

# Knowledge and Skills Progression Year 1 to Year 6 Computing Curriculum



Year Group	Term	Unit Name	Success Criteria	Education for a Connected World
1	Aut 1	Computing systems and networks – Technology around us	<ul style="list-style-type: none"> <li>- I can explain how these technology examples help us</li> <li>- I can explain technology as something that helps us</li> <li>- I can locate examples of technology in the classroom</li> <li>- I can name the main parts of a computer</li> <li>- I can switch on and log into a computer</li> <li>- I can use a mouse to click and drag</li> <li>- I can click and drag to make objects on a screen</li> <li>- I can use a mouse to create a picture</li> <li>- I can use a mouse to open a program</li> <li>- I can save my work to a file</li> <li>- I can say what a keyboard is for</li> <li>- I can type my name on a computer</li> <li>- I can delete letters</li> <li>- I can open my work from a file</li> <li>- I can use the arrow keys to move the cursor</li> <li>- I can discuss how we benefit from these rules</li> <li>- I can give examples of some of these rules</li> <li>- I can identify rules to keep us safe and healthy when we are using technology in and beyond the home</li> </ul>	Health, well-being and lifestyle Self Image and identity Managing Online Information  Copyright and ownership
1	Aut 2	Creating media – Digital painting	<ul style="list-style-type: none"> <li>- I can draw lines on a screen and explain which tools I used</li> <li>- I can make marks on a screen and explain which tools I used</li> <li>- I can use the paint tools to draw a picture</li> <li>- I can make marks with the square and line tools</li> <li>- I can use the shape and line tools effectively</li> <li>- I can use the shape and line tools to recreate the work of an artist</li> <li>- I can choose appropriate shapes</li> <li>- I can create a picture in the style of an artist</li> <li>- I can make appropriate colour choices</li> <li>- I can choose appropriate paint tools and colours to recreate the work of an artist</li> <li>- I can say which tools were helpful and why</li> <li>- I know that different paint tools do different jobs</li> <li>- I can change the colour and brush sizes</li> <li>- I can make dots of colour on the page</li> <li>- I can use dots of colour to create a picture in the style of an artist on my own</li> <li>- I can explain that pictures can be made in lots of different ways</li> <li>- I can say whether I prefer painting using a computer or using paper</li> <li>- I can spot the differences between painting on a computer and on paper</li> </ul>	
1	Spr 1	Programming A – Moving a robot	<ul style="list-style-type: none"> <li>- I can match a command to an outcome</li> <li>- I can predict the outcome of a command on a device</li> <li>- I can run a command on a device</li> <li>- I can follow an instruction</li> <li>- I can give directions</li> <li>- I can recall words that can be acted out</li> <li>- I can compare forwards and backwards movements</li> <li>- I can predict the outcome of a sequence involving forwards and backwards commands</li> <li>- I can start a sequence from the same place</li> <li>- I can compare left and right turns</li> <li>- I can experiment with turn and move commands to move a robot</li> <li>- I can predict the outcome of a sequence involving up to four commands</li> <li>- I can choose the order of commands in a sequence</li> <li>- I can debug my program</li> <li>- I can explain what my program should do</li> <li>- I can identify several possible solutions</li> <li>- I can plan two programs</li> <li>- I can use two different programs to get to the same place</li> </ul>	
1	Spr 2	Data and information – Grouping	<ul style="list-style-type: none"> <li>- I can describe objects using labels</li> <li>- I can identify the label for a group of objects</li> <li>- I can match objects to groups</li> </ul>	

		data	<ul style="list-style-type: none"> <li>- I can count a group of objects</li> <li>- I can count objects</li> <li>- I can group objects</li> <li>- I can describe an object</li> <li>- I can describe a property of an object</li> <li>- I can find objects with similar properties</li> <li>- I can count how many objects share a property</li> <li>- I can group objects in more than one way</li> <li>- I can group similar objects</li> <li>- I can choose how to group objects</li> <li>- I can describe groups of objects</li> <li>- I can record how many objects are in a group</li> <li>- I can compare groups of objects</li> <li>- I can decide how to group objects to answer a question</li> <li>- I can record and share what I have found</li> </ul>	
1	Sum 1	Creating media – Digital writing	<ul style="list-style-type: none"> <li>- I can identify and find keys on a keyboard</li> <li>- I can open a word processor</li> <li>- I can recognise keys on a keyboard</li> <li>- I can enter text into a computer</li> <li>- I can use backspace to remove text</li> <li>- I can use letter, number, and space keys</li> <li>- I can explain what the keys that I have learnt about already do</li> <li>- I can identify the toolbar and use bold, italic, and underline</li> <li>- I can type capital letters</li> <li>- I can change the font</li> <li>- I can select all of the text by clicking and dragging</li> <li>- I can select a word by double-clicking</li> <li>- I can decide if my changes have improved my writing</li> <li>- I can say what tool I used to change the text</li> <li>- I can use 'undo' to remove changes</li> <li>- I can explain the differences between typing and writing</li> <li>- I can make changes to text on a computer</li> <li>- I can say why I prefer typing or writing</li> </ul>	
