

Information Technology – Progression Map

Concept

Skill

Information Technology	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Computing systems and networks</p>	<p>To explain that technology is something that can help us.</p> <p>To identify examples of technology.</p> <p>To recognise that a computer is an example of technology.</p> <p>To identify the main parts of a computer.</p> <p>To use a keyboard to type and edit text.</p>	<p>To recognise different types of computers used in school.</p> <p>To describe some uses of computers.</p> <p>To identify that a computer is a part of information technology.</p> <p>To talk about uses of information technology</p>	<p>To describe what an input is.</p> <p>To identify input and output devices.</p> <p>To explain that a computer system accepts an input and processes it to produce an output.</p> <p>To explain how computer systems can change the way we work.</p> <p>To recognise that a network is made up of a number of components.</p> <p>To identify network devices around me.</p> <p>To identify the benefits of computer networks.</p>	<p>To describe how networks connect to other networks.</p> <p>To outline how information can be shared via the World Wide Web.</p> <p>To recognise the need for security on the internet.</p> <p>To describe how to access the World Wide Web.</p> <p>To explain how the content of the World Wide Web is created, owned, and shared by people.</p> <p>To describe the current limitations of World Wide Web media.</p>	<p>To recognise that computers can be part of a system in an electronic device.</p> <p>To understand that computers can be connected together to form systems.</p> <p>To recognise input, process, and output in larger computer systems.</p> <p>To recognise that data is transferred using agreed protocols (methods).</p> <p>To recognise the role of computer systems in our lives.</p> <p>To explain that the internet lets people in different places work together.</p>	<p>To recall how to use a search engine.</p> <p>To compare the results from different search engines.</p> <p>To explain why search engines exist.</p> <p>To explain how search results are selected.</p> <p>To explain how ranking is determined by rules, and that different search engines use different rules.</p> <p>To explain how search engines make money by selling advertising space.</p> <p>To define 'communication'</p> <p>To discuss the opportunities that technology offers for communication.</p>

				<p>To explain the benefits of the World Wide Web.</p>	<p>To explain that the internet allows different media to be shared.</p> <p>To evaluate different ways of working together.</p> <p>To recognise that internet collaborations can be public or private.</p>	<p>To list methods of communicating using the internet.</p> <p>To choose an appropriate method of internet communication for a given purpose.</p> <p>To evaluate different methods of online communication.</p>
<p>Creating Media</p>	<p>To explain what different freehand tools do.</p> <p>To create a picture using freehand tools.</p> <p>To use a range of paint colours, shape and line tools when precision is needed.</p> <p>To use letter, number, and Space keys to</p>	<p>To recognise that some digital devices can capture images using a camera.</p> <p>To take photographs in both landscape and portrait format.</p> <p>To recognise features of 'good' photographs.</p>	<p>To explain that an animation is made up of a sequence of images.</p> <p>To plan an animation using a storyboard.</p> <p>To review a captured sequence of frames as an animation.</p> <p>To add media to enhance an animation.</p>	<p>To identify that sound can be recorded.</p> <p>To record sound using a computer.</p> <p>To recognise that audio can be edited.</p> <p>To play recorded audio.</p>	<p>To identify that a vector drawing comprises separate objects.</p> <p>To add an object to a vector drawing.</p> <p>To recognise that each object in a drawing is in its own layer.</p> <p>To duplicate, modify and reposition an object.</p>	<p>To review an existing website (navigation bars, header).</p> <p>To recognise that web pages can contain different media types.</p> <p>To recognise that web pages are written by people.</p> <p>To recognise components of a web page layout.</p>

