Curriculum Map

Y5 - Woodpeckers Class

	At the end of each unit, children will be able to:					
	Lesson 1	**Lesson 2**	**Lesson 3**	**Lesson 4**	**Lesson 5**	**Lesson 6**
Computing Systems - Systems and Searching	**Explain that computers can be connected together to form systems** • explain that systems are built using a number of parts • describe the input, process, and output of a digital system • explain that computer systems communicate with other devices	**Recognise the role of computer systems in our lives** • identify tasks that are managed by computer systems • identify the human elements of a computer system • explain the benefits of a given computer system	**Identify how to use a search engine** • make use of a web search to find specific information • refine my web search • compare results from different search engines	**Describe how search engines select results** • explain why we need tools to find things online • recognise the role of web crawlers in creating an index • relate a search term to the search engine's index	**Explain how search results are ranked** • order a list by rank • explain that a search engine follows rules to rank results • give examples of criteria used by search engines to rank results	**Recognise why the order of results is important, and to whom** • describe some of the ways that search results can be influenced • recognise some of the limitations of search engines • explain how search engines make money
Creating Media - Video Production	**Explain what makes a video effective** • explain that video is a visual media format • identify features of videos • compare features in different videos	**Use a digital device to record video** • identify and find features on a digital video recording device • experiment with different camera angles • make use of a microphone	**Capture video using a range of techniques** • suggest filming techniques for a given purpose • capture video using a range of filming techniques • review how effective my video is	**Create a storyboard** • outline the scenes of my video • decide which filming techniques I will use • create and save video content	**Identify that video can be improved through reshooting and editing** • store, retrieve, and export my recording to a computer • explain how to improve a video by reshooting and editing • select the correct tools to make edits to my video	**Consider the impact of the choices made when making and sharing a video** • make edits to my video and improve the final outcome • recognise that my choices when making a video will impact the quality of the final outcome • evaluate my video and share my opinions

Programming A - Selection in Physical Computing	**Control a simple circuit connected to a computer** • create a simple circuit and connect it to a microcontroller • program a microcontroller to make an LED switch on • explain what an infinite loop does	**Write a program that includes count-controlled loops** • connect more than one output component to a microcontroller • use a count-controlled loop to control outputs • design sequences that use count-controlled loops	**Explain that a loop can stop when a condition is met** • explain that a condition is either true or false • design a conditional loop • program a microcontroller to respond to an input	**Explain that a loop can be used to repeatedly check whether a condition has been met** • explain that a condition being met can start an action • identify a condition and an action in my project • use selection (an 'if…then…' statement) to direct the flow of a program	**Design a physical project that includes selection** • identify a real-world example of a condition starting an action • describe what my project will do • create a detailed drawing of my project	**Create a program that controls a physical computing project** • write an algorithm that describes what my model will do • use selection to produce an intended outcome • test and debug my project
Data and Information - Flat-file databases	**Use a form to record information** • create a database using cards • explain how information can be recorded • order, sort, and group my data cards	**Compare paper and computer-based databases** • explain what a field and a record is in a database • navigate a flat-file database to compare different views of information • choose which field to sort data by to answer a given question	**Outline how you can answer questions by grouping and then sorting data** • explain that data can be grouped using chosen values • group information using a database • combine grouping and sorting to answer specific questions	**Explain that tools can be used to select specific data** • choose which field and value are required to answer a given question • outline how 'AND' and 'OR' can be used to refine data selection • choose multiple criteria to answer a given question	**Explain that computer programs can be used to compare data visually** • select an appropriate chart to visually compare data • refine a chart by selecting a particular filter • explain the benefits of using a computer to create charts	**Use a real-world database to answer questions** • ask questions that will need more than one field to answer • refine a search in a real-world context • present my findings to a group
Creating Media - Introduction to Vector Graphics	**Identify that drawing tools can be used to produce different outcomes** • recognise that vector drawings are made using shapes • experiment with the shape and line tools • discuss how vector drawings are different from paper-based drawings	**Create a vector drawing by combining shapes** • identify the shapes used to make a vector drawing • explain that each element added to a vector drawing is an object • move, resize, and rotate objects I have duplicated	**Use tools to achieve a desired effect** • use the zoom tool to help me add detail to my drawings • explain how alignment grids and resize handles can be used to improve consistency • modify objects to create a new image	**Recognise that vector drawings consist of layers** • identify that each added object creates a new layer in the drawing • change the order of layers in a vector drawing • use layering to create an image	**Group objects to make them easier to work with** • copy part of a drawing by duplicating several objects • recognise when I need to group and ungroup objects • reuse a group of objects to further develop my vector drawing	**Apply what I have learned about vector drawings** • create a vector drawing for a specific purpose • reflect on the skills I have used and why I have used them • compare vector drawings to freehand paint drawings

Programming B - Selection in Quizzes	**Explain how selection is used in computer programs** • recall how conditions are used in selection • identify conditions in a program • modify a condition in a program	**Relate that a conditional statement connects a condition to an outcome** • use selection in an infinite loop to check a condition • identify the condition and outcomes in an 'if… then… else…' statement • create a program that uses selection to produce different outcomes	**Explain how selection directs the flow of a program** • explain that program flow can branch according to a condition • design the flow of a program that contains 'if… then… else…' • show that a condition can direct program flow in one of two ways	**Design a program that uses selection** • outline a given task • use a design format to outline my project • identify the outcome of user input in an algorithm	**Create a program that uses selection** • implement my algorithm to create the first section of my program • test my program • share my program with others	**Evaluate my program** • identify ways the program could be improved • identify the setup code I need in my program • extend my program further
E-safety	Identify the consequences of positive and negative behaviour on themselves and others; Give examples of how individual/group actions can impact on others in a positive or negative way.		Demonstrate strategies to deal with both face-to-face and online bullying Consider what information is safe/unsafe to share offline and online, and reflect on the consequences of not keeping personal information private Know how to protect personal information online; Recognise disrespectful behaviour online and know how to respond to it.		Develop internet skills using Be an Internet Legend resources - reinforce skills around responding to inappropriate content or cyberbullying, phishing, grooming. Understand how to use settings and parental controls to keep ourselves safe on different sites.	
Vocab	**Unit 1 -** System Search engine Inputs Processes Outputs Refine	**Unit 2 -** Video Visual media Reshooting Storyboard Export	**Unit 3 -** Output component Microcontroller Selection	**Unit 4 -** Multiple criteria Field Context	**Unit 5 -** Vector Alignment Zoom	**Unit 6 -** Conditional statement Program Flow