Year 1

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 1: Objectives

Assessment & Computing POS

Knowsley CLCs

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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 do the basics with technology.	(CS) I can follow a simple algorithm and create a simple sequence algorithm using symbols that solve a problem.	(IT) I can use technology to create and present my ideas.	(DL) I can recognise the ways we use technology in our classroom, my home and community.
(MS) I can take a good quality photograph and video on an iPad/digital camera.	(CS) I can create algorithms that can be turned into a program using a robot or digital device.	(IT) I can organise and store my digital work.	(DL) I can use a search engine.
	(CS) I can independently debug simple sequence errors in a program.	(IT) I can collect and sort data.	(DL) I understand something online may upset and know where to find help it anything does,
	(CS) I can use logical reasoning to predict the outcome of simple programs.		(DL) I can communicate politely via the internet.
			(DL) I understand that once something is posted you lose control of it.
			(DL) I can describe how to behave online in ways that do not upset others and can give examples.
			(DL) I know the rules of using technology at home or in school.
			(DL) I can explain what personal information is and give examples of it.
			(DL) I am aware that content online is owned by the person that created it.

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 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 1 Activities

Knowsley CLCs

Primary Computing Scheme of Work

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Digital Literacy	Computer Science	Information Technology	Byte Size & Fun
Y1.1 Modern Tales: Using the vehicle of the children's stories, the children will learn to navigate the rules of online safety and communication. The children will make animations based on an online situation they may encounter. Assessment: 1, 2, 7, 8, 9, 10, 11, 12, 15, 17	**Y1.2 What is a Computer?:** In this unit children will learn about the different parts of a computer and iPad. They will learn new skills, tips and tricks. The children will be able to see the inner working of a computer and build their own. Includes a range of continuous provision activities. Assessment: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13	**Y1.3 Mini-Beasts:** Children will use technology to classify minibeasts. In this activity the children will learn about gathering and presenting information. They will then make their own David Attenborough style nature documentary. Assessment: 1, 2, 7, 8, 9, 10, 11, 13	**Y1.4 Animate with Shapes:** Children will learn the basic skills of stop frame animation and produce a simple animated movie. Assessment: 1, 7, 8, 13
Y1.5 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	**Y1.6 My Friend the Robot:** In this unit children will learn all about computational thinking and problem solving with a variety of unplugged activities and online coding games. Assessment: 1,2, 3, 4, 5, 6, 7, 8, 10, 13	**Y1.7 News Presenter:** In this activity children will become news reporters. They will be given a series of break news stories based on popular traditional tales. The children will film short clips using green screen before sharing/saving their work. Assessment: 1, 2, 7, 8, 9, 11, 13, 18	**Y1.8 Drawing Maths:** This activity blends art and maths. The children will master art apps while exploring shape, numbers and problem solving. Assessment: 1, 7, 8, 13
			Y1.9 Email Me: In this unit children will learn about online communication and sending their first email. Assessment: 1, 7, 8, 10, 13, 16, 17

Mandatory Skills	
1	I can do the basics with technology.
2	I can take a good quality photograph and video on an iPad/digital camera.
Computer Science	
3	I can follow a simple algorithm and create a simple sequence algorithm using symbols that solve a problem.
4	I can create algorithms that can be turned into a program using a robot or digital device.
5	I can independently debug simple sequence errors in a program.
6	I can use logical reasoning to predict the outcome of simple programs.
Information Technology	
7	I can use technology to create and present my ideas.
8	I can organise and store my digital work.
9	I can collect and sort data.
Digital Literacy	
10	I can recognise the ways we use technology in our classroom, my home and community.
11	I can use a search engine.
12	I understand something online may upset and know where to find help it anything does,
13	I can communicate politely via the internet.
14	I understand that once something is posted you lose control of it.
15	I can describe how to behave online in ways that do not upset others and can give examples.
16	I know the rules of using technology at home or in school.
17	I can explain what personal information is and give examples of it.
18	I am aware that content online is owned by the person that created it.

