



## Computing Progression Grid 2023-2024

EYFS		
<u>Personal, Social and Emotional Development</u>	<u>Physical Development</u>	<u>Understanding the World</u>
<p>I can show resilience and perseverance in the face of a challenge.</p> <p>I am confident to try new activities and I can show independence, resilience and perseverance in the face of challenge. I can explain the reasons for rules, know right from wrong and try to behave accordingly.</p>	<p>I can develop my small motor skills so that I can use a range of tools competently, safely and confidently. I know and talk about the different factors that support my overall health and well-being, i.e. sensible amounts of screen-time.</p>	<p>I can explore how things work.</p>
<p>I am learning how to explore and tinker with hardware to develop familiarity.</p> <p>I am learning the relevant vocabulary for different hardware.</p> <p>I recognise that a range of technology is used in places such as homes and schools.</p> <p>I can play on a touchscreen game and use computers/keyboards and mouse in role-play.</p> <p>I can scan a QR code using the iPad.</p> <p>I can take a photograph on the iPad.</p> <p>I can move and resize images.</p> <p>I know what a keyboard is and how to locate relevant keys.</p> <p>I can type letters with increasing confidence.</p> <p>I am learning how to log in and out of a computer or program.</p> <p>I understand why we need to log in and out.</p> <p>I am learning what a mouse is.</p> <p>I am developing my basic mouse skills such as moving and clicking.</p> <p>I can follow instructions as part of practical activities and games.</p> <p>I am learning to give simple instructions.</p> <p>I can learn to debug instructions, with the help of an adult, when things go wrong.</p> <p>I am learning that an algorithm is a set of instructions to carry out a task, in a specific order.</p> <p>I understand how to sort and categorise objects.</p> <p>I can explain how items have been sorted and categorised.</p> <p>I understand how to represent data in a pictogram.</p> <p>I understand how to read a simple pictogram.</p> <p>I can dictate short, clear sentences into a digital device.</p>		

I can record my voice over a picture.  
 I know the difference between a photo and a video.  
 I can record a short film using the iPad.  
 I can play and watch my film back.  
 I understand the meaning of directional arrows.  
 I follow a simple sequence of instructions.  
 I can experiment with programming a Bee Bot.  
 I am learning how to explore and tinker with hardware to develop familiarity.  
 I am learning the relevant vocabulary for different hardware.  
 I can learn to debug instructions, with the help of an adult, when things go wrong.  
 I am learning that an algorithm is a set of instructions to carry out a task, in a specific order.  
 I can follow an algorithm as part of an unplugged game.

## Year 1

Year 1		
<u>Information technology</u>	<u>Computer Science</u>	<u>Digital Literacy</u>
Using computers for functional purposes, e.g. collecting and presenting information, or using search technology.	Understanding how computers and networks work and basic computer programming.	The safe and responsible use of technology, including recognising its advantages for collaboration or communication.
Overview and goals	Knowledge	Skills
<ul style="list-style-type: none"> <li>- I use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>- I understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions.</li> <li>- I can create and debug simple programs.</li> <li>- I can use logical reasoning to predict the behaviour of simple programs.</li> </ul>	<ul style="list-style-type: none"> <li>- To explain that technology is something that can help us.</li> <li>- To identify examples of technology</li> <li>- To explain how examples of technology help us</li> <li>- To recognise that a computer is an example of technology</li> <li>- To recognise that choices are made when using technology</li> <li>- To explain why rules are needed when using technology</li> <li>- To explain what different freehand tools do</li> <li>- To recognise computers can be used to create art</li> <li>- To recognise a tool can be adjusted to suit my need</li> <li>- To decide when it's appropriate to use each tool</li> <li>- To consider impact of choices made</li> </ul>	<ul style="list-style-type: none"> <li>- To recognise that some technology can be used in different ways</li> <li>- To choose a piece of technology to do a job</li> <li>- To identify the main parts of a computer</li> <li>- To use a mouse in different ways</li> <li>- To use a keyboard to type</li> <li>- To use the keyboard to edit text</li> <li>- To show how to use technology safely</li> <li>- To create a picture using freehand tools</li> <li>- To use shape and line tools when precision is needed</li> <li>- To use a range of paint colours</li> <li>- To use the fill tool to colour an enclosed area</li> <li>- To use the undo button to correct a mistake</li> <li>- To combine a range of tools to create a piece of artwork</li> </ul>

