishing, location based settings, in app purchasing, trolling, sexting, exclusion, doxxing, catfishing, flaming, fabotage, creeping, dissing, ghosting FTP, filtering, malware, screen time, balanced lifestyle, configuring.

# **Knowsley CLCs** Primary Computing Scheme of Work

Inspire a lifelong love of play, design, code, and invention with technology.



#### Abstraction

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

#### Adware

Software application which displays adverts and can redirect searches.

#### Algorithm

Steps to follow to achieve a task.

## Application (App)

A program (such as a word processor or a spreadsheet) that performs one of the important tasks for which a computer is used

# **Bandwidth**

The amount of data that can fit through an Internet connection.

#### Block

B

An instruction in Scratch, Blocks linked together are called a script or program in Scratch. Also to block someone from contacting a user on a social media account for example.

#### **Blog/Blogging**

Short for 'web log', a shared online journal or diary. Normally a webpage containing users' opinions/experiences/observations.

#### Bluetooth

Allows the exchange of data over short distances from devices.

## Boolean

A variable whose value can only be true or false. Bot

A program that can do things without a user needing to give instructions. Many bots are malware.

## Browser

A computer program used to access the World Wide Web.

#### Button

In computing, the term button refers to any graphical control element that provides the user a simple way to trigger an event.





#### Camera

A digital camera is a hardware device that takes photographs and stores the image as data on a memory card.

#### Canvas

A region on which you can draw lines, shapes or text.

#### Catfishing

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

#### CEOP

Child Exploitation and Online Protection Command is tasked to bring offenders to UK Courts.

#### Checksum

The total number of packets sent to/from a router.

#### Circumventor Sites

Parallel websites that allow children to bypass sites their adults have blocked.

#### Cloud computing

A system in which data is stored on a central server owned by a company (e.g. Google) and accessed virtually.

#### Code

Lines or blocks of instructions (see program).

#### Computer

A device that takes input, processes it, then produces output.

#### Computer networks

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

#### Control

In general, control refers to the ability to manage, organise, or run something on a computer.

#### Costume

In Scratch, the costume is what a sprite can look like on screen. Command

A step or line of programming (instruction for younger children). Computational Thinking

An analytical approach to 'problem' solving (involving abstraction, decomposition, logical thinking, pattern, evaluation, generalisation) Condition

Something that is either true or false

#### Cookie

A small file which records a user's personal preferences, shopping choices and other information.

#### Copyright

Gives the creator of an original work ownership rights. Creeping

Someone who follows someone else's social network profile closely. Cyberbullying

The use of electronic communication to bully someone.

#### **Knowsley CLCs** Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.

# 

# Data

Numbers that represent images, video, text and sound.

#### Debua

Finding and correcting errors.

#### Decomposition Splitting things into smaller parts.

#### **Decoy App**

These apps help children hide videos/images from their parents.

## **Digital Footprint**

A person's trail of data on the internet that can last indefinitely.

#### **Digital content**

Any media created, edited or viewed on a computer.

## Dissina

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

## Download

Transfer of a file, from a central computer to your computer.

# Doxxing

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

# Ebook / ePub

Ð

Digital book format file.

# **Emoticon / Emoji**

The use of icons or text to portray mood or facial expression, e.g. :) when happy and :( when sad.

#### **Etiquette**

A set of rules that people try to abide by out of respect for other people around them.

#### Evaluation

Is this 'good'? Can it be improved?

## Exclusion

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

# Execute

Run or follow a series of instructions in a program.





# Fabotage

Accessing someone else's social media account without their knowledge and changing information on it.

## File format

The particular code that a file is stored in. Different software and devices use different formats, e.g. video uses MP4 and audio use Mp3.

# Firewall

A system designed to prevent unauthorised access to your computer when connected to a network such as the Internet.

# 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

This is a combination of 'Facebook' and 'rape' and it 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.

# FTP

File Transfer Protocol. A service for moving files from one computer to another.



# **Computing Vocabulary**

#### Knowsley CLCs Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.



## Gamer

A person who plays video games including online, likely with other online users.

#### Gamer Tag

An alter ego made from an alias, picture or avatar. Sometimes these are offensive.

#### **GB** GigaByte

1024 kilobytes. Unit of measuring data.