Example Curriculum Map for Computing

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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			
Reception	**Y1.5 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	**Y1.3 Mini-Beasts:** Children will use technology to classify minibeasts. In this activity the children will learn about gathering and presenting information. They will then make their own David Attenborough style nature documentary. Assessment: 1, 2, 7, 8, 9, 10, 11, 13	**Y1.2 What is a Computer?:** In this unit children will learn about the different parts of a computer and iPad. They will learn new skills, tips and tricks. The children will be able to see the inner working of a computer and build their own. Includes a range of continuous provision activities. Assessment: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13	**Y1.1 Modern Tales:** Using the vehicle of the children's stories, the children will learn to navigate the rules of online safety and communication. The children will make animations based on an online situation they may encounter. Assessment: 1, 2, 7, 8, 9, 10, 11, 12, 15, 17	**Y1.7 News Presenter:** In this activity children will become news reporters. They will be given a series of break news stories based on popular traditional tales. The children will film short clips using green screen before sharing/ saving their work. Assessment: 1, 2, 7, 8, 9, 11, 13, 18	**Y1.6 My Friend the Robot:** In this unit children will learn all about computational thinking and problem solving with a variety of unplugged activities and online coding games. Assessment: 1,2, 3, 4, 5, 6, 7, 8, 10, 13	Remote control toys Code-a-Pillar Bee bots Blue Bots Dash Robots	Legoland Technology / STEM themed play centre Apple Store Visit with Workshop	Ability to work with each other Creativity

What the children learn in Reception

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Essential: Age appropriate skills for the use of core devices and applications within their setting.	The children learn to explore and experiment with technology in order to build familiarity with classroom apps and devices. The children learn basic photographic and video techniques to document their own learning.
(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.	The children learn to explore algorithms and sequencing of instructions. The children learn to read, follow and create a simple sequence algorithm. The Children learn to give these instructions so that they can be executed by a robot with the aim of successfully reaching a destination.
(CS) Coding: Create and debug simple programs.	The children learn to create a simple program and correct mistakes (debug).
(CS) Logical Reasoning: Use logical reasoning to predict the behaviour of simple programs.	The children learn about making predictions when using technology. E.g. They will be asked to predict what will happen for a short sequence of instructions in a program.
(CS) Networking:	The children learn about signing into a device or online platform.
(CS) Online:	The children learn how they can use a search engine to find answers and different types of media e.g. videos.
(IT) Harnessing Technology: Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	The children learn to create different types of digital content (short video, ebook or presentation). The children learn to combine text and images in a document that showcases learning or tells a story. The children learn to use technology to collect, sort and display information that could include data, photos, video or sound. The children learn about saving work in a special place and retrieve it again.
(IT) Online:	The children learn how they can use a search engine to find answers and different types of media category e.g. images, book, videos.
(DL) Technology in the Real World: Key Stage 1: Recognise common uses of information technology beyond school.	The children learn about the uses and purpose of technology in the classroom, at home, work and the world around them. The children learn about some of the common ways in which technology at home can be used.
(DL) Media & Content:	The children learn to access different types of media content on their device. Including; sound, images, books, podcasts/audiobooks and video via the web.
(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 children learn how to access and search the web. The children learn to identify people they can trust and who they can ask for help when using the internet. The children learn to send a digital message. The children learn how they should behave and interact with others in the online world. The children learn why it is very important not to over share, share things that are personal or may hurt other people. The children learn the ways that some people can be unkind online. The children learn about following sensible online rules. The children learn safe behaviours in their day to day world such as not talking to or meeting strangers and how this applies in the online world. The children learn what a username and password is and that they must keep them private. The children learn that online content such as video, images, websites and games are created and shared by people. The children learn that to use other peoples work without asking or giving credit is wrong.

What digital skills will the children learn in Year 1?

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Technology in your setting	These are Bronze skills. The children should be working towards being secure with all bronze and starting on 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	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 1?

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Technology in your setting	These are Silver skills. The children should be working towards being secure with all bronze and starting on 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

Overview of an effective learner in computing

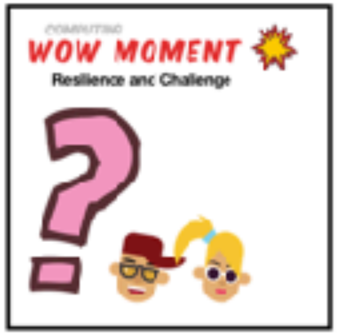
We believe there are core digital skills that children must possess.

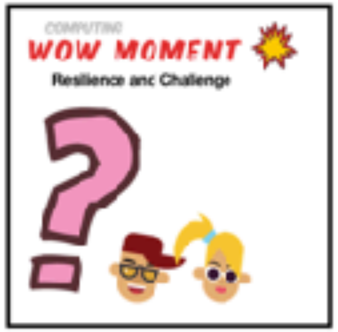
- 'All children must have a basic understanding of coding and how the web works.'
- 'All children must able to evaluate online information and be social media savvy.'
- 'All children must understand online safety rules and know how to report and block.'
- 'All children must be proficient with word processing 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.'

