Year 3

Computing Progression Planning

Knowsley CLCs

Primary Computing Scheme of Work

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

Knowsley
City Learning Centres

Year 3: Objectives

Assessment & Computing POS

Knowsley CLCs

Primary Computing Scheme of Work

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

Essential (MS): Age appropriate skills for the use of core devices and applications within their setting.	**Computer Science (CS):** 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.	**Information Technology (IT):** Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	**Digital Literacy (DL):** Recognise common uses of information technology beyond school. 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.
(MS) I can troubleshoot when something doesn't appear to be working with my device.	(CS) I can plan, create and debug programs.	(IT) I can improve the quality and presentation of my work.	(DL) I know how to use the internet.
(MS) I can discuss different types of digital content and file types.	(CS) I can use decomposition to help me solve computing problems.	(IT) I can create with technology. E.g. Video, animation, 3D	(DL) I can analyse information and make accurate searches.
	(CS) I can use sequence, selection, repetition and variables in programs.	(IT) I can collect, analyse, evaluate and present data and information.	(DL) I understand the need for copyright and the consequences of ignoring it.
	(CS) I can work with various forms of input and output.	(IT) I can use advanced search tools.	(DL) I am aware of what I should be sharing online and where to go for help if I need it.
	(CS) I can use logical reasoning to predict and correct errors in algorithms and programs.		(DL) I understand that I cannot trust everyone I talk to online, that I should be a good digital citizen and where to go for help if something upsets me online.
	(CS) I can explain how the internet works.		(DL) I can explain what bullying is and know where to go for help.
	(CS) I can explain how a search engine works.		(DL) I understand the impact technology can have on my health, well being and lifestyle.
			(DL) I know who I should be sharing information with and how to keep my data secure.
			(DL) I understand the term identity and I can take appropriate measures to protect my own online identity.

The **'My Online Life'** activity supports the key aims of the government's Internet Safety Strategy (Digital Literacy) of supporting children to stay safe and make a positive contribution online, as well as enabling teachers to develop effective strategies for understanding and handling online risks. The framework has been produced by the UK Council for Child Internet Safety (UKCCIS).

Year 3 Activities

Knowsley CLCs

Primary Computing Scheme of Work

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

Digital Literacy	Computer Science	Information Technology	Byte Size & Fun
Y3.1 Online Detectives: This activity is designed to support children in mastering the art of advanced internet searching. They will learn new tricks to improve their searches while they try to solve puzzles and challenges. Assessment: 8, 9, 13, 14, 15	**Y3.2 Dancing Robot:** The children will be using some of Scratch Jr's more advanced coding blocks to create their own interactive dancing robot game. The children will learn the important skills of critical thinking, problem solving and debugging. Assessment: 1, 3, 4, 6, 7	**Y3.3 Rainforests:** The children will explore rainforests through new Virtual Reality (VR) apps. They will also use Augmented Reality (AR) to create their own learning games for younger children to play. Assessment: 1, 2, 10, 11	**Y3.4 Keyboard Adventures:** In this activity the children will master the art of using a keyboard and short cuts with a series of fun activities. Assessment: 1, 10, 11
Y3.5 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: 14, 15, 16, 17, 18, 19, 20, 21, 22	**Y3.6 Programming with Robots:** Robots can be found almost everywhere. In this unit the children explore the history of robots and then get to program a robot around a maze. Assessment: 1, 3, 5, 6, 7	**Y3.7 Be Digitally Awesome:** This unit is all about ensuring the children possess core skills with word processing, spreadsheet and presentation apps. Assessment: 1, 2, 10, 11, 12	**Y3.8 T-Shirt Designer:** The children will become illustrators and design their own t-shirts. Assessment: 1, 2, 10, 11
			Y3.9 Crumble: In this unit the children will be introduced to the creative power of the Crumble kit. They will create and program awesome inventions! Assessment:

Mandatory Skills	
1	I can troubleshoot when something doesn't appear to be working with my device.
2	I can discuss different types of digital content and file types.
Computer Science	
3	I can plan, create and debug programs.
4	I can use decomposition to help me solve computing problems.
5	I can use sequence, selection, repetition and variables in programs.
6	I can work with various forms of input and output.
7	I can use logical reasoning to predict and correct errors in algorithms and programs.
8	I can explain how the internet works.
9	I can explain how a search engine works.
Information Technology	
10	I can improve the quality and presentation of my work.
11	I can create with technology. E.g. Video, animation, 3D
12	I can collect, analyse, evaluate and present data and information.
13	I can use advanced search tools.
Digital Literacy	
14	I know how to use the internet.
15	I can analyse information and make accurate searches.
16	I understand the need for copyright and the consequences of ignoring it.
17	I am aware of what I should be sharing online and where to go for help if I need it.
18	I understand that I cannot trust everyone I talk to online, that I should be a good digital citizen and where to go for help if something upsets me online.
19	I can explain what bullying is and know where to go for help.
20	I understand the impact technology can have on my health, well being and lifestyle.
21	I know who I should be sharing information with and how to keep my data secure.
22	I understand the term identity and I can take appropriate measures to protect my own online identity.

Example Curriculum Map for Computing

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

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 3	**Y3.5 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: 14, 15, 16, 17, 18, 19, 20, 21, 22	**Y3.7 Be Digitally Awesome:** This unit is all about ensuring the children possess core skills with word processing, spreadsheet and presentation apps. Assessment: 1, 2, 10, 11, 12	**Y3.2 Dancing Robot:** The children will be using some of Scratch Jr's more advanced coding blocks to create their own interactive dancing robot game. The children will learn the important skills of critical thinking, problem solving and debugging. Assessment: 1, 3, 4, 6, 7	**Y3.1 Online Detectives:** This activity is designed to support children in mastering the art of advanced internet searching. They will learn new tricks to improve their searches while they try to solve puzzles and challenges. Assessment: 8, 9, 13, 14, 15	**Y3.3 Rainforests:** The children will explore rainforests through new Virtual Reality (VR) apps. They will also use Augmented Reality (AR) to create their own learning games for younger children to play. Assessment: 1, 2, 10, 11	**Y3.6 Programming with Robots:** Robots can be found almost everywhere. In this unit the children explore the history of robots and then get to program a robot around a maze. Assessment: 1, 3, 5, 6, 7	Crumbles Makey Makey Sphero Ozbots	Legoland 02 Digital Gurus Barclays Digital Local Amazon Warehouse Newstead Abbey - Ada Lovelace Local Radio Station Technology / STEM Museum or University Bletchley Park Apple Store Visit with Workshop Microsoft Store & Workshop Google VR Expeditions Big Bang STEM Roadshow / Code Show	Ability to work independently Creativity

What the children learn in Year 3

Essential: Age appropriate skills for the use of core devices and applications within their setting.	To be more independent and are encouraged to attempt to fix a problem they may have before asking for help on their device. About different media and file types.
(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.	To create a detailed flow diagram using the correct symbols. To turn an algorithm into a simple program on a digital device. About testing the program and recognising when it needs to be debugged.
(CS) Coding: Create and debug simple programs.	To create their own sprite in Scratch/Scratch Jr. About sequencing commands and adding a repeat command in a program. How to refine/improve a program by using the repeat command. To create a program that contains variables, selection, inputs and outputs.
(CS) Logical Reasoning: Use logical reasoning to predict the behaviour of simple programs.	About using logical reasoning to detect potential problems in an algorithm or program which could result in something going wrong and then offer ideas of what is need to fixed/debugged it.
(CS) Networking:	The World Wide Web is only one part of the Internet, the part that contains websites. To send an email and understands how this works. How information travels through computer networks.
(CS) Online:	About key words and that search engines try to put the most useful websites at the top.
(IT) Harnessing Technology: Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	To create digital content using a range of mixed tools/media and how to improve its design. To be creative and independent while using unfamiliar apps or technology to create content. To create a plan/storyboard when producing digital content. To design a simple questionnaire to collect information, and display the information in a graph or table. To add information to a database.
(IT) Online:	That the top search results can be manipulated and are based on things like popularity. About filtering results by adding more detail or using advanced tools. To use search engines to collect information.
(DL) Technology in the Real World: Key Stage 1: Recognise common uses of information technology beyond school.	That the internet is a computer network. That the internet provides multiple services e.g. world wide web, streaming music/video and email. Explore a websites journey from first request to appearing on the screen. To learn advanced web terminology e.g. URL.
(DL) Media & Content:	How to make judgements about the usefulness and accuracy of information. About the term 'fake news'. About what copyright is and why we have copyright laws and to recognise copyright material.
(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.	The SMART rules about using the internet safely and responsibly. What personal information is and what they shouldn't be sharing. They should pause before posting and consider the potential consequences. Who they should seek help from about online concerns. The correct and sensible choice when presented with hypothetical scenarios. How to send and reply to online messages, such as email, respectfully and understand the difference between online and face-to-face. How to use the safety features of websites as well as reporting concerns to an adult they trust. What online bullying/cyberbullying is and some of the forms it can take. How to report any concerns and who they consider a trusted adult. They need to have a balanced approach to their use of technology. To make good choices about how long they spend online. To recognise websites and games appropriate for their age e.g. PEGI rating. Online accounts need to be signed in to and why passwords should never be shared. What makes a secure password and why they are important. How to use a password security checking tool. What represents an online identity e.g. images, username, information shared and digital footprint. To post positive comments online.