#### Generalisation

Adapting solutions already found to solve new problems.

## Geocaching

Is an outdoor activity in which the participants use (GPS) to hide and seek containers, called "geocaches".

## Geotag

To attach the exact geographical coordinates of longitude and latitude to a digital image, giving the location of where it was taken.

## Ghosting

This means breaking off a relationship by stopping all communication and contact without any apparent warning or justification.

## Google

Is one of a number of search engines that help us find information on the web.

## Griefer

Someone who deliberately harasses online gamers during a gaming session.

## Grooming

Someone who gains a child's trust for sexual exploitation or trafficking.

# H Hacker

A person who uses technology to gain unauthorised access to information.

#### Harassment

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

#### Hardware

The physical parts of a computer system, e.g. the CPU and the devices connected to it.

#### HDMI (high-definition multimedia interface)

Required for connecting devices to show high-definition video.

## HTML

Hyper Text Markup Language: the 'code' used to create and lay out web pages.

## Hub

A device that joins a group of computers together.

#### Identity theft

A crime that involves someone pretending to be another person in order to steal money or obtain other benefits. **In-app purchasing** 

Purchases of services or products are possible within some apps, such as game apps, and real money is required by them.

#### Incognito browsing

This allows a user to browse the web without their history being recorded on their device.

#### Information

Data processed and/or presented to users in a meaningful way.

#### Instructions

Computer instructions are a set of steps.

#### Input

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

#### Instant Messenger

A way of communicating where messages are sent over the internet in real time.

#### Internet

The global collection of computer networks and their connections, all using shared protocols (TCP/IP) to communicate.

#### Internet Shaming

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

#### IM (DM / PM)

Instant message also known as direct message, Private or personal message. These are messages sent between users via the internet or social media apps. These are very popular with younger generations.

#### **IP Address**

Numerical label assigned to each device on a computer network.

#### ISP

Internet Service Provider. The company you pay to connect you to the Internet.



## **Computing Vocabulary**

#### Knowsley CLCs Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.



#### Java

Programming language that enables the browser to perform a function or feature not normally available

#### JavaScript

Programming language that allows a web designer to add extra features to their web page.

#### JPEG

A format for compressing image files.

#### Junk Mail

Unwelcome or unwanted emails also know as SPAM.

# Kbps

K

Kilobits Per Second, primarily used to measure data transfer rates.

#### Keyboard

A board of keys. One of the primary input devices used with a computer.

#### Keyboard Shortcut

Key combination that performs a certain command, such as copy or paste.

#### Keywords

Words or phrases that describe content.

#### Kilobyte

Most often used to measure the size of small files.





# LAN

Local Area Network. Computers connected together that are geographically close to each other (e.g. home or school).

#### Link

Allows users to navigate. E.g. by clicking on a link, the user can 'jump' to a new screen.

#### Logical reasoning/thinking

A systematic approach to solving problems or deducing information using a set of universally applicable and totally reliable rules.

#### Knowsley CLCs Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.



## Malware

Software that is designed to cause problems for users.

#### Metadata

Provides information about the content of a digital item, e.g. each digital image from a digital camera has a file attached listing such things as date, time, camera and shutter speed.

## Multimedia

A combination of different content types such as text, audio, still images, animation and video.

# Navigation

N

If a product is interactive, the user must be able to move around it easily. Navigational aids such as buttons and links are an important feature of interactive digital products.

## Navigation bar

Usually placed along the top or side of the screen, this consists of a series of links to other screens. The navigation bar appears in the same position on every screen of the product, making it easy for users to find their way around.

# Netiquette

Netiquette is the code of good behaviour on the internet. As the internet changes, so does netiquette.

# Network

A group of computers that are connected (including the Internet).





# Outing

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

# 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. Also an action performed by the computer e.g. switching on a light, moving a turtle or sprite across the screen.

#### Knowsley CLCs Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.

# P

Packet

Small pieces of data.

## PageRank

A way of ordering the results of a search on the internet.

# Pattern

Finding and using repetition in programs. **Pharming** 

Directing a user to a bogus website that pretends to be a real one in order to extract information from them.

## Phishing

A form of Internet fraud that aims to steal valuable information such as credit card details, usernames and passwords.