<ul style="list-style-type: none"> <li>- I can recognise common uses of information technology beyond school.</li> <li>- I can use technology safely and respectfully, keeping personal information private.</li> <li>- I can identify where to go for help and support when I have concerns about content or contact on the internet or other online technologies.</li> </ul>	<ul style="list-style-type: none"> <li>- To compare painting using a computer with painting using brushes</li> <li>- To recall words that can be enacted</li> <li>- To explain what a given command does</li> <li>- To match a command to an outcome</li> <li>- To recall that a series of instructions can be issued before they are enacted</li> <li>- To understand that a program is a set of commands that a computer can run</li> <li>- To identify that objects can be counted</li> <li>- To recognise that information can be presented</li> <li>- To recognise that information can be presented in different ways</li> </ul>	<ul style="list-style-type: none"> <li>- To enact a given word</li> <li>- To predict the outcome of a command on a device</li> <li>- To list which commands can be used on a given device</li> <li>- To run a command on a floor robot</li> <li>- To choose a command for a given purpose</li> <li>- To choose a series of words that can be enacted as a program</li> <li>- To choose a series of commands that can be run as a program</li> <li>- To build a sequence of commands in steps</li> <li>- To combine commands in a program</li> <li>- To run a program on a device</li> <li>- To identify some attributes of an object</li> <li>- To collect simple data</li> <li>- To show that collected data can be counted</li> <li>- To describe the properties of an object</li> <li>- To choose an attribute to group objects by</li> <li>- To group objects to answer questions</li> <li>- To explain that objects can be grouped by similarities (attribute)</li> <li>- To describe a group of objects (based on commonality).</li> </ul>
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Year 2		
<u>Information technology</u>	<u>Computer Science</u>	<u>Digital Literacy</u>
Using computers for functional purposes, e.g. collecting and presenting information, or using search technology	Understanding how computers and networks work and basic computer programming.	The safe and responsible use of technology, including recognising its advantages for collaboration or communication.
Overview and goals	Knowledge	Skills
<ul style="list-style-type: none"> <li>- I use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>- I understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions.</li> </ul>	<ul style="list-style-type: none"> <li>- To recognise different types of computers used in school</li> <li>- To identify that a computer is a part of information technology</li> <li>- To recognise the features of information technology</li> <li>- To say how rules for using information technology can help us</li> <li>- To talk about uses of information technology</li> <li>- To explain how information technology benefits us</li> </ul>	<ul style="list-style-type: none"> <li>- To describe some uses of computers</li> <li>- To identify information technology in school</li> <li>- To identify information technology beyond school</li> <li>- To show how to use information technology safely</li> <li>- To capture a digital image</li> <li>- To take photographs in both landscape and portrait format</li> <li>- To view photographs on a digital device</li> <li>- To decide which photographs to keep</li> <li>- To hold the camera still to take a clear photograph</li> </ul>

<ul style="list-style-type: none"> <li>- I can create and debug simple programs.</li> <li>- I can use logical reasoning to predict the behaviour of simple programs.</li> <li>- I can recognise common uses of information technology beyond school.</li> <li>- I can use technology safely and respectfully, keeping personal information private.</li> <li>- I can identify where to go for help and support when I have concerns about content or contact on the internet or other online technologies.</li> </ul>	<ul style="list-style-type: none"> <li>- To recognise that choices are made when using information technology</li> <li>- To recognise that some digital devices can capture images using a camera</li> <li>- To talk about how to take a photograph</li> <li>- To make choices when composing my photograph</li> <li>- To recognise features of 'good' photographs</li> <li>- To recognise that photographs can be saved and viewed later</li> <li>- To recognise features of 'good' photographs</li> <li>- To identify how a photograph could be improved</li> <li>- To explain the effect of light on a photograph</li> <li>- To recognise that photographs can be change after they have been taken</li> <li>- To recognise that some images are not accurate</li> <li>- To describe that a series of instructions is a sequence</li> <li>- To explain what happens when we change the order of instructions</li> <li>- To recall that a series of instructions can be issued before they are enacted</li> <li>- To recognise that you can predict the outcome of a program</li> <li>- To use a tally chart to collect data</li> <li>- To compare objects that have been grouped by attribute</li> <li>- To construct (complete) a given comparison question,</li> <li>- To suggest appropriate headings for tally charts and pictograms</li> <li>- To explain that we can present information using a computer</li> <li>- To give simple examples of why some information should not be shared</li> <li>- To identify that computers can be used to play sounds of different instruments</li> <li>- To identify that the same pattern can be represented in different ways</li> <li>- To compare playing music on instruments with making music on a computer</li> </ul>	<ul style="list-style-type: none"> <li>- To use zoom to change the composition of a photograph</li> <li>- To consider lighting before taking a photograph</li> <li>- To improve a photograph by retaking it</li> <li>- To use filters to edit the appearance of a photograph</li> <li>- To choose a series of words that can be enacted as a sequence</li> <li>- To choose a series of instructions that can be run as a program</li> <li>- To create a program</li> <li>- To trace a sequence to make a prediction</li> <li>- To run a program on a device</li> <li>- To debug a program that I have written</li> <li>- To show I can enter data onto a computer</li> <li>- To recognise that people, animals and objects can be described by attributes</li> <li>- To use a computer to view data in different formats</li> <li>- To use pictograms to answer single-attribute questions</li> <li>- To use a computer to answer comparison questions (graphs, tables)</li> <li>- To experiment with musical patterns on a computer</li> <li>- To experiment with different sounds on a computer</li> <li>- To use a computer to create a musical pattern</li> <li>- To use a computer to compose a rhythm and a melody on a given theme</li> <li>- To use a computer to play the same music in different ways (e.g. tempo)</li> <li>- To evaluate a musical composition created on a computer</li> <li>- To improve a musical composition created on a computer.</li> <li>-</li> </ul>
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# Year 3