1	Sum 2	Programming B - Programming animations	<ul style="list-style-type: none"> <li>- I can compare different programming tools</li> <li>- I can find which commands to move a sprite</li> <li>- I can use commands to move a sprite</li> <li>- I can run my program</li> <li>- I can use a Start block in a program</li> <li>- I can use more than one block by joining them together</li> <li>- I can change the value</li> <li>- I can find blocks that have numbers</li> <li>- I can say what happens when I change a value</li> <li>- I can add blocks to each of my sprites</li> <li>- I can delete a sprite</li> <li>- I can show that a project can include more than one sprite</li> <li>- I can choose appropriate artwork for my project</li> <li>- I can create an algorithm for each sprite</li> <li>- I can decide how each sprite will move</li> <li>- I can add programming blocks based on my algorithm</li> <li>- I can test the programs I have created</li> <li>- I can use sprites that match my design</li> </ul>	
2	Aut 1	Computing systems and networks – IT around us	<ul style="list-style-type: none"> <li>- I can describe some uses of computers</li> <li>- I can identify examples of computers</li> <li>- I can identify that a computer is a part of IT</li> <li>- I can identify examples of IT</li> <li>- I can identify that some IT can be used in more than one way</li> <li>- I can sort school IT by what it's used for</li> <li>- I can find examples of information technology</li> <li>- I can sort IT by where it is found</li> <li>- I can talk about uses of information technology</li> <li>- I can demonstrate how IT devices work together</li> <li>- I can recognise common types of technology</li> <li>- I can say why we use IT</li> <li>- I can list different uses of information technology</li> <li>- I can say how rules can help keep me safe</li> <li>- I can talk about different rules for using IT</li> <li>- I can explain the need to use IT in different ways</li> <li>- I can identify the choices that I make when using IT</li> <li>- I can use IT for different types of activities</li> </ul>	- Health, well-being and lifestyle
2	Aut 2	Creating media – Digital photography	<ul style="list-style-type: none"> <li>- I can explain what I did to capture a digital photo</li> <li>- I can recognise what devices can be used to take photographs</li> <li>- I can talk about how to take a photograph</li> <li>- I can explain the process of taking a good photograph</li> <li>- I can explain why a photo looks better in portrait or landscape format</li> <li>- I can take photos in both landscape and portrait format</li> <li>- I can discuss how to take a good photograph</li> </ul>	

			<ul style="list-style-type: none"> <li>- I can identify what is wrong with a photograph</li> <li>- I can improve a photograph by retaking it</li> <li>- I can experiment with different light sources</li> <li>- I can explain why a picture may be unclear</li> <li>- I can explore the effect that light has on a photo</li> <li>- I can explain my choices</li> <li>- I can recognise that images can be changed</li> <li>- I can use a tool to achieve a desired effect</li> <li>- I can apply a range of photography skills to capture a photo</li> <li>- I can identify which photos are real and which have been changed</li> <li>- I can recognise which photos have been changed</li> </ul>	
2	Spr 1	Programming A – Robot algorithms	<ul style="list-style-type: none"> <li>- I can choose a series of words that can be enacted as a sequence</li> <li>- I can follow instructions given by someone else</li> <li>- I can give clear instructions</li> <li>- I can show the difference in outcomes between two sequences that consist of the same commands</li> <li>- I can use an algorithm to program a sequence on a floor robot</li> <li>- I can use the same instructions to create different algorithms</li> <li>- I can compare my prediction to the program outcome</li> <li>- I can follow a sequence</li> <li>- I can predict the outcome of a sequence</li> <li>- I can explain the choices I made for my mat design</li> <li>- I can identify different routes around my mat</li> <li>- I can test my mat to make sure that it is usable</li> <li>- I can create an algorithm to meet my goal</li> <li>- I can explain what my algorithm should achieve</li> <li>- I can use my algorithm to create a program</li> <li>- I can plan algorithms for different parts of a task</li> <li>- I can put together the different parts of my program</li> <li>- I can test and debug each part of the program</li> </ul>	
2	Spr 2	Data and information – Pictograms	<ul style="list-style-type: none"> <li>- I can compare totals in a tally chart</li> <li>- I can record data in a tally chart</li> <li>- I can represent a tally count as a total</li> <li>- I can enter data onto a computer</li> <li>- I can use a computer to view data in a different format</li> <li>- I can use pictograms to answer simple questions about objects</li> <li>- I can explain what the pictogram shows</li> <li>- I can organise data in a tally chart</li> <li>- I can use a tally chart to create a pictogram</li> <li>- I can answer 'more than'/'less than' and 'most/least' questions about an attribute</li> <li>- I can create a pictogram to arrange objects by an attribute</li> <li>- I can tally objects using a common attribute</li> <li>- I can choose a suitable attribute to compare people</li> <li>- I can collect the data I need</li> <li>- I can create a pictogram and draw conclusions from it</li> <li>- I can give simple examples of why information should not be shared</li> <li>- I can share what I have found out using a computer</li> <li>- I can use a computer program to present information in different ways</li> </ul>	