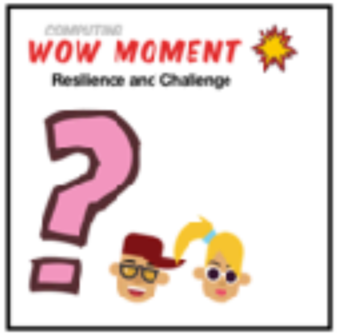
We also encourage schools to go beyond these essential digital skills and the computer program of study. When teaching computing, please include at least two effective learner objectives to be the focus for the year. These are in addition to the specific objectives in each Computing activity. Choose 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.







Print and cut out - Wow Moments

Year 1 Progression - Mandatory Skills

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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 do the basics with an iPad or computing.	The child can use digital technologies independently and can demonstrate some basic skills. **On a Computer:** Click and drag with a mouse or trackpad. Switch on and shutdown a computer independently. Launch an application by double clicking it. **On an iPad:** Switch on and off the iPad. Press the home button to close an app. Swipe left and right to find an app.	The child can select an appropriate digital device to use for an intended purpose. E.g. play music or create a digital drawing. The child can write their name using a keyboard on different devices. The child can use the shift or caps lock for the initial sound in their name. The child can use digital technologies independently and can demonstrate some basic skills. **On a Computer:** Use right click on a mouse or trackpad. Close an application by clicking the x icon. Log on and log off on a computer independently. Manipulate an application window by moving and resizing it. Understands that work can be saved and can do with support. **On an iPad:** Switch on and off the iPad. Change settings on the iPad e.g. volume. Use some basic iPad gestures. E.g. Open the search by swiping down. Know how to scan a QR code. Know when and how to charge the iPad/other digital devices. The child can use simple tools on an interactive whiteboard, e.g. drawing with pen tools.	The child can use digital technologies independently and can support other children. **On a Computer:** Understands where work can be saved and can do it independently. (This could be to shared drive/cloud or pupil portfolio like Seesaw. Explain how and when to use the shift, space and return keys. Can plug in headphones and adjust the volume. **On an iPad:** Use more complex gestures e.g. Quit an app or slide through open apps. Access the control centre and change basic settings like the volume or brightness.
	I can take a good quality photograph and video on an iPad/digital camera.	The child can use a camera or app to document their own learning. The child takes care when using the camera and keeps the camera level and steady.	The child can demonstrate an awareness of basic photographic and video techniques to document their own learning. The child can frame the shot carefully and can delete poorly taken photographs/video.	The child demonstrates knowledge of what conditions are required to take a good photograph or video to document their own learning. E.g. too dark. The child will take more than one photo and then choose the best one.