Year 3		
<u>Information technology</u>	<u>Computer Science</u>	<u>Digital Literacy</u>
Using computers for functional purposes, e.g. collecting and presenting information, or using search technology	Understanding how computers and networks work and basic computer programming.	The safe and responsible use of technology, including recognising its advantages for collaboration or communication.
Overview and goals	Knowledge	Skills
<ul style="list-style-type: none"> <li>- I can 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.</li> <li>- I can use search technologies effectively.</li> <li>- I can design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</li> <li>- I can solve problems by decomposing them into smaller parts.</li> <li>- I can use sequence, selection and repetition in programs.</li> <li>- I can work with variables and various forms of input and output.</li> </ul>	<ul style="list-style-type: none"> <li>- To explain how digital devices function</li> <li>- To identify input and output devices</li> <li>- To recognise how digital devices can change the way we work</li> <li>- To explain how a computer network can be used to share information</li> <li>- To explore how digital devices can be connected</li> <li>- To recognise the physical components of a network</li> <li>- To explain that animation is a sequence of drawings or photographs</li> <li>- To relate animated movement with a sequence of images</li> <li>- To plan an animation</li> <li>- To identify the need to work consistently and carefully</li> <li>- To review and improve an animation</li> <li>- To evaluate the impact of adding other media to an animation</li> <li>- To recognise how text and images convey information</li> <li>- To recognise that text and layout can be edited</li> <li>- To choose appropriate page settings</li> </ul>	<ul style="list-style-type: none"> <li>- I can describe how connected devices can collect and share my information with others.</li> <li>- I can explain how to search for information about others online.</li> <li>- I can use key phrases in search engines</li> <li>- I can use search technologies effectively.</li> <li>- I can explain why copying someone else's work from the internet without permission can cause problems.</li> <li>- I can give examples of what those problems might be.</li> <li>- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.</li> <li>- I can give some simple examples.</li> <li>- I can give examples of content that is permitted to be reused</li> <li>- I can demonstrate the use of search tools to find and access online content which can be reused by others</li> <li>- I can use key phrases in search engines</li> <li>- I can use search technologies effectively</li> <li>- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it</li> </ul>