2	Sum 1	Creating media - Digital music	<ul style="list-style-type: none"> <li>- I can describe music using adjectives</li> <li>- I can identify simple differences in pieces of music</li> <li>- I can say what I do and don't like about a piece of music</li> <li>- I can create a rhythm pattern</li> <li>- I can explain that music is created and played by humans</li> <li>- I can play an instrument following a rhythm pattern</li> <li>- I can connect images with sounds</li> <li>- I can relate an idea to a piece of music</li> <li>- I can use a computer to experiment with pitch</li> <li>- I can explain how my music can be played in different ways</li> <li>- I can identify that music is a sequence of notes</li> <li>- I can refine my musical pattern on a computer</li> <li>- I can add a sequence of notes to my rhythm</li> <li>- I can create a rhythm which represents an animal I've chosen</li> <li>- I can create my animal's rhythm on a computer</li> <li>- I can explain how I changed my work</li> <li>- I can listen to music and describe how it makes me feel</li> <li>- I can review my work</li> </ul>	
2	Sum 2	Programming B - Programming quizzes	<ul style="list-style-type: none"> <li>- I can identify that a program needs to be started</li> <li>- I can identify the start of a sequence</li> <li>- I can show how to run my program</li> <li>- I can change the outcome of a sequence of commands</li> <li>- I can match two sequences with the same outcome</li> <li>- I can predict the outcome of a sequence of commands</li> <li>- I can build the sequences of blocks I need</li> <li>- I can decide which blocks to use to meet the design</li> </ul>	

			<ul style="list-style-type: none"> <li>- I can work out the actions of a sprite in an algorithm</li> <li>- I can choose backgrounds for the design</li> <li>- I can choose characters for the design</li> <li>- I can create a program based on the new design</li> <li>- I can build sequences of blocks to match my design</li> <li>- I can choose the images for my own design</li> <li>- I can create an algorithm</li> <li>- I can compare my project to my design</li> <li>- I can debug my program</li> <li>- I can improve my project by adding features</li> </ul>	
3	Aut 1	Computing systems and networks – Connecting computers	<ul style="list-style-type: none"> <li>- I can explain that digital devices accept inputs</li> <li>- I can explain that digital devices produce outputs</li> <li>- I can follow a process</li> <li>- I can classify input and output devices</li> <li>- I can describe a simple process</li> <li>- I can design a digital device</li> <li>- I can explain how I use digital devices for different activities</li> <li>- I can recognise similarities between using digital devices and non-digital tools</li> <li>- I can suggest differences between using digital devices and non-digital tools</li> <li>- I can discuss why we need a network switch</li> <li>- I can explain how messages are passed through multiple connections</li> <li>- I can recognise different connections</li> <li>- I can demonstrate how information can be passed between devices</li> <li>- I can explain the role of a switch, server, and wireless access point in a network</li> <li>- I can recognise that a computer network is made up of a number of devices</li> <li>- I can identify how devices in a network are connected together</li> <li>- I can identify networked devices around me</li> <li>- I can identify the benefits of computer networks</li> </ul>	Privacy and Security
3	Aut 2	Creating media - Stop-frame animation	<ul style="list-style-type: none"> <li>- I can create an effective flip book—style animation</li> <li>- I can draw a sequence of pictures</li> <li>- I can explain how an animation/flip book works</li> <li>- I can create an effective stop-frame animation</li> <li>- I can explain why little changes are needed for each frame</li> <li>- I can predict what an animation will look like</li> <li>- I can break down a story into settings, characters and events</li> <li>- I can create a storyboard</li> <li>- I can describe an animation that is achievable on screen</li> <li>- I can evaluate the quality of my animation</li> <li>- I can review a sequence of frames to check my work</li> <li>- I can use onion skinning to help me make small changes between frames</li> <li>- I can evaluate another learner’s animation</li> <li>- I can explain ways to make my animation better</li> <li>- I can improve my animation based on feedback</li> <li>- I can add other media to my animation</li> <li>- I can evaluate my final film</li> <li>- I can explain why I added other media to my animation</li> </ul>	
3	Spr 1	Programming A - Sequencing sounds	<ul style="list-style-type: none"> <li>- I can explain that objects in Scratch have attributes (linked to)</li> <li>- I can identify the objects in a Scratch project (sprites, backdrops)</li> <li>- I can recognise that commands in Scratch are represented as blocks</li> <li>- I can choose a word which describes an on-screen action for my plan</li> <li>- I can create a program following a design</li> <li>- I can identify that each sprite is controlled by the commands I choose</li> <li>- I can create a sequence of connected commands</li> <li>- I can explain that the objects in my project will respond exactly to the code</li> <li>- I can start a program in different ways</li> <li>- I can combine sound commands</li> <li>- I can explain what a sequence is</li> <li>- I can order notes into a sequence</li> </ul>	