What digital skills will the children learn in Year 3?

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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 these 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	I 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 3?

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Technology in your setting	These are Silver skills. The children should be working towards being secure with all silver and starting on gold 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?	I know how to open / create a new spreadsheet & add a title	I know how to add a number to a cell / word / image.	I know how to format text and cells.	I know how to print.	I know how to input a range of data.
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

What digital skills will the children learn in Year 3?

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 Gold skills. The children should be working towards being secure with all silver and starting on gold skills.				
Can you use an iPad?	I know how to use the split screen with two apps E.g. Safari & Notes app for research.	I know how to use iPad advanced user gestures e.g. switch apps.	I know how to use split screen with same app but using multiple files. E.g. two Keynote files.		
Can you use a Chromebook?	I know how to search folders and open files using Drive app.	I know how to use trackpad gestures / keyboard shortcuts.	pin a Chrome App to the Shelf / pin a webpage to your desktop.		
Can you use the Cloud / Files & Folders / Seesaw?	I know how to get the file size of a document or folder.	I know how to share a folder or file for collaboration / share a link (file).	I know how to explain clouds and saving work to someone else.		
Can you use a browser?	I know how to use advanced searches techniques to improve my results and research.	I know how to turn on/off accessibility features / configure browser features.	I know how to turn on the reader view to show just the text.		
Can you use a word processing app?	I know how to collaborate on a document / make a comment / add notes.	I know how to export the document in a different format / publish.	I know how to share my document with others.	I know how to use shortcut / quick keys (e.g. command+c, command+v).	
Can you use a presentation app?	I know how to add speaker notes.	I know how to add audio / record narration.	I know how to create complex animations.	I know how to use shortcut / quick keys (e.g. command+c, command+v).	
Can you use a spreadsheet app?	I know how to use text and number formatting options.	I know how to merge the cell contents / select a range of cells. Add and delete rows/ columns. Add new sheets.	I know how to cut, copy, and paste cell content / insert a hyperlink to text.	I know how to use data and insert a simple formula	I know how to create a simple chart from some sample data.
Can you use a drawing app?	I know how to create an illustration.	I know how to change the canvas size.	I know how to change the order of a shapes/layers.	I know how to a save the drawing in different formats.	I know how to save with transparent background.
Can you fix problems?	I know how to search for a file.	I know how to find a deleted file.	I know how to make a duplicate of a file.	I know how to read any error message and follow any instructions that may help.	I know how to check there is paper in the printer.

Overview of an effective learner in computing

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

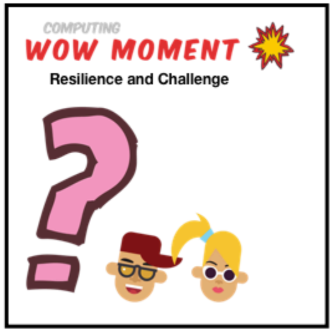
- 'All children must have a basic understanding of coding and how the web works.'
- 'All children must able to evaluate online information and be social media savvy.'
- 'All children must understand online safety rules and know how to report and block.'
- 'All children must be proficient with word processing 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 can take independent notes or photographs at appropriate times to support my learning.	I am willing to work with others. I share thoughts and ideas with the rest of the group or class. I communicate appropriately and put forward my ideas within a group. I can give others constructive feedback on their ideas.	I attempt any task and try hard. I ask relevant questions of the teacher. I engage in different activities and small competitions, accepting and embracing challenges. I see difficult tasks as a challenge, something I must work at and learn from.	I can come up with ideas and use these ideas to help myself. I am keen to express my ideas in different ways. I take other's ideas into account alongside my own. I use a wide variety of sources effectively.	I am enthusiastic about the lesson and happy to contribute. I am keen to improve my knowledge and understanding. I understand how to improve.