<ul style="list-style-type: none"> <li>- I can use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</li> <li>- I understand computer networks including the internet.</li> <li>- I understand how the internet can provide multiple services such as the world wide web.</li> <li>- I can appreciate how search results are selected and ranked. I can use technology safely, respectfully and responsibly.</li> <li>- I can recognise acceptable and unacceptable behaviour.</li> <li>- I can identify a range of ways to report concerns about content and contact.</li> <li>- I can be discerning in evaluating digital content.</li> <li>- I understand the opportunities networks offer for communication and collaboration.</li> </ul>	<ul style="list-style-type: none"> <li>- To add content to a desktop publishing publication</li> <li>- To consider how different layouts can suit different purposes</li> <li>- To consider the benefits of desktop publishing</li> <li>- To create questions with yes/no answers</li> <li>- To identify the object attributes needed to collect relevant data</li> <li>- To create a branching database</li> <li>- To explain why it is helpful for a database to be well structured</li> <li>- To identify objects using a branching database</li> <li>- To compare the information shown in a pictogram with a branching database</li> <li>- To explore a programming environment</li> <li>- To identify that commands have an outcome</li> <li>- To explain that a program has a start</li> <li>- To recognise that a sequence of commands can have an order</li> <li>- To change the appearance of my project</li> <li>- To create a project from a task description</li> <li>- To explain how a sprite moves in an existing project</li> <li>- To create a program to move a sprite in four directions</li> <li>- To adapt a program to a new context</li> <li>- To develop my program by adding features</li> <li>- To identify and fix bugs in a program</li> <li>- To design and create a maze-based challenge</li> </ul>	<ul style="list-style-type: none"> <li>- I can demonstrate the use of search tools to find and access online content which can be reused by others</li> <li>- I can demonstrate how to use key phrases in search engines to gather accurate information online.</li> <li>- I can explain what autocomplete is and how to choose the best suggestion.</li> <li>- I can explain how the internet can be used to sell and buy things.</li> <li>- I can explain the difference between a 'belief', an 'opinion' and a 'fact' and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories, etc.</li> <li>- I can explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed).</li> <li>- I can describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened.</li> <li>- I can explain why spending too much time using technology can sometimes have a negative impact on me; I can give some examples of activities where it is easy to spend a lot of time engaged e.g. games, films, videos</li> <li>- I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).</li> <li>- I can give reasons why someone should only share information with people they choose to and can trust. I can explain that if they are not sure or feel pressured then they should tell a trusted adult.</li> </ul>
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## Year 4

Year 4		
<u>Information technology</u>	<u>Computer Science</u>	<u>Digital Literacy</u>
Using computers for functional purposes, e.g. collecting and presenting information, or using search technology	Understanding how computers and networks work and basic computer programming.	The safe and responsible use of technology, including recognising its advantages for collaboration or communication.

Overview and goals	Knowledge	Skills
<ul style="list-style-type: none"> <li>- I can 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</li> <li>- I can use search technologies effectively.</li> <li>- I can design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</li> <li>- I can solve problems by decomposing them into smaller parts.</li> <li>- I can use sequence, selection and repetition in programs.</li> <li>- I can work with variables and various forms of input and output</li> <li>- I can use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>- I understand computer networks including the internet.</li> <li>- I understand how the internet can provide multiple services such as the world wide web.</li> <li>- I can appreciate how search results are selected and ranked.</li> <li>- I can use technology safely, respectfully and responsibly.</li> <li>- I can recognise acceptable and unacceptable behaviour</li> <li>- I can identify a range of ways to report concerns about content and contact.</li> <li>- I can be discerning in evaluating digital content.</li> </ul>	<ul style="list-style-type: none"> <li>- To describe how networks physically connect to other networks</li> <li>- To recognise how networked devices make up the internet</li> <li>- To outline how websites can be shared via the World Wide Web</li> <li>- To describe how content can be added and accessed on the World Wide Web</li> <li>- To recognise how the content of the WWW is created by people</li> <li>- To evaluate the consequences of unreliable content</li> <li>- To identify that sound can be digitally recorded.</li> <li>- To use a digital device to record sound.</li> <li>- To explain that a digital recording is stored as a file</li> <li>- To explain that audio can be changed through editing</li> <li>- To show that different types of audio can be combined and played together</li> <li>- To evaluate editing choices made</li> <li>- To explain that digital images can be changed</li> <li>- To change the composition of an image</li> <li>- To describe how images can be changed for different uses</li> <li>- To make good choices when selecting different tools</li> <li>- To recognise that not all images are real</li> <li>- To evaluate how changes can improve an image</li> <li>- To explain that data gathered over time can be used to answer questions</li> <li>- To use a digital device to collect data automatically</li> <li>- To explain that a data logger collects 'data points' from sensors over time</li> <li>- To use data collected over a long duration to find information</li> <li>- To identify the data needed to answer questions</li> <li>- To use collected data to answer questions</li> <li>- To identify that accuracy in programming is important</li> <li>- To create a program in a text-based language</li> <li>- To explain what 'repeat' means</li> <li>- To modify a countcontrolled loop to produce a given outcome</li> <li>- To decompose a task into small steps</li> </ul>	<ul style="list-style-type: none"> <li>- I can explain how my online identity can be different to my offline identity.</li> <li>- I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.</li> <li>- I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.</li> <li>- I can describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms).</li> <li>- I can explain why copying someone else's work from the internet without permission can cause problems</li> <li>- I can give examples of what those problems might be</li> <li>- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it</li> <li>- I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.</li> <li>- I can describe ways in which people might make themselves look different online.</li> <li>- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.</li> <li>- I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours.</li> <li>- I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.</li> <li>- I can explain how using technology can be a distraction from other things, in both a positive and negative way.</li> <li>- I can identify times or situations when I might need to limit the amount of time I use technology, e.g. I can suggest strategies to help with limiting this time.</li> <li>- I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't.</li> <li>- I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others.</li> </ul>