			<ul style="list-style-type: none"> <li>- I can build a sequence of commands</li> <li>- I can decide the actions for each sprite in a program</li> <li>- I can make design choices for my artwork</li> <li>- I can identify and name the objects I will need for a project</li> <li>- I can implement my algorithm as code</li> <li>- I can relate a task description to a design</li> </ul>	
3	Spr 2	Data and information – Branching databases	<ul style="list-style-type: none"> <li>- I can create two groups of objects separated by one attribute</li> <li>- I can investigate questions with yes/no answers</li> <li>- I can make up a yes/no question about a collection of objects</li> <li>- I can arrange objects into a tree structure</li> <li>- I can create a group of objects within an existing group</li> <li>- I can select an attribute to separate objects into groups</li> <li>- I can group objects using my own yes/no questions</li> <li>- I can select objects to arrange in a branching database</li> <li>- I can test my branching database to see if it works</li> <li>- I can compare two branching database structures</li> <li>- I can create yes/no questions using given attributes</li> <li>- I can explain that questions need to be ordered carefully to split objects into similarly sized groups</li> <li>- I can create a physical version of a branching database</li> <li>- I can create questions that will enable objects to be uniquely identified</li> <li>- I can independently create questions to use in a branching database</li> <li>- I can create a branching database that reflects my plan</li> <li>- I can suggest real-world uses for branching databases</li> <li>- I can work with a partner to test my identification tool</li> </ul>	
3	Sum 1	Creating media – Desktop publishing	<ul style="list-style-type: none"> <li>- I can explain the difference between text and images</li> <li>- I can identify the advantages and disadvantages of using text and images</li> <li>- I can recognise that text and images can communicate messages clearly</li> <li>- I can change font style, size, and colours for a given purpose</li> <li>- I can edit text</li> <li>- I can explain that text can be changed to communicate more clearly</li> <li>- I can create a template for a particular purpose</li> <li>- I can define the term 'page orientation'</li> <li>- I can recognise placeholders and say why they are important</li> <li>- I can choose the best locations for my content</li> <li>- I can make changes to content after I've added it</li> <li>- I can paste text and images to create a magazine cover</li> <li>- I can choose a suitable layout for a given purpose</li> <li>- I can identify different layouts</li> <li>- I can match a layout to a purpose</li> <li>- I can compare work made on desktop publishing to work created by hand</li> <li>- I can identify the uses of desktop publishing in the real world</li> <li>- I can say why desktop publishing might be helpful</li> </ul>	Managing online information
3	Sum 2	Programming B - Events and actions in programs	<ul style="list-style-type: none"> <li>- I can choose which keys to use for actions and explain my choices</li> <li>- I can explain the relationship between an event and an action</li> <li>- I can identify a way to improve a program</li> <li>- I can choose a character for my project</li> <li>- I can choose a suitable size for a character in a maze</li> <li>- I can program movement</li> <li>- I can choose blocks to set up my program</li> <li>- I can consider the real world when making design choices</li> <li>- I can use a programming extension</li> <li>- I can build more sequences of commands to make my design work</li> <li>- I can choose suitable keys to turn on additional features</li> <li>- I can identify additional features (from a given set of blocks)</li> <li>- I can match a piece of code to an outcome</li> <li>- I can modify a program using a design</li> <li>- I can test a program against a given design</li> <li>- I can evaluate my project</li> <li>- I can implement my design</li> <li>- I can make design choices and justify them</li> </ul>	
4	Aut 1	Computing	<ul style="list-style-type: none"> <li>- I can demonstrate how information is shared across the internet</li> </ul>	

		systems and networks – The Internet	<ul style="list-style-type: none"> <li>- I can describe the internet as a network of networks</li> <li>- I can discuss why a network needs protecting</li> <li>- I can describe networked devices and how they connect</li> <li>- I can explain that the internet is used to provide many services</li> <li>- I can recognise that the World Wide Web contains websites and web pages</li> <li>- I can describe how to access websites on the WWW</li> <li>- I can describe where websites are stored when uploaded to the WWW</li> <li>- I can explain the types of media that can be shared on the WWW</li> <li>- I can explain that internet services can be used to create content online</li> <li>- I can explain what media can be found on websites</li> <li>- I can recognise that I can add content to the WWW</li> <li>- I can explain that there are rules to protect content</li> <li>- I can explain that websites and their content are created by people</li> <li>- I can suggest who owns the content on websites</li> <li>- I can explain that not everything on the World Wide Web is true</li> <li>- I can explain why I need to think carefully before I share or reshare content</li> <li>- I can explain why some information I find online may not be honest, accurate, or legal</li> </ul>	<ul style="list-style-type: none"> <li>- Managing online information</li> </ul>
