YEAR 5

1. COMPUTING SYSTEMS AND NETWORKS – Systems and searching
2. CREATING MEDIA – Video production
3. PROGRAMMING A – Selection in physical computing
4. DATA AND INFORMATION – Flat-file databases
5. CREATING MEDIA – Introduction to vector graphics
6. PROGRAMMING B - Selection in quizzes

YEAR	STRAND	LESSON	PURPOSE	OUTCOMES
1	COMPUTING SYSTEMS AND NETWORKS SYSTEMS AND SEARCHING	1	Explain that computers can be connected together to form systems PAGES/OPEN OFFICE/WEBSITES	Describe that computer systems feature inputs, processes, and outputs Explain that computer systems communicate with other devices Explain that systems are built using a number of parts
1		2	Recognise the role of computer systems in our lives PAGES/OPEN OFFICE/WEBSITES	Explain the benefits of a given computer system Identify tasks that are managed by computer systems Identify the human elements of a computer system
1		3	Experiment with search engines PAGES/OPEN OFFICE/WEBSITES	Compare results from different search engines Make use of a web search to find specific information Refine my web search
1		4	Describe how search engines select results PAGES/OPEN OFFICE/WEBSITES	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
1		5	Explain how search results are ranked PAGES/OPEN OFFICE/WEBSITES	Explain that a search engine follows rules to rank results Give examples of criteria used by search engines to rank results Order a list by rank
1		6	Recognise why the order of results is important, and to whom PAGES/OPEN OFFICE/WEBSITES	Describe some of the ways that search results can be influenced Explain how search engines make money Recognise some of the limitations of search engines

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1	CREATING MEDIA VIDEO PRODUCTION	1	Explain what makes a video effective IMOVIE (iPad) / MICROSOFT PHOTOS	Compare features in different videos Explain that video is a visual media format Identify features of videos
1		2	Identify digital devices that can record video IMOVIE (iPad) / MICROSOFT PHOTOS	Experiment with different camera angles Identify and find features on a digital video recording device Make use of a microphone
1		3	Capture video using a range of techniques IMOVIE (iPad) / MICROSOFT PHOTOS	Capture video using a range of filming techniques Review how effective my video is Suggest filming techniques for a given purpose
1		4	Create a storyboard IMOVIE (iPad) / MICROSOFT PHOTOS	Create and save video content Decide which filming techniques I will use Outline the scenes of my video
1		5	Identify that video can be improved through reshooting and editing IMOVIE (iPad) / MICROSOFT PHOTOS	Explain how to improve a video by reshooting and editing Select the correct tools to make edits to my video Store, retrieve, and export my recording to a computer
1		6	Consider the impact of the choices made when making and sharing a video IMOVIE (iPad) / MICROSOFT PHOTOS	Evaluate my video and share my opinions Make edits to my video and improve the final outcome Recognise my choices will impact on the quality of the final outcome

YEAR	STRAND	LESSON	PURPOSE	OUTCOMES
1	PROGRAMMING A SELECTION IN PHYSICAL COMPUTING	1	Control a simple circuit connected to a computer MICRO:BIT / LEGO SPIKE	Create a simple circuit and connect it to a microcontroller Explain what an infinite loop does Program a microcontroller to make an LED switch on
1		2	Write a program that includes count-controlled loops MICRO:BIT / LEGO SPIKE	Connect more than one output component to a microcontroller Design sequences that use count-controlled loops Use a count-controlled loop to control outputs
1		3	Explain that a loop can stop when a condition is met MICRO:BIT / LEGO SPIKE	Design a conditional loop Explain that a condition is either true or false Program a microcontroller to respond to an input
1		4	Explain that a loop can be used to repeatedly check whether a condition has been met MICRO:BIT / LEGO SPIKE	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
1		5	Design a physical project that includes selection MICRO:BIT / LEGO SPIKE	Create a detailed drawing of my project Describe what my project will do Identify a real-world example of a condition starting an action
1		6	Create a program that controls a physical computing project MICRO:BIT / LEGO SPIKE	Test and debug my project Use selection to produce an intended outcome Write an algorithm that describes what my model will do