<ul style="list-style-type: none"> <li>- I understand the opportunities networks offer for communication and collaboration.</li> </ul>	<ul style="list-style-type: none"> <li>- To create a program that uses count-controlled loops to produce a given outcome</li> <li>- To develop the use of count-controlled loops in a different programming environment</li> <li>- To explain that in programming there are infinite loops and count controlled loops</li> <li>- To develop a design that includes two or more loops which run at the same time</li> <li>- To modify an infinite loop in a given program</li> <li>- To design a project that includes repetition</li> <li>- To create a project that includes repetition</li> </ul>	<ul style="list-style-type: none"> <li>- I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).</li> <li>- I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, popups) and can recognise some of these when they appear online.</li> <li>- I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true</li> <li>- I can explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be.</li> </ul>
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Year 5		
<u>Information technology</u>	<u>Computer Science</u>	<u>Digital Literacy</u>
Using computers for functional purposes, e.g. collecting and presenting information, or using search technology	Understanding how computers and networks work and basic computer programming.	The safe and responsible use of technology, including recognising its advantages for collaboration or communication.
Overview and goals	Knowledge	Skills
<ul style="list-style-type: none"> <li>- I can 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.</li> <li>- I can use search technologies effectively.</li> <li>- I can design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</li> </ul>	<ul style="list-style-type: none"> <li>- To explain that computers can be connected together to form systems</li> <li>- To recognise the role of computer systems in our lives</li> <li>- To recognise how information is transferred over the internet</li> <li>- To explain how sharing information online lets people in different places work together</li> <li>- To contribute to a shared project online</li> <li>- To evaluate different ways of working together online</li> <li>- To identify that drawing tools can be used to produce different outcomes</li> <li>- To create a vector drawing by combining shapes</li> <li>- To use tools to achieve a desired effect</li> </ul>	<ul style="list-style-type: none"> <li>- I can assess and justify when it is acceptable to use the work of others</li> <li>- I can give examples of content that is permitted to be reused</li> <li>- I can give examples of technology specific forms of communication (e.g. emojis, memes and GIFs).</li> <li>- I explain what a strong password is and demonstrate how to create one</li> <li>- I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my/our fault.</li> <li>- I can explain how someone can get help if they are having problems and identify when to tell a trusted adult.</li> </ul>