4	Aut 2	Creating media - Audio production	<ul style="list-style-type: none"> <li>- I can explain that the person who records the sound can say who is allowed to use it</li> <li>- I can identify the input and output devices used to record and play sound</li> <li>- I can use a computer to record audio</li> <li>- I can discuss what sounds can be added to a podcast</li> <li>- I can inspect the soundwave view to know where to trim my recording</li> <li>- I can re-record my voice to improve my recording</li> <li>- I can explain how sounds can be combined to make a podcast more engaging</li> <li>- I can plan appropriate content for a podcast</li> <li>- I can save my project so the different parts remain editable</li> <li>- I can improve my voice recordings</li> <li>- I can record content following my plan</li> <li>- I can review the quality of my recordings</li> <li>- I can arrange multiple sounds to create the effect I want</li> <li>- I can explain the difference between saving a project and exporting an audio file</li> <li>- I can open my project to continue working on it</li> <li>- I can choose appropriate edits to improve my podcast</li> <li>- I can listen to an audio recording to identify its strengths</li> <li>- I can suggest improvements to an audio recording</li> </ul>	<ul style="list-style-type: none"> <li>- Copyright and ownership</li> </ul>
4	Spr 1	Programming A – Repetition in shapes	<ul style="list-style-type: none"> <li>- I can create a code snippet for a given purpose</li> <li>- I can explain the effect of changing a value of a command</li> <li>- I can program a computer by typing commands</li> <li>- I can test my algorithm in a text-based language</li> <li>- I can use a template to create a design for my program</li> <li>- I can write an algorithm to produce a given outcome</li> <li>- I can identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves</li> <li>- I can identify patterns in a sequence</li> <li>- I can use a count-controlled loop to produce a given outcome</li> <li>- I can choose which values to change in a loop</li> <li>- I can identify the effect of changing the number of times a task is repeated</li> <li>- I can predict the outcome of a program containing a count-controlled loop</li> <li>- I can explain that a computer can repeatedly call a procedure</li> <li>- I can identify 'chunks' of actions in the real world</li> <li>- I can use a procedure in a program</li> <li>- I can design a program that includes count-controlled loops</li> <li>- I can develop my program by debugging it</li> <li>- I can make use of my design to write a program</li> </ul>	

4	Spr 2	Data and information – Data logging	<ul style="list-style-type: none"> <li>- I can choose a data set to answer a given question</li> <li>- I can identify data that can be gathered over time</li> <li>- I can suggest questions that can be answered using a given data set</li> <li>- I can explain what data can be collected using sensors</li> <li>- I can identify that data from sensors can be recorded</li> <li>- I can use data from a sensor to answer a given question</li> <li>- I can identify the intervals used to collect data</li> <li>- I can recognise that a data logger collects data at given points</li> <li>- I can talk about the data that I have captured</li> <li>- I can explain that there are different ways to view data</li> <li>- I can sort data to find information</li> <li>- I can view data at different levels of detail</li> <li>- I can plan how to collect data using a data logger</li> <li>- I can propose a question that can be answered using logged data</li> <li>- I can use a data logger to collect data</li> <li>- I can draw conclusions from the data that I have collected</li> <li>- I can explain the benefits of using a data logger</li> <li>- I can interpret data that has been collected using a data logger</li> </ul>	
4	Sum 1	Creating media – Photo editing	<ul style="list-style-type: none"> <li>- I can explain why I might crop an image</li> <li>- I can improve an image by rotating it</li> <li>- I can use photo editing software to crop an image</li> <li>- I can experiment with different colour effects</li> <li>- I can explain that different colour effects make you think and feel different things</li> <li>- I can explain why I chose certain colour effects</li> <li>- I can add to the composition of an image by cloning</li> <li>- I can identify how a photo edit can be improved</li> <li>- I can remove parts of an image using cloning</li> <li>- I can experiment with tools to select and copy part of an image</li> <li>- I can explain why photos might be edited</li> <li>- I can use a range of tools to copy between images</li> <li>- I can choose suitable images for my project</li> <li>- I can create a project that is a combination of other images</li> <li>- I can describe the image I want to create</li> <li>- I can combine text and my image to complete the project</li> <li>- I can review images against a given criteria</li> <li>- I can use feedback to guide making changes</li> </ul>	- Self-image and identity