<p>enter text into a computer.</p> <p>To recognise a tool can be adjusted to suit my need.</p> <p>To use letter, number, and Space keys to enter text into a computer.</p> <p>To consider the impact of choices made.</p>	<p>To hold the camera still to take a clear photograph.</p> <p>To recognise that photographs can be change after they have been taken.</p> <p>To use filters to edit the appearance of a photograph.</p> <p>To identify that computers can be used to play sounds of different instruments.</p> <p>To experiment with different sounds on a computer.</p> <p>To use a computer to create a musical pattern.</p>	<p>To recognise how text and images can be used together to convey information.</p> <p>To show that page orientation can be changed.</p> <p>To organise text and image placeholders in a page layout.</p> <p>To move resize and rotate images</p> <p>To recognise how different font styles and effects are used for particular purposes.</p> <p>To review a document.</p>	<p>To import audio into a project.</p> <p>To recognise that digital images can be changed for different purposes.</p> <p>To use an application to change the whole of a digital image.</p> <p>To change the composition of a digital image by rotating, flipping, cropping and applying filters.</p> <p>To choose the most appropriate tool for a particular purpose.</p>	<p>To explain how alignment and size guides can help create a more consistent drawing.</p> <p>To combine options to achieve a desired effect.</p> <p>To consider the impact of choices made.</p> <p>To create a vector drawing for a given purpose.</p> <p>To explain the features of video as a visual media format.</p> <p>To use different camera angles, pan, tilt and zoom.</p> <p>To explain the purpose of a storyboard.</p> <p>To identify that videos can be edited on a recording device or on a computer.</p>	<p>To create a new blank web page.</p> <p>To add text to a web page.</p> <p>To embed media in a web page.</p> <p>To recognise the need to preview pages (different screens / devices).</p> <p>To add web pages to a website.</p> <p>To preview a web page (different screen sizes).</p> <p>To insert hyperlinks between pages.</p> <p>To insert hyperlinks to another site.</p> <p>To recognise the implications of linking to content owned by others.</p> <p>To explain that 3D models can be created on a computer.</p> <p>To recognise that digital tools can be used to manipulate 3D objects.</p>
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					<p>To combine filming techniques for a given purpose.</p> <p>To decide what changes I will make when editing.</p> <p>To use split, trim, and crop to edit a video.</p>	<p>To use digital tools to accurately size 3D objects.</p> <p>To construct a 3D model which reflects a real world object.</p>
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Digital Literacy - Progression Map

Concept

Skill

Digital Literacy	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Internet Safety	<p>To understand why we need to keep passwords safe.</p> <p>To understand although parents and teachers can help you log on, passwords should never be shared with anyone else.</p> <p>To know that we treat people the same online as we do offline.</p>	<p>To understand the importance of communicating safely and respectfully online, and the need for keeping personal information private.</p> <p>To know what to do and who to tell when concerned about content or being contacted.</p>	<p>To demonstrate using computers safely and responsibly, knowing a range of ways to report unacceptable content and contact when online.</p> <p>To develop and understand rules for personal internet safety.</p> <p>To know that some information should be kept private and why.</p>	<p>To develop and understand rules for personal internet safety. To know it is dangerous to meet anyone you have met online.</p> <p>To know what is personal information and why we need to keep it private.</p> <p>To know who to tell if something is uncomfortable online.</p> <p>To understand reliability when using online services.</p> <p>To know how to be respectful online.</p>	<p>To understand what cyberbullying is.</p> <p>To recognise the impact that cyberbullying can have on people.</p> <p>To learn the strategies to avoid getting into or contributing to negative situations online.</p> <p>To share ideas using a range of online methods.</p> <p>To develop key skills and ideas about personal safety when using any form of electronic communication.</p>	<p>To understand what information is personal and how create safe profiles online.</p> <p>To develop an awareness of potential risks and how to prevent them.</p> <p>To demonstrate responsible use of technologies and online services and knows a range of ways to report concerns.</p>
Data and information	<p>To identify some attributes of an object and to collect simple data.</p> <p>To show that collected data can be counted.</p>	<p>To use a tally chart to collect data.</p> <p>To show I can enter data onto a computer.</p>	<p>To investigate questions with yes/no answers.</p> <p>To create questions with yes/no answers.</p>	<p>To suggest questions that can be answered using a table of data.</p>	<p>To explain that a computer program can be used to organise data.</p>	<p>To identify questions that can be answered using spreadsheet data.</p>

	<p>To explain that objects can be grouped by similarities (attribute).</p> <p>To describe a group of objects (based on commonality).</p> <p>To recognise that information can be presented in different ways.</p>	<p>To recognise that people, animals and objects can be described by attributes.</p> <p>To suggest appropriate headings for tally charts and pictograms.</p> <p>To use a computer to answer comparison questions (graphs, tables).</p> <p>To use a computer program to present information in different ways.</p> <p>To give simple examples of why some information should not be shared.</p>	<p>To choose questions that will divide objects into evenly sized subgroups.</p> <p>To explain that a branching database is an identification tool.</p> <p>To identify an object using a branching database.</p> <p>To retrieve information from different levels of the branching database.</p> <p>To suggest real-world applications for branching databases.</p>	<p>To identify data that can be logged over time.</p> <p>To use a digital device to collect data automatically.</p> <p>To use a computer program to sort data by one attribute.</p> <p>To export information in different formats.</p>	<p>To choose different ways to view data.</p> <p>To ask questions that need more than one attribute to answer.</p> <p>To choose which attribute to sort data by to answer a given question.</p> <p>To explain that we present information to communicate a message.</p> <p>To choose suitable ways to present information to other people.</p>	<p>To explain what an item of data is in a spreadsheet.</p> <p>To explain that formulas can be used to produce calculated data.</p> <p>To use functions to create new data.</p> <p>To recognise that a cell's value automatically updates when the value in a linked cell is changed.</p> <p>To choose suitable ways to present spreadsheet data.</p>
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Computer Science – Progression Map