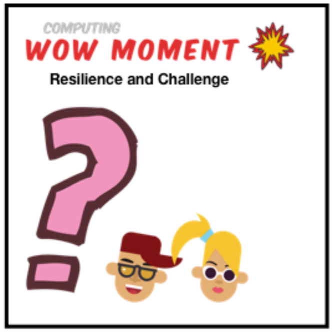

COMPUTING
WOW MOMENT
Ability to work independently

COMPUTING
WOW MOMENT
Ability to work with each other

COMPUTING
WOW MOMENT
Resilience and Challenge

COMPUTING
WOW MOMENT
Creativity

COMPUTING
WOW MOMENT
Academic Progress

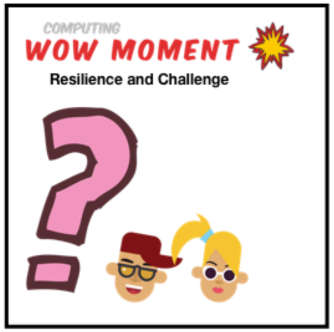
COMPUTING
WOW MOMENT
Ability to work independently

COMPUTING
WOW MOMENT
Ability to work with each other

COMPUTING
WOW MOMENT
Resilience and Challenge

COMPUTING
WOW MOMENT
Creativity

COMPUTING
WOW MOMENT
Academic Progress

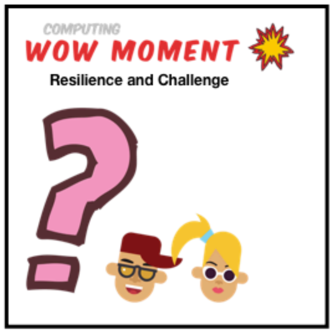
COMPUTING
WOW MOMENT
Ability to work independently

COMPUTING
WOW MOMENT
Ability to work with each other

COMPUTING
WOW MOMENT
Resilience and Challenge

COMPUTING
WOW MOMENT
Creativity

COMPUTING
WOW MOMENT
Academic Progress

COMPUTING
WOW MOMENT
Ability to work independently

COMPUTING
WOW MOMENT
Ability to work with each other

COMPUTING
WOW MOMENT
Resilience and Challenge

COMPUTING
WOW MOMENT
Creativity

COMPUTING
WOW MOMENT
Academic Progress

Computing Strand: Mandatory Skills	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
Essential: Age appropriate skills for the use of core devices and applications within their setting.	I can troubleshoot when something doesn't appear to be working with my device.	The child understands that if they can't complete an action with a device, an error message may appear on their device.	The child can show independence and attempt to fix a problem they may have before asking for help e.g. a website isn't loading. The child understands reading an error message may help fix the problem. The child can attempt some simple steps that may fix the error. **For example:** Ask a friend if they are having the same problem. Is the wifi turned off / are you in aeroplane mode? Refresh the page. Restart/quit your app/browser. Restart your iPad/computer. Are any cables not in properly? The child knows to watch the battery life of a device and can put the device on charge.	The child can do the more routine digital tasks independently and without being instructed e.g the child can mirror/connect a digital device to a projector or TV (e.g. Airplay, Chromecast or wired). The child knows there is more than one way to complete a task on a digital device and will attempt other solutions e.g. try a different browser or app.
	I can discuss different types of digital content and file types.	The child understands that there are different types of file types for digital content e.g. book files are different from video files. The child knows how to play video content on a device e.g. that a player like VLC or Quicktime is required.	The child understands that every graphic they see online is an image file. The child understands that different media has different file types and name at least two file types and their purpose eg. jpeg are image files and MP4 are video files. The child knows how to use digital books on a mobile device. The child can add annotation to a file or document.	The child can save/export a document in various formats as required and explain why.