YEAR	STRAND	LESSON	PURPOSE	OUTCOMES
1	DATA AND INFORMATION FLAT-FILE DATABASES	1	Use a form to record information J2DATA DATABASE	Create a database using cards Explain how information can be recorded Order, sort, and group my data cards
1		2	Compare paper and computer-based databases J2DATA DATABASE	Choose which field to sort data by to answer a given question Explain what a field and a record is in a database Navigate a flat-file database to compare different views of information
1		3	Outline how you can answer questions by grouping and then sorting data J2DATA DATABASE	Combine grouping and sorting to answer specific questions Explain that data can be grouped using chosen values Group information using a database
1		4	Explain that tools can be used to select specific data J2DATA DATABASE	Choose multiple criteria to answer a given question Choose which field and value are required to answer a given question Outline how 'AND' and 'OR' can be used to refine data selection
1		5	Explain that computer programs can be used to compare data visually J2DATA DATABASE	Explain the benefits of using a computer to create charts Refine a chart by selecting a particular filter Select an appropriate chart to visually compare data
1		6	Use a real-world database to answer questions J2DATA DATABASE	Ask questions that will need more than one field to answer Present my findings to a group Refine a search in a real-world context

YEAR	STRAND	LESSON	PURPOSE	OUTCOMES
1	CREATING MEDIA INTRODUCTION TO VECTOR GRAPHICS	1	Identify that drawing tools can be used to produce different outcomes INKSCAPE/ VECTORNATOR (iPad)	Discuss how vector drawings are different from paper-based drawings Experiment with the shape and line tools Recognise that vector drawings are made using shapes
1		2	Create a vector drawing by combining shapes INKSCAPE/ VECTORNATOR (iPad)	Explain that each element added to a vector drawing is an object Identify the shapes used to make a vector drawing Move, resize, and rotate objects I have duplicated
1		3	Use tools to achieve a desired effect INKSCAPE/ VECTORNATOR (iPad)	Explain how alignment grids and resizing can improve consistency Modify objects to create a new image Use the zoom tool to help me add detail to my drawings
1		4	Recognise that vector drawings consist of layers INKSCAPE/ VECTORNATOR (iPad)	Change the order of layers in a vector drawing Identify that each added object creates a new layer in the drawing Use layering to create an image
1		5	Group objects to make them easier to work with INKSCAPE/ VECTORNATOR (iPad)	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
1		6	Apply what I have learned about vector drawings INKSCAPE/ VECTORNATOR (iPad)	Compare vector drawings to freehand paint drawings Create a vector drawing for a specific purpose Reflect on the skills I have used and why I have used them

YEAR	STRAND	LESSON	PURPOSE	OUTCOMES
1	PROGRAMMING B SELECTION IN QUIZZES	1	Explain how selection is used in computer programs SCRATCH	Identify conditions in a program Modify a condition in a program Recall how conditions are used in selection
1		2	Relate that a conditional statement connects a condition to an outcome SCRATCH	Create a program with different outcomes using selection Identify the condition and outcomes in an 'if... Then… else...' statement Use selection in an infinite loop to check a condition
1		3	Explain how selection directs the flow of a program SCRATCH	Design the flow of a program which contains 'if… then… else…' Explain that program flow can branch according to a condition Show that a condition can direct program flow in one of two ways
1		4	Design a program which uses selection SCRATCH	Identify the outcome of user input in an algorithm Outline a given task Use a design format to outline my project
1		5	Create a program which uses selection SCRATCH	Implement my algorithm to create the first section of my program Share my program with others Test my program
1		6	Evaluate my program SCRATCH	Extend my program further Identify the setup code I need in my program Identify ways the program could be improved