4	Sum 2	Programming B – Repetition in games	<ul style="list-style-type: none"> <li>- I can list an everyday task as a set of instructions including repetition</li> <li>- I can modify a snippet of code to create a given outcome</li> <li>- I can predict the outcome of a snippet of code</li> <li>- I can choose when to use a count-controlled and an infinite loop</li> <li>- I can modify loops to produce a given outcome</li> <li>- I can recognise that some programming languages enable more than one process to be run at once</li> <li>- I can choose which action will be repeated for each object</li> <li>- I can evaluate the effectiveness of the repeated sequences used in my program</li> <li>- I can explain what the outcome of the repeated action should be</li> <li>- I can explain the effect of my changes</li> <li>- I can identify which parts of a loop can be changed</li> <li>- I can re-use existing code snippets on new sprites</li> <li>- I can develop my own design explaining what my project will do</li> <li>- I can evaluate the use of repetition in a project</li> <li>- I can select key parts of a given project to use in my own design</li> <li>- I can build a program that follows my design</li> <li>- I can evaluate the steps I followed when building my project</li> <li>- I can refine the algorithm in my design</li> </ul>	
5	Aut 1	Computing systems and networks - Systems and searching	<ul style="list-style-type: none"> <li>- I can describe that a computer system features inputs, processes, and outputs</li> <li>- I can explain that computer systems communicate with other devices</li> <li>- I can explain that systems are built using a number of parts</li> <li>- I can explain the benefits of a given computer system</li> <li>- I can identify tasks that are managed by computer systems</li> <li>- I can identify the human elements of a computer system</li> <li>- I can compare results from different search engines</li> <li>- I can make use of a web search to find specific information</li> </ul>	Privacy and Security  Managing online informatio

			<ul style="list-style-type: none"> <li>- I can refine my web search</li> <li>- I can explain why we need tools to find things online</li> <li>- I can recognise the role of web crawlers in creating an index</li> <li>- I can relate a search term to the search engine's index</li> <li>- I can explain that a search engine follows rules to rank results</li> <li>- I can give examples of criteria used by search engines to rank results</li> <li>- I can order a list by rank</li> <li>- I can describe some of the ways that search results can be influenced</li> <li>- I can explain how search engines make money</li> <li>- I can recognise some of the limitations of search engines</li> </ul>	<p>n</p> <ul style="list-style-type: none"> <li>- Managing online information</li> <li>- Managing online information</li> <li>- Managing online information</li> </ul>
5	Aut 2	Creating media - Video production	<ul style="list-style-type: none"> <li>- I can compare features in different videos</li> <li>- I can explain that video is a visual media format</li> <li>- I can identify features of videos</li> <li>- I can experiment with different camera angles</li> <li>- I can identify and find features on a digital video recording device</li> <li>- I can make use of a microphone</li> <li>- I can capture video using a range of filming techniques</li> <li>- I can review how effective my video is</li> <li>- I can suggest filming techniques for a given purpose</li> <li>- I can create and save video content</li> <li>- I can decide which filming techniques I will use</li> <li>- I can outline the scenes of my video</li> <li>- I can explain how to improve a video by reshooting and editing</li> <li>- I can select the correct tools to make edits to my video</li> <li>- I can store, retrieve, and export my recording to a computer</li> <li>- I can evaluate my video and share my opinions</li> <li>- I can make edits to my video and improve the final outcome</li> <li>- I can recognise that my choices when making a video will impact on the quality of the final outcome</li> </ul>	Online Relationships
5	Spr 1	Programming A – Selection in physical computing	<ul style="list-style-type: none"> <li>- I can create a simple circuit and connect it to a microcontroller</li> <li>- I can explain what an infinite loop does</li> <li>- I can program a microcontroller to make an LED switch on</li> <li>- I can connect more than one output component to a microcontroller</li> <li>- I can design sequences that use count-controlled loops</li> <li>- I can use a count-controlled loop to control outputs</li> <li>- I can design a conditional loop</li> <li>- I can explain that a condition is either true or false</li> <li>- I can program a microcontroller to respond to an input</li> <li>- I can explain that a condition being met can start an action</li> <li>- I can identify a condition and an action in my project</li> <li>- I can use selection (an 'if...then...' statement) to direct the flow of a program</li> <li>- I can create a detailed drawing of my project</li> <li>- I can describe what my project will do</li> <li>- I can identify a real-world example of a condition starting an action</li> <li>- I can test and debug my project</li> <li>- I can use selection to produce an intended outcome</li> <li>- I can write an algorithm that describes what my model will do</li> </ul>	