Year 1 Progression - Computer Science

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Computing Strand: Computer Science	Statement	What to Observe in Learning		
		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 follow a simple algorithm and create a simple sequence algorithm using symbols that solve a problem.	The child can read and follow a simple sequence algorithm. The child can understand that goals can be achieved by following a sequence of steps. The child can discuss a simple everyday sequence, such as cleaning your teeth, the steps involved and why they must be in the correct order. E.g. Remove toothpaste top, squeeze toothpaste onto brush etc.	The child can understand algorithms as a sequence of instructions. The child can read, follow and create a simple sequence algorithm. The child can understand that an algorithm is a set of instructions to complete a task or solve a problem. They can create a simple everyday sequence of instructions and recognise this as an algorithm. Get up, get dressed, eat breakfast, brush teeth etc. The child can discuss the different steps to sort objects into groups. E.g. colour or shape. Then describe this as an algorithm.	The child can read, follow and create symbol sequence algorithm. While understanding the need for “precise and unambiguous” instructions. The child can understand that their instructions need to be “precise and unambiguous” when creating algorithms and will add extra detail. Get up in the morning, get dressed, eat my breakfast, go to the bathroom and brush teeth for 2 minutes etc.
	I can create algorithms that can be turned into a program using a robot or digital device.	The child can use symbols to create a simple sequence of instructions and can press the buttons to make a robot move. The child can arrange some printed symbol cards to create a sequence of instructions for a programmable toy or app. Forward, left, right etc. The child can then attempt to give these instructions so that the robot moves but does not reach a destination.	The child can use symbols to create a sequence of instructions and can press the buttons in the correct order to make a robot reach a desired destination. The child can arrange some printed symbol cards to create a sequence of instructions for a programmable toy or app. Forward, left, right etc. The child can then give these instructions so that the robot can successfully reach a destination.	The child knows that the instructions for a programmable robot to reach its destination need to be precise. The child can recognise that there is more than one way (sequenced algorithm) to do the same thing. The child can identify two routes to go from point A to point B.
(CS) Coding: Create and debug simple programs.	I can independently debug simple sequence errors in a program.	The child can create a simple program and with support correct mistakes (debug). The child can begin to use software or apps to create movement and patterns on a screen. For example they can program a Bee-Bot on an iPad to move. When errors occur the child can with support debug (fix) the program.	The child can create a simple program and independently correct mistakes (debug). The child can create a simple program E.g. An animation in Scratch Jr. Recognise that there is a problem and say what the problem is. The child can use software or apps to create movement and patterns on a screen. For example they can program a Bee-Bot on an iPad to move. When errors occur the child can debug (fix) the program.	The child can identify where in the program or algorithm the bug/ problem occurs. The child can use the word debug when they correct mistakes in code / programs. The child can create programs containing quite lengthy sequence of instructions using a Bee Bot or an app. The child can work out where bugs are in their program, reset the Bee Bot and enter corrected code or fix the code they have used in the app.
(CS) Logical Reasoning: Use logical reasoning to predict the behaviour of simple programs	I can use logical reasoning to predict the outcome of simple programs.	The child can make simple predictions about what a basic program will do. The child can describe what happens when they press buttons on a robot or Bee bot.	The child can predict what will happen for a short sequence of instructions in a program. The child can describe what happens when they press a series of buttons on a robot or Bee bot / use multiple code blocks in an app.	The child can describe what actions they will need to do to create a lengthy sequence of instructions and outcomes while using computational language. The child can describe what happens when they press a series of buttons on a robot or Bee bot / use multiple code blocks in an app.

Year 1 Progression - Information Technology

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Computing Strand: Information Technology	Statement	What to Observe in Learning		
		Working towards expectations	**Meeting expectations**	**Exceeding expectations**
(IT) Harnessing Technology: Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	I can use technology to create and present my ideas.	The child with support can create original digital content on a digital device. The child with support can use a digital camera, video camera or audio recorders to capture their learning or tell a story (the equivalent apps on mobile devices might be used). E.g. the child can create a photo story with audio or presentation with images and can use the keyboard on a device to enter text.	The child can independently create their own original content using digital technology of their choice. E.g. The child may be able to create a short video, ebook or presentation that combines some text and an image in a document that showcases learning or tells a story.	The child has applied creativity in their work. They have considered the design and colour as well as evidence that they have edited content to improve the presentation of their work.
	I can organise, store and retrieve my digital work.	The child with support can use technology to collect information, that could include photos, video or sound. Then with support organise them in a document such as a presentation or ebook. The child with support can save work in a special place and retrieve it again. E.g. Folder on computer or folder in a cloud.	The child can use technology to collect information, that could include photos, video or sound. The child can create a new document and add information. Then organise them in a document such as a presentation or ebook. The child can talk about the importance of saving their work. The child can name their work when saving files. The child can save work in a special place and retrieve it again. E.g. Folder on computer or folder in a cloud.	The child can name their work when saving files and understand why they need to name files appropriately. E.g. using a describing word like poster.
	I can collect and sort data.	The child with support is beginning to develop simple classification skills by carrying out simple sorting activities either on a device or as an unplugged computing activity. The child can sort items (pictures) into sets, groups or simple tables based on simple criteria like colour or size.	The child has continued to develop their classification skills and can independently carry out simple sorting activities using a digital device. The child can sort items into sets, groups or simple tables based on simple criteria like colour or size. The child with help can then produce a simple graph to present their data.	The child can independently produce a graph to present their data and can explain what the graph shows.