<ul style="list-style-type: none"> <li>- I can solve problems by decomposing them into smaller parts.</li> <li>- I can use sequence, selection and repetition in programs.</li> <li>- I can work with variables and various forms of input and output.</li> <li>- I can use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</li> <li>- I understand computer networks including the internet.</li> <li>- I understand how the internet can provide multiple services such as the world wide web.</li> <li>- I can appreciate how search results are selected and ranked.</li> <li>- I can use technology safely, respectfully and responsibly.</li> <li>- I can recognise acceptable and unacceptable behaviour.</li> <li>- I can identify a range of ways to report concerns about content and contact.</li> <li>- I can be discerning in evaluating digital content.</li> <li>- I understand the opportunities networks offer for communication and collaboration.</li> </ul>	<ul style="list-style-type: none"> <li>- To recognise that vector drawings consist of layers</li> <li>- To group objects to make them easier to work with</li> <li>- To evaluate my vector drawing</li> <li>- To recognise video as moving pictures, which can include audio</li> <li>- To identify digital devices that can record video</li> <li>- To capture video using a digital device</li> <li>- To recognise the features of an effective video</li> <li>- To identify that video can be improved through reshooting and editing</li> <li>- To consider the impact of the choices made when making and sharing a video</li> <li>- To use a form to record information</li> <li>- To compare paper and computer-based databases</li> <li>- To outline how grouping and then sorting data allows us to answer questions</li> <li>- To explain that tools can be used to select specific data</li> <li>- To explain that computer programs can be used to compare data visually</li> <li>- To apply my knowledge of a database to ask and answer real-world questions</li> <li>- To control a simple circuit connected to a computer</li> <li>- To write a program that includes count-controlled loops</li> <li>- To explain that a loop can stop when a condition is met, eg number of times</li> <li>- To conclude that a loop can be used to repeatedly check whether a condition has been met</li> <li>- To design a physical project that includes selection</li> <li>- To create a controllable system that includes selection</li> <li>- To explain how selection is used in computer programs</li> <li>- To relate that a conditional statement connects a condition to an outcome</li> <li>- To explain how selection directs the flow of a program</li> <li>- To design a program which uses selection</li> <li>- To create a program which uses selection</li> <li>- To evaluate my program</li> </ul>	<ul style="list-style-type: none"> <li>- I can demonstrate how to support others (including those who are having difficulties) online.</li> <li>- I can explain how to block abusive users.</li> <li>- I can explain why copying someone else's work from the internet without permission can cause problems.</li> <li>- I can describe the helpline services which can help people experiencing bullying and how to access them</li> <li>- I can recognise online bullying can be different to bullying in the physical world and can describe some of those differences</li> <li>- I can describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying.</li> <li>- I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult.</li> <li>- I can identify a range of ways to report concerns and access support both in school and at home about online bullying.</li> <li>- I can explain how I can represent myself in different ways online</li> <li>- Knowing this, I can describe the right decisions about how I interact with others and how others perceive me</li> <li>- I can recognise some ways in which the internet can be used to communicate</li> <li>- I can give examples of how to be respectful to others online</li> <li>- I can search for information about an individual online and create a summary report of the information I find</li> <li>- I can describe ways that information about anyone online can be used by others to make judgements about an individual and why these may be incorrect.</li> <li>- I can explain ways that some of the information about me online could have been created, copied, or shared by others</li> <li>- I can evaluate digital content (and can explain how I make choices from search results)</li> <li>- I can demonstrate how to make responsible choices about having online identity, depending on context.</li> <li>- I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results.</li> <li>- I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence and can identify ways the internet can draw us to</li> </ul>
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		<p>information for different agendas, e.g. website notifications, pop-ups, targeted ads.</p> <ul style="list-style-type: none"> <li>- I can explain the benefits and limitations of using different types of search technologies e.g. voice activation search engine. I can explain how some technology can limit the information I am presented with e.g. voice activated searching giving one result.</li> <li>- I explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be 'sceptical'.</li> <li>- I can describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions (e.g. gaming communities or social media groups).</li> <li>- I can describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively.</li> <li>- I can describe some strategies, tips or advice to promote health and wellbeing with regards to technology</li> <li>- I recognise the benefits and risks of accessing information about health and wellbeing online and how we should balance this with talking to trusted adults and professionals.</li> <li>- I can explain how and why some apps and games may request to take payment for additional content (e.g. in-app purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing</li> <li>- I can explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others.</li> <li>- I can explain what app permissions are and can give some examples.</li> </ul>
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# Year 6