5	Spr 2	Data and information – Flat-file databases	<ul style="list-style-type: none"> <li>- I can create a database using cards</li> <li>- I can explain how information can be recorded</li> <li>- I can order, sort, and group my data cards</li> <li>- I can choose which field to sort data by to answer a given question</li> <li>- I can explain what a field and a record is in a database</li> <li>- I can navigate a flat-file database to compare different views of information</li> <li>- I can combine grouping and sorting to answer specific questions</li> <li>- I can explain that data can be grouped using chosen values</li> </ul>	



			<ul style="list-style-type: none"> <li>- I can group information using a database</li> <li>- I can choose multiple criteria to answer a given question</li> <li>- I can choose which field and value are required to answer a given question</li> <li>- I can outline how 'AND' and 'OR' can be used to refine data selection</li> <li>- I can explain the benefits of using a computer to create charts</li> <li>- I can refine a chart by selecting a particular filter</li> <li>- I can select an appropriate chart to visually compare data</li> </ul>	
			<ul style="list-style-type: none"> <li>- I can ask questions that will need more than one field to answer</li> <li>- I can present my findings to a group</li> <li>- I can refine a search in a real-world context</li> </ul>	
5	Sum 1	Creating media – Introduction to vector graphics	<ul style="list-style-type: none"> <li>- I can discuss how vector drawings are different from paper-based drawings</li> <li>- I can experiment with the shape and line tools</li> <li>- I can recognise that vector drawings are made using shapes</li> <li>- I can explain that each element added to a vector drawing is an object</li> <li>- I can identify the shapes used to make a vector drawing</li> <li>- I can move, resize, and rotate objects I have duplicated</li> <li>- I can explain how alignment grids and resize handles can be used to improve consistency</li> <li>- I can modify objects to create a new image</li> <li>- I can use the zoom tool to help me add detail to my drawings</li> <li>- I can change the order of layers in a vector drawing</li> <li>- I can identify that each added object creates a new layer in the drawing</li> <li>- I can use layering to create an image</li> <li>- I can copy part of a drawing by duplicating several objects</li> <li>- I can recognise when I need to group and ungroup objects</li> <li>- I can reuse a group of objects to further develop my vector drawing</li> <li>- I can compare vector drawings to freehand paint drawings</li> <li>- I can create a vector drawing for a specific purpose</li> <li>- I can reflect on the skills I have used and why I have used them</li> </ul>	
5	Sum 2	Programming B – Selection in quizzes	<ul style="list-style-type: none"> <li>- I can identify conditions in a program</li> <li>- I can modify a condition in a program</li> <li>- I can recall how conditions are used in selection</li> <li>- I can create a program with different outcomes using selection</li> <li>- I can identify the condition and outcomes in an 'if... then... else...' statement</li> <li>- I can use selection in an infinite loop to check a condition</li> <li>- I can design the flow of a program which contains 'if... then... else...'</li> <li>- I can explain that program flow can branch according to a condition</li> <li>- I can show that a condition can direct program flow in one of two ways</li> <li>- I can identify the outcome of user input in an algorithm</li> <li>- I can outline a given task</li> <li>- I can use a design format to outline my project</li> <li>- I can implement my algorithm to create the first section of my program</li> <li>- I can share my program with others</li> <li>- I can test my program</li> <li>- I can extend my program further</li> <li>- I can identify the setup code I need in my program</li> <li>- I can identify ways the program could be improved</li> </ul>	
6	Aut 1	Computing systems and networks - Communication and collaboration	<ul style="list-style-type: none"> <li>- I can describe how computers use addresses to access websites</li> <li>- I can explain that internet devices have addresses</li> <li>- I can recognise that data is transferred using agreed methods</li> <li>- I can explain that all data transferred over the internet is in packets</li> <li>- I can explain that data is transferred over networks in packets</li> <li>- I can identify and explain the main parts of a data packet</li> <li>- I can explain that the internet allows different media to be shared</li> <li>- I can recognise how to access shared files stored online</li> <li>- I can send information over the internet in different ways</li> <li>- I can explain how the internet enables effective collaboration</li> <li>- I can identify different ways of working together online</li> </ul>	<ul style="list-style-type: none"> <li>- Managing online information</li> <li>- Self-</li> </ul>

			<ul style="list-style-type: none"> <li>- I can recognise that working together on the internet can be public or private</li> <li>- I can choose methods of communication to suit particular purposes</li> <li>- I can explain the different ways in which people communicate</li> <li>- I can identify that there are a variety of ways to communicate over the internet</li> <li>- I can compare different methods of communicating on the internet</li> <li>- I can decide when I should and should not share information online</li> <li>- I can explain that communication on the internet may not be private</li> </ul>	image and identity