Year 3 Progression - Computer Science

Computing Strand: Computer Science	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
(CS) Computational Thinking: Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	I can plan, create and debug programs.	The child can explain what an algorithm is and give examples. The child understands that an algorithm can be used to plan out a program. The child can create an algorithm needed for a simple task in the form of a flow chart. The child can explore an online simulation.	The child can create a detailed flow diagram using the correct symbols. The child can turn an algorithm into a simple program on a digital device. The child keeps testing the program and can recognise when it needs to be debugged e.g. the child can create a basic game using Hopscotch / Tynker / Scratch / Scratch Jr and fix errors. The child can explain the rules behind the simulation and how they can be realistic / represent reality.	The child can independently plan, create a simple game, fix errors, make improvements after testing and explain how they did it to others. The child can use simulations to spot patterns and test predictions.
	I can use decomposition to help me solve computing problems.	The child understands that decomposition means to break an open-ended problem up into smaller parts and this will make it easier to solve.	The child can demonstrate how they solved a problem by breaking it into smaller parts. The child can plan out a program and break it into smaller steps when tackling the structure, incorporating sequencing, commands and procedures e.g. the child can plan what code might be required to create a simple game.	The child can recognise that different solutions exist for the same problem and can discuss alternative solutions.
(CS) Coding: Use sequence, selection, and repetition in programs; work with variables and various forms of input and output	I can use sequence, selection, repetition and variables in programs.	The child can understand that programs are made up of sequences of instructions in the appropriate order.The child can put programming commands into a sequence to achieve a specific outcome e.g. the child can use a sequence of coding blocks to make a sprite move in Scratch.	The child can create my own sprite in Scratch/ Scratch Jr. The child can add a repeat command in a program. The child can refine/ improve a program by using the repeat command e.g. the child can independently write programs to draw different regular shapes using the repeat command.	The child can create a variable. The child can explain why variables are used in programs and give examples e.g. Timer, life counter or points. The child can create a procedure in Scratch (group of commands) to do a specific task, draw a specific shape.
	I can work with various forms of input and output.	The child can talk about the parts of a computer, including inputs and outputs. e.g. keyboard and mouse/trackpad or touch screen) and output (screen and speakers) for a computer.	The child when viewing a program can identify inputs and outputs. The child can create a program that contains inputs and outputs e.g. when a button is pressed the program plays a sound.	The child can create a program with multiple types of inputs and outputs e.g. the program uses the keyboard, mouse, noise detection as the input. The program uses sound, movement or text as the output.
(CS) Logical Reasoning: Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	I can use logical reasoning to predict and correct errors in algorithms and programs.	The child can make predictions about what an algorithm will do. The child can make predictions about what a program will do.	The child can detect potential problems in an algorithm which could result in unsuccessful programming. The child when running a program, can describe what went wrong and offer ideas on how this could be fixed/ debugged. The programs can be the child's own or ones provided for them.	The child can debug problems and confirm that they have fixed them by testing the new version of their program.

Year 3 Progression - Computer Science

Computing Strand: Computer Science	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
(CS) Networking: Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web	I can explain how the internet works.	The child understands that the internet is a network of linked computers. The child understands that this network of connected devices can provide multiple services, such as the world wide web and email.	The child is able to describe the World Wide Web as the part of the Internet that contains websites. The child can send an email and understands how this works e.g. the message is sent over the internet to other devices. The child can explain that any information has to be converted to numbers (binary) before it can travel through computer networks.	The child can create/add content to a blog page. The child understands that this content is now visible to the whole world via the internet. The child can understand the process in which information can be converted into a binary code.
(CS) Online: Appreciate how [search] results are selected and ranked	I can explain how a search engine works.	The child understands that there are billions of web pages on the internet. The child understands search engines help us find information.	The child understands what key words are. The child understands that search engines try to put the most useful websites at the top.	The child can begin to explain why certain websites might appear first in their searches.