Year 1 Progression - Digital Literacy

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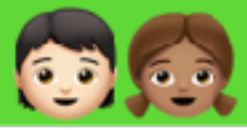
Computing Strand: Digital Literacy	Statement	What to Observe in Learning		
		Working towards expectations	Meeting expectations	Exceeding expectations
(DL) Technology in the Real World Recognise common uses of information technology beyond school.	I can recognise the ways we use technology in our classroom, my home and community.	The child (with prompting) can list some of the technology in the classroom, at home and beyond. The child can sort images of technology into groups of where it could be found.	The child can list some uses and purpose of technology in the classroom, at home and beyond. The child can discuss some of the ways in which they use or their parents use technology beyond school. E.g. they could talk about how they watch videos, create digital art, typing in documents, listening to music or audio books, video calls, sending emails and social media.	The child can discuss in more depth how technology is used for a range of purposes beyond school. The child is beginning to identify some of the benefits and risks of using technology and can discuss this in conversation. The child might know that modern TVs can be SMART and use digital technology (Netflix or Amazon Prime). That books are often available in a digital format and can discuss Amazon Kindle or iBooks. That music is often recorded using computers and can be downloaded. That people often communicate using computers or apps these days e.g. WhatsApp or Skype.

Year 1 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 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 use a search engine. (Online Bullying)	The child understands they need to use Google or other search engines to find information, websites or images. The child with support can use a device and type in a question to a search engine to find out the answer.	The child knows that in order to access the web they must open an app called a browser. The child can independently type into the search bar and use a search engine to find information, website or an image.	The child can recognise links within websites or documents. The child can navigate a search engine to find a simple website e.g. the school website. They understand simple menus and that underlined text are links to other pages.
	I understand something online may upset and know where to find help if anything does, (Self Image)	The child understands that they can tell an adult when they see something unexpected or worrying online that makes them feel sad, scared or confused.	The child can identify people they can trust and discuss any concerns they may have about using the internet.	The child can give an example of when they might need to tell a trusted adult and put this in context of their own lives.
	I can communicate politely via the internet. (Online Relationships)	The child understands the basic idea of sending and receiving a message. This can be an unplugged session, send and receive paper messages to introduce language of online communication.	The child can send a digital message. The child understands the basic rules and format of sending messages. The child can use apps like G-Suite, Purple Mash or Seesaw to safely send their first message.	The child can add an attachment e.g. a picture. The child can discuss the format, benefits and rules of sending emails/messages.
	I understand that once something is posted you lose control if it. (Online Reputation)	The child understands that it is possible to share information, photographs and videos with others online.	The child can discuss the term 'post' and relate it to their own lives. The child understands once you 'post' information, photos or video, others can see it and share it so you no longer have control of who sees your 'post'.	The child can discuss how a 'post' can be shared to lots of people very quickly, including people they might not know.
	I can describe how to behave online in ways that do not upset others and can give examples. (Online Bullying)	The child can talk about why it's important to be kind and polite.	The child knows how they should behave and interact with others in the real world and apply these behaviours in the online world. The child can discuss why it is very important not to over share, share things that are personal or may hurt other people. The child can describe ways that some people can be unkind online.	The child can identify the activities, content and games they are accessing in school / home and demonstrate or talk about how they would do so safely and politely.
	I know the rules of using technology at home or in school. (Health well being)	The child understands that the internet is fun but just like there are rules in the real world to keep you safe there are rules for keeping you safe in the online world.	The child understands and agrees to follow sensible online rules. The child is able to identify safe behaviours in their day to day world such as not talking to or meeting strangers and how this applies in the online world.	The child can explain how to recognise an app or website that isn't age appropriate.
	I can explain what personal information is and give examples of it. (Privacy and Security)	The child can explain what personal information is. The child can identify some simple examples of personal information (e.g. name, address, birthday, age, location).	The child understands what a username and password is and that they must keep them private.	The child can explain the consequences of sharing personal information.
	I am aware that content online is owned by the person that created it. (Copyright)	The child knows that work they create with technology belongs to them.	The child understands that online content such as video, images, websites and games are created and shared by people. The child understands to use other peoples work without asking or giving credit is wrong.	The child can name their digital work so that others know it belongs to them. The child understands to use other peoples work without asking or giving credit is wrong and this is called copyright.

What vocabulary will the children learn in Reception?

Year Group	Key Vocabulary / These could be introduced as word of the week.	
Reception	**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 **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. **Computer** A device that takes input, processes it, then produces output. **Control** In general, control refers to the ability to manage, organise, or run something on a computer. **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.	**iPad/tablet** The iPad and tablets are a type of hand held computer. **Keyboard** A board of keys. One of the primary input devices used with a computer. **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. **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. **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. **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: 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.

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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.