Year 6		
<u>Information technology</u>	<u>Computer Science</u>	<u>Digital Literacy</u>
Using computers for functional purposes, e.g. collecting and presenting information, or using search technology	Understanding how computers and networks work and basic computer programming.	The safe and responsible use of technology, including recognising its advantages for collaboration or communication.
Overview and goals	Knowledge	Skills
<ul style="list-style-type: none"> <li>- I can 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.</li> <li>- I can use search technologies effectively.</li> <li>- I can design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</li> <li>- I can solve problems by decomposing them into smaller parts.</li> <li>- I can use sequence, selection and repetition in programs.</li> <li>- I can work with variables and various forms of input and output.</li> <li>- I can use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</li> <li>- I understand computer networks including the internet.</li> </ul>	<ul style="list-style-type: none"> <li>- To identify how to use a search engine</li> <li>- To describe how search engines select results</li> <li>- To explain how search results are ranked</li> <li>- To recognise why the order of results is important, and to whom</li> <li>- To recognise how we communicate using technology</li> <li>- To evaluate different methods of online communication</li> <li>- To use a computer to create and manipulate three-dimensional (3D) digital objects</li> <li>- To compare working digitally with 2D and 3D graphics</li> <li>- To construct a digital 3D model of a physical object</li> <li>- To identify that physical objects can be broken down into a collection of 3D shapes</li> <li>- To design a digital model by combining 3D objects</li> <li>- To develop and improve a digital 3D model</li> <li>- To review an existing website and consider its structure</li> <li>- To plan the features of a web page</li> <li>- To consider the ownership and use of images (copyright)</li> <li>- To recognise the need to preview pages</li> <li>- To outline the need for a navigation path</li> <li>- To recognise the implications of linking to content owned by other people</li> <li>- To identify questions which can be answered using data</li> <li>- To explain that objects can be described using data</li> </ul>	<ul style="list-style-type: none"> <li>- I can describe and assess the benefits and the potential risks of sharing information online.</li> <li>- I can use various additional tools to refine my searches (e.g. search filters: size, type, usage rights etc.).</li> <li>- I can explain how to use search effectively and use examples from my own practice to illustrate this.</li> <li>- I can explain how search engine rankings are returned and can explain how they can be influenced (e.g. commerce, sponsored results).</li> <li>- I can demonstrate the use of search tools to find and access online content which can be reused by others.</li> <li>- I can demonstrate how to make references to and acknowledge sources I have used from the internet.</li> <li>- I can describe strategies for keeping my personal information private, depending on context</li> <li>- I can describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser).</li> <li>- I can explain what to do if a password is shared, lost or stolen.</li> <li>- I can describe how and why people should keep their software and apps up to date, e.g. auto updates.</li> <li>- I can describe simple ways to increase privacy on apps and services that provide privacy settings.</li> <li>- I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing).</li> </ul>

<ul style="list-style-type: none"> <li>- I understand how the internet can provide multiple services such as the world wide web.</li> <li>- I can appreciate how search results are selected and ranked</li> <li>- I can use technology safely, respectfully and responsibly.</li> <li>- I can recognise acceptable and unacceptable behaviour.</li> <li>- I can identify a range of ways to report concerns about content and contact.</li> <li>- I can be discerning in evaluating digital content.</li> <li>- I understand the opportunities networks offer for communication and collaboration.</li> </ul>	<ul style="list-style-type: none"> <li>- To explain that formulas can be used to produce calculated data</li> <li>- To apply formulas to data, including duplicating</li> <li>- To create a spreadsheet to plan an event</li> <li>- To choose suitable ways to present data</li> <li>- To define a 'variable' as something that is changeable</li> <li>- To explain why a variable is used in a program</li> <li>- To choose how to improve a game by using variables</li> <li>- To design a project that builds on a given example</li> <li>- To use my design to create a project</li> <li>- To evaluate my project</li> <li>- To create a program to run on a controllable device</li> <li>- To explain that selection can control the flow of a program</li> <li>- To update a variable with a user input</li> <li>- To use an conditional statement to compare a variable to a value</li> <li>- To design a project that uses inputs and outputs on a controllable device</li> <li>- To develop a program to use inputs and outputs on a controllable device</li> </ul>	<ul style="list-style-type: none"> <li>- I know that online services have terms and conditions that govern their use.</li> <li>- I can use the internet with adult support to communicate with people I know. (EY-7)</li> <li>- I can navigate online content, websites, or social media feeds using more sophisticated tools to get to the information I want (e.g. menus, sitemaps, breadcrumb-trails, site search functions). (11-14)</li> <li>- I can explain why copying someone else's work from the internet without permission can cause problems.</li> <li>- I can give examples of what those problems might be.</li> <li>- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.</li> <li>- I can give some simple examples.</li> <li>- I can assess and justify when it is acceptable to use the work of others.</li> <li>- I can give examples of content that is permitted to be reused.</li> <li>- I can demonstrate the use of search tools to find and access online content which can be reused by others.</li> <li>- I can demonstrate how to make references to and acknowledge sources I have used from the internet.</li> <li>- I can explain the principles of fair use and apply this to case studies. (11-14)</li> <li>- I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites)</li> <li>- I can explain how to use search technologies effectively.</li> <li>- I can evaluate digital content and can explain how I make choices from search results</li> <li>- I can explain how search engines work and how results are selected and ranked.</li> <li>- I can describe how some online information can be opinion and can offer examples</li> <li>- I can explain how and why some people may present 'opinions' as 'facts'; why the popularity of an opinion or the personalities or those promoting it does not necessarily make it true, fair or perhaps even legal.</li> <li>- I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news).</li> </ul>
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