Year 3 Progression - Information Technology

Computing Strand: Information Technology	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
(IT) Harnessing Technology: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	I can improve the quality and presentation of my work using editing and formatting techniques.	The child can create basic content e.g. a digital book or presentation containing images and text with little or no formatting.	The child can create digital content using a range of mixed tools/media to improve its design e.g. text, graphics and sound to share my ideas and learning. The child can use appropriate keyboard commands to amend text on my device, including making use of a spellchecker.	The child can can create different effects with different technology tools. The child can evaluate their own work and improve its effectiveness.
	I can create with technology. E.g. Video, animation, 3D	The child with support can create content with unfamiliar apps or technology.	The child understands what apps may be required to complete a task e.g. Microsoft Word to create a document or iMovie to edit a video clip. The child demonstrates creativity and independence while using unfamiliar apps or technology to create content. The child understands the need to create a plan/ storyboard when producing digital content. **For example:** The child can create a well presented digital document to retell a story. They can combine a mixture of text, graphics and sound to share an idea or learning. The child can use an art package using various tools to create their own illustrations.	The child is beginning to recognise that similar icons/features are present within apps and that these are consistent across different types of applications e.g. the export/save button, the add image button or record button.
	I can collect, analyse, evaluate and present data and information.	The child can collect, record and organise data. The child can discuss the different ways data can be organised. The child can use a data logger to monitor changes and can talk about the information collected. The child can search a ready-made database to answer questions.	The child can design a simple questionnaire to collect information and display the information in a graph or table. The child can answer questions based on the data they have collected and present findings. The child can add information to a database. The child can filter and sort records in a database to answer questions.	The child can explain the purpose of a branching database. The child can explore a branching database to see how it works and is structured. The child can make a branching database.
(IT) Online: Use search technologies effectively	I can use advanced search tools.	The child can use a search engine to find an appropriate website. The child is aware that Google is not the only search engine.	The child understands that the top results are based on things like most popular, recently updated and you can filter results by adding more detail or using advanced tools.	The child can use advanced search tools in Google to get better results e.g. latest posted. The child can explain the process and why it can be useful.

Year 3 Progression - Digital Literacy

Computing Strand: Digital Literacy	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
(DL) Technology in the Real World Understand the opportunities [networks] offer for communication and collaboration	I know how to use the internet. (Online Bullying)	The child understands that the internet can be used to find information. The child understands that the web (www) contains billions of web pages. The child understands they need to use a browser to access the web. The child understands a search engine is required to find a website unless you know the address. The child can discuss how the internet is used in school, at work by an adult and at home. The child can discuss how the internet may be used for communication e.g. email.	The child understands that the internet is a computer network. The child understands the internet can provide multiple services, such as the world wide web and email. The child can explain a web sites journey from first request to appearing on the screen to their partner. The child can name the web sites and services that they use and create a world map. The child knows what a URL is.	The child understands other internet services such as streaming video, voice chat (Skype), file transfer services (FTP). The child knows how to find out if a website is https.
(DL) Media & Content: Be discerning in evaluating digital content	I can analyse information and make accurate searches.	The child can independently answer questions by searching for and using information from a range of sources.	The child can make judgements about the usefulness of information. The child can explain the term 'fake news'. The child understands not all information on the web is accurate.	The child can explain the process of how to check if information is accurate.
	I understand the need for copyright and the consequences of ignoring it. (Copyright)	The child knows to ask an adult before downloading files and games from an unfamiliar site on the Internet.	The child can explain what copyright is and why we have copyright. The child knows how to recognise copyright material. The child knows that to use copyright material without paying for it or getting consent is against the law.	The child can search for copyright free images online to use in their own work. The child knows that copying and pasting information and claiming it as their work is wrong (plagiarism). The child can reference website sources.