Concept
Skill

<u>Computer Science</u>	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Programming</p> <p>Algorithms</p>	<p>To predict the outcome of a command on a device.</p> <p>To list which commands can be used on a given device.</p> <p>To run a command on a floor robot.</p> <p>To choose a command for a given purpose.</p> <p>To understand that a program is a set of commands that a computer can run.</p> <p>To build a sequence of commands in steps.</p> <p>To run a program on a device.</p> <p>To predict the outcome of a command on a device.</p> <p>To explain what a given command does.</p>	<p>To describe that a series of instructions is a sequence.</p> <p>To choose a series of words that can be enacted as a sequence.</p> <p>To explain what happens when we change the order of instructions.</p> <p>To choose a series of instructions that can be run as a program.</p> <p>To create a program.</p> <p>To recognise that you can predict the outcome of a program.</p> <p>To debug a program that I have written.</p> <p>To explain what happens when we change the order of instructions.</p> <p>To choose a series of commands that can be run as a program.</p>	<p>To explain that programs start because of an input.</p> <p>To explain what a sequence is.</p> <p>To identify that a program includes sequences of commands.</p> <p>To build a sequence of commands.</p> <p>To explain that the order of commands can affect a program's output.</p> <p>To identify that different sequences can achieve the same and different outputs.</p> <p>To create a sequence of commands to produce a given outcome.</p> <p>To explain that programs start because of an input.</p>	<p>To identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves.</p> <p>To list an everyday task as a set of instructions including repetition.</p> <p>To explain that we can use a loop command in a program to repeat instructions.</p> <p>To identify patterns in a sequence.</p> <p>To use an indefinite loop to produce a given outcome.</p> <p>To plan a program that includes appropriate loops to produce a given outcome.</p> <p>To create two or more sequences that run at the same time.</p> <p>To identify everyday tasks that include repetition as part of a</p>	<p>To define that conditional statements are used in computer programs.</p> <p>To outline that a condition is something that can either be true or false.</p> <p>To explain that instructions in a program will produce specific outcomes.</p> <p>To experiment with a repeat-until loop.</p> <p>To show that a condition can switch program flow in one of two ways.</p> <p>To explain the importance of instruction order in 'if... then... else...'</p> <p>statements.</p> <p>To explain that a loop can stop when a condition is met, eg an event.</p>	<p>To define a 'variable' as something that is changeable.</p> <p>To explain that a variable has a name and a value.</p> <p>To experiment with the value of an existing variable.</p> <p>To explain the importance of setting up a variable at the start of a program (initialisation).</p> <p>To explain that if you change the value of a variable, you cannot access the previous value (cannot undo).</p> <p>To use the same variable in more than one location in a program.</p> <p>To explain that the name of a variable needs to be unique.</p> <p>To explain that the name of a variable is meaningless to the computer.</p>

	<p>To choose a series of commands that can be run as a program.</p> <p>To run a program on a device.</p>	<p>To use logical reasoning to predict the outcome of a program.</p> <p>To run a program on a device.</p>	<p>To build a sequence of commands.</p> <p>To order commands in a program.</p> <p>To identify that different sequences can achieve different outputs.</p> <p>To create a sequence of commands to produce a given outcome.</p>	<p>sequence, eg brushing teeth, dance moves.</p> <p>To identify a loop within a program.</p> <p>To use an indefinite loop to produce a given outcome.</p> <p>To recognise tools that enable more than one process to be run at the same time (concurrency).</p> <p>To create two or more sequences that run at the same time.</p>	<p>To create a count-controlled or event-controlled loop.</p> <p>To choose a condition to use in a program.</p> <p>To explain that when a condition is met a loop will complete a cycle before it stops.</p> <p>To use a condition in an 'if... then...' statement to start an action.</p> <p>To explain the importance of instruction order in 'if... then... else...' statements.</p>	
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