6	Aut 2	Creating media – Web page creation	<ul style="list-style-type: none"> <li>- I can discuss the different types of media used on websites</li> <li>- I can explore a website</li> <li>- I know that websites are written in HTML</li> <li>- I can draw a web page layout that suits my purpose</li> <li>- I can recognise the common features of a web page</li> <li>- I can suggest media to include on my page</li> <li>- I can describe what is meant by the term 'fair use'</li> <li>- I can find copyright-free images</li> <li>- I can say why I should use copyright-free images</li> <li>- I can add content to my own web page</li> <li>- I can evaluate what my web page looks like on different devices and suggest/make edits</li> <li>- I can preview what my web page looks like</li> <li>- I can describe why navigation paths are useful</li> <li>- I can explain what a navigation path is</li> <li>- I can make multiple web pages and link them using hyperlinks</li> <li>- I can create hyperlinks to link to other people's work</li> <li>- I can evaluate the user experience of a website</li> <li>- I can explain the implication of linking to content owned by others</li> </ul>	Copyright and ownership
6	Spr 1	Programming A – Variables in games	<ul style="list-style-type: none"> <li>- I can explain that the way a variable changes can be defined</li> <li>- I can identify examples of information that is variable</li> <li>- I can identify that variables can hold numbers or letters</li> <li>- I can explain that a variable has a name and a value</li> <li>- I can identify a program variable as a placeholder in memory for a single value</li> <li>- I can recognise that the value of a variable can be changed</li> <li>- I can decide where in a program to change a variable</li> <li>- I can make use of an event in a program to set a variable</li> <li>- I can recognise that the value of a variable can be used by a program</li> <li>- I can choose the artwork for my project</li> <li>- I can create algorithms for my project</li> <li>- I can explain my design choices</li> <li>- I can choose a name that identifies the role of a variable</li> <li>- I can create the artwork for my project</li> <li>- I can test the code that I have written</li> <li>- I can identify ways that my game could be improved</li> <li>- I can share my game with others</li> <li>- I can use variables to extend my game</li> </ul>	
6	Spr 2	Data and information – Spreadsheets	<ul style="list-style-type: none"> <li>- I can collect data</li> <li>- I can enter data into a spreadsheet</li> <li>- I can suggest how to structure my data</li> <li>- I can apply an appropriate format to a cell</li> <li>- I can choose an appropriate format for a cell</li> <li>- I can explain what an item of data is</li> <li>- I can construct a formula in a spreadsheet</li> <li>- I can explain which data types can be used in calculations</li> <li>- I can identify that changing inputs changes outputs</li> <li>- I can apply a formula to multiple cells by duplicating it</li> <li>- I can calculate data using different operations</li> <li>- I can create a formula which includes a range of cells</li> <li>- I can apply a formula to calculate the data I need to answer questions</li> <li>- I can explain why data should be organised</li> <li>- I can use a spreadsheet to answer questions</li> <li>- I can produce a chart</li> <li>- I can suggest when to use a table or chart</li> </ul>	

			- I can use a chart to show the answer to questions	
6	Sum 1	Creating media – 3D Modelling	<ul style="list-style-type: none"> <li>- I can add 3D shapes to a project</li> <li>- I can move 3D shapes relative to one another</li> <li>- I can view 3D shapes from different perspectives</li> <li>- I can lift/lower 3D objects</li> <li>- I can recolour a 3D object</li> <li>- I can resize an object in three dimensions</li> <li>- I can duplicate 3D objects</li> <li>- I can group 3D objects</li> <li>- I can rotate objects in three dimensions</li> <li>- I can accurately size 3D objects</li> <li>- I can combine a number of 3D objects</li> <li>- I can show that placeholders can create holes in 3D objects</li> <li>- I can analyse a 3D model</li> <li>- I can choose objects to use in a 3D model</li> <li>- I can combine objects in a design</li> <li>- I can construct a 3D model based on a design</li> <li>- I can explain how my 3D model could be improved</li> <li>- I can modify my 3D model to improve it</li> </ul>	
6	Sum 2	Programming B - Sensing movement	<ul style="list-style-type: none"> <li>- I can apply my knowledge of programming to a new environment</li> <li>- I can test my program on an emulator</li> <li>- I can transfer my program to a controllable device</li> <li>- I can determine the flow of a program using selection</li> <li>- I can identify examples of conditions in the real world</li> <li>- I can use a variable in an if, then, else statement to select the flow of a program</li> <li>- I can experiment with different physical inputs</li> <li>- I can explain that checking a variable doesn't change its value</li> <li>- I can use a condition to change a variable</li> <li>- I can explain the importance of the order of conditions in else, if statements</li> <li>- I can modify a program to achieve a different outcome</li> <li>- I can use an operand (e.g. &lt;=&gt;) in an if, then statement</li> <li>- I can decide what variables to include in a project</li> <li>- I can design the algorithm for my project</li> <li>- I can design the program flow for my project</li> <li>- I can create a program based on my design</li> <li>- I can test my program against my design</li> <li>- I can use a range of approaches to find and fix bugs</li> </ul>	