Year 3 Progression - Digital Literacy

Computing Strand: Digital Literacy	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
(DL) Online Safety: Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact	I am aware of what I should be sharing online and where to go for help if I need it. (Online Reputation)	The child is aware of the SMART rules and that they exist to help keep them safe on the internet. The child knows that if they have concerns or are worried about something that has happened online, they need to tell someone.	The child can explain the SMART rules about using the internet safely and responsibly. The child can discuss what personal information is and what they shouldn't be sharing. The child understands that they should pause before posting and consider if what they are sharing is appropriate, is it respectful and would it hurt someone's feelings. The child can explain who they should seek help from about online concerns.	The child can discuss the consequences of sharing too much online. The child can discuss the concept of a digital footprint and how this can have a negative effect in the future. The child knows to take a screenshot of anything they find worrying and understands they should discuss it with a trusted adult before doing anything else.
	I understand that I cannot trust everyone I talk to online, that I should be a good digital citizen and where to go for help if something upsets me online. (Online Relationships)	The child can discuss online 'stranger danger' and 'smart doesn't go' campaigns. The child understands the term 'digital citizen'. The child can discuss the adults they trust to help them with any online concerns.	The child when presented with various hypothetical scenarios makes the correct and sensible choices. The child can send and reply to online messages, such as email, respectfully and understand the difference between online and face-to-face. The child is aware of and knows how use the safety features of websites as well as reporting concerns to an adult they trust.	The child understands that some online accounts are not real people and that these are called bots.
	I can explain what bullying is and know where to go for help. (Online Bullying)	The child understands online bullying is the same as bullying in the real world.	The child can explain what online bullying/ cyberbullying is and some of the forms it can take. The child knows how to report any concerns and who they consider a trusted adult.	The child can send and reply to online messages, such as email, respectfully. The child is aware how to screenshot messages on various devices in order to show an adult.
	I understand the impact technology can have on my health, well being and lifestyle. (Health well being)	The child understands that too much time spent using technology may have a negative impact on their health.	The child understands that they need to have a balanced approach to their use of technology. The child can make good choices about how long they spend online. The child can recognise websites and games appropriate for their age e.g. PEGI rating.	The child understands that if they see something online that makes them feel unhappy, they should discuss this with a trusted adult. The child can discuss what a balanced approach to technology should look like E.g. Digital 5 A Day - By Children's Commissioner.
	I know who I should be sharing information with and how to keep my data secure. (Privacy and Security)	The child can discuss who are the trusted adults in their lives. The child can discuss what personal information is and what is safe to share and what isn't.	The child understands why online accounts need to be signed in to and why passwords should never be shared. The child can talk about what makes a secure password and why they are important. The child can label secure and weak passwords. The child can use a password security checking tool.	The child knows they need to protect their personal information when they do different things online and can give an example of the steps they take e.g. never leave an account signed in when on a shared device.
	I understand the term identity and I can take appropriate measures to protect my own online identity. (Self Image)	The child understands that the information they put online leaves a digital footprint or "trail." This trail can be big or small, helpful or hurtful, depending on how they manage it.	The child can outline what represents an online identity e.g. images, username, information shared and digital footprint. The child can post positive comments online e.g. give feedback on another child's work using Seesaw.	The child understands that photos can be altered digitally. The child can discuss the creative upsides of photo alteration, as well as its power to distort our perceptions of beauty, health and self image.

What vocabulary will the children learn in Year 3?

Year Group	Key Vocabulary / Commonly used.	These could be introduced as word of the week.
Year 3	**3D / 2D** 3D means three-dimensional, i.e. something that has width, height and depth (length). 2D shapes are shapes with two dimensions, such as width and height. **Algorithm** Steps to follow to achieve a task. **Browser** A computer program used to access the World Wide Web. **Code** Lines or blocks of instructions (see program). 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) **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. **Data** Numbers that represent images, video, text and sound. **Debug** Finding and correcting errors. **Decomposition** Splitting things into smaller parts. **Emoticon / Emoji** The use of icons or text to portray mood or facial expression, e.g. :) when happy and :(when sad. **Google** Is one of a number of search engines that help us find information on the web. **Information** Data processed and/or presented to users in a meaningful way. **Instructions** Computer instructions are a set of steps. **Internet** The global collection of computer networks and their connections, all using shared protocols (TCP/IP) to communicate.	**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. **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'. **Robot** 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. **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. **Technology** Technology is the skills, methods, and processes used to achieve goals. **URL** Uniform Resource Locator: a nickname (address) for a website **Zoom** To cause text or other graphics in a window or frame to appear larger on the screen.

Teaching Key Computing Vocabulary

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, 360º 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.

A

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

B

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

Block
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.

C

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.

D

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

Debug
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.

Dissing
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.

E

Ebook / ePub
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.

F

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.

G

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.

I

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.

J

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.

K

Kbps
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.

L

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.

M

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.

N

Navigation
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).

O

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.

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.

R

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.

S

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.

T

TB
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.

U

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.

V

Variables
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.

W

Web Server
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.

X Y Z

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.