## **Photo Sharing**

Some apps allow users to share images for a few seconds. These apps can be very damaging to children.

# Printer

A printer is an external hardware output device that takes the electronic data stored on a computer or other device and generates a hard copy of it.

## Profile

Often social media sites will allow users to create their own personal profiles which other users can see.

## Program

A sequence of instructions written to perform a specified task on the computer.

# Q

# QR Code

A QR code (short for "quick response" code) is a type of barcode that contains a matrix of dots. It can be scanned using a QR scanner or a smartphone with built-in camera.

#### QWERTY

This term is used to describe a standard (Latin alphabet-based) keyboard.





# RAM / ROM

Random access memory (RAM) is a form of computer data storage. Read-Only Memory - is a computer hard drive.

## Repetition

Instructions that can be repeated until a condition is met – i.e. a loop. Sometimes referred to as 'iteration'.

## Resolution

The number of distinct pixels in each dimension that can be displayed.

## 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".

## Robot

Robots have a reprogrammable brain (a computer) that moves a body.

## Router

A device which can be either wired or wireless and is used to connect devices to the internet.

# **Computing Vocabulary**

#### Knowsley CLCs Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.



#### Save

Save is the process of writing data to a storage medium, such as a floppy disk, CD-R, USB flash drive, or hard drive. **Search** 

Finding data or information that satisfies condition(s). Such as web pages containing supplied keywords, or files on a computer with certain properties.

#### Selection

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

Self-portrait photo often taken at arm's length using a Smartphone and uploaded to social media.

#### Sequence

A set of instructions that are followed in order.

#### Services

Programs running on computers, typically those connected to the internet, for example, to transmit a web page, deliver an email or allow a text, voice or video conversation.

#### Sexting

Sending and receiving sexually explicit images/videos via IM, text or social media.

#### Share

Sharing is the practice of sharing or offering access to digital information or resources, including documents, multimedia (audio/video), graphics, computer programs, images and e-books.

#### Simulate

Using computers to imitate real-world scenarios

#### Social networking

An online community where people can communicate and share information.

#### Software

Computer programs and applications (apps)

#### Spam

Messages sent to large numbers of users for the purpose of phishing, spreading malware and advertising.

#### Sprite

(in Scratch) an object that can be controlled by programming. Scratch projects are made up of objects called sprites.

#### Spyware

Software that can be installed on your computer without your knowledge, which collects information and sends details to another computer on the Internet.

#### Stage

This is where you see your stories, games, and animations come to life. Sprites move and interact with one another on the Stage.

# тв

T

Terabyte or 1024 gigabytes.

#### TCP/IP

Language computers use to communicate.

#### Technology

Technology is the skills, methods, and processes used to achieve goals.

#### Trojan

A program that appears legitimate but which performs some harmful activity when it is run. Trojans often sneak in attached to a free game.

#### Troll

A user who posts inflammatory messages typically on Social Media sites to upset others.





## Upload

Transfer a file from your computer to a central computer, e.g. your ISP.

#### URL

Uniform Resource Locator: a nickname (address) for a website

#### **USB (Universal Serial Bus)**

A standard method of connecting devices such as keyboards and printers to a computer.

# **Computing Vocabulary**

#### Knowsley CLCs Primary Computing Scheme of Work Inspire a lifelong love of play, design, code, and invention with technology.





#### Variables

V

A way in which computer programs can store, retrieve or change simple data, such as a score, the time left, or the user's name.

#### **Video Hosting Sites**

Websites and apps which allow users to post and view video clips, like YouTube.

#### Virus

A program designed to cause other programs on a computer to malfunction or stop working altogether.

## Vlog (Vlogger)

Short for 'video log', a shared online journal or diary. Normally a video shared to YouTube or Vimeo containing users' opinions/experiences/ observations.

# Web Server

W

A computer connected to the Internet that provides access to (hosts) websites.

#### World Wide Web (WWW)

All of the web pages on the Internet, accessed using a browser.

## Wireless (wifi)

Devices that are connected without wires or cables. They communicate via radio waves.

#### You Tube

A video sharing and streaming platform.

#### Zip

A compressed file format for emailing files or downloading.

#### Zoom

To cause text or other graphics in a window or frame to appear larger on the screen.