



Computing
Year 5
Systems and Searching

Concepts
Information Technology

Prior Learning	New Learning	Future Learning
To describe how networks physically connect to other networks	To explain that computers can be connected together to form systems	To explain the importance of internet addresses
To recognise how networked devices make up the internet	To recognise the role of computer systems in our lives	To recognise how data is transferred across the internet
To outline how websites can be shared via the World Wide Web (WWW)	To identify how to use a search engine	To explain how sharing information online can help people to work together
To describe how content can be added and accessed on the World Wide Web (WWW)	To describe how search engines select results	To evaluate different ways of working together online
To recognise how the content of the WWW is created by people	To explain how search results are ranked	To recognise how we communicate using technology
To evaluate the consequences of unreliable content	To recognise why the order of results is important, and to whom	To evaluate different methods of online communication

Sequence of Learning	Current Vocabulary	New Vocabulary
Systems	internet, network,	system, connection, digital, input,
Computer systems and us	router, security,	process, storage,
Searching the web	switch, server,	output, search,
Selecting search results	wireless access	search engine, refine, index, bot,
How search results are ranked	point (WAP), website, web page,	ordering, links, algorithm, search engine optimisation (SEO), web crawler, content creator, selection, ranking.
How searches are influenced	web address, routing, web browser, World Wide Web, content, links, files, use, download, sharing, ownership, permission, information, accurate, honest, content, adverts	

Trip/Visitor

Other Information	Powerpoint (teaching and for students to create work)
	Online videos of Systems
	NCCE Lesson resources



Computing
Year 5
Video production

Concepts
Digital literacy

Prior Learning	New Learning	Future Learning
To explain that the composition of digital images can be changed	To explain what makes a video effective	To review an existing website and consider its structure
To explain that colours can be changed in digital images	To use a digital device to record video	To plan the features of a web page
To explain that images can be combined	To capture video using a range of techniques	To consider the ownership and use of images (copyright)
To explain how cloning can be used in photo editing	To create a storyboard	To recognise the need to preview pages
To combine images for a purpose	To identify that video can be improved through reshooting and editing	To outline the need for a navigation path
To evaluate how changes can improve an image	To consider the impact of the choices made when making and sharing a video	To recognise the implications of linking to content owned by other people

Sequence of Learning	Current Vocabulary	New Vocabulary
What is video?	image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, image, retouch, clone, select, combine, made up, real, composite, cut, copy, paste, alter, background, foreground, zoom, undo, font.	video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid-range, long shot, moving subject, side by side, angle (high, low, normal), static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share
Filming techniques		
Using a storyboard		
Planning a video		
Importing and exporting video		
Video evaluation		

Trip/Visitor

Other Information	IPad camera (files may need converting)
	Digital camera
	Movie Maker



Computing
Year 5
Flat-file databases

Concepts
Information technology, computer science, digital literacy

Prior Learning	New Learning	Future Learning
To explain that data gathered over time can be used to answer questions	To use a form to record information	To create a data set in a spreadsheet
To use a digital device to collect data automatically	To compare paper and computer-based databases	To build a data set in a spreadsheet
To explain that a data logger collects 'data points' from sensors over time	To outline how you can answer questions by grouping and then sorting data	To explain that formulas can be used to produce calculated data
To recognise how a computer can help us analyse data	To explain that tools can be used to select specific data	To apply formulas to data
To identify the data needed to answer questions	To explain that computer programs can be used to compare data visually	To create a spreadsheet to plan an event
To use data from sensors to answer questions	To use a real-world database to answer questions	To choose suitable ways to present data

Sequence of Learning	Current Vocabulary	New Vocabulary
Creating a paper-based database	data, table, layout, input device, sensor, logger, logging, data point, interval, analyse, dataset, import, export, logged, collection, review, conclusion	. database, data, information, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation.
Computer databases		
Using a database		
Using search tools		
Comparing data visually		
Databases in real life		

Trip/Visitor

Other	Excel
Information	Google sheets
	NCCE Lesson resources



Computing	Concepts
Year 5 Selection in physical computing	Computer science, digital literacy

Prior Learning	New Learning	Future Learning
To identify that accuracy in programming is important	To control a simple circuit connected to a computer	To define a 'variable' as something that is changeable
To create a program in a text-based language	To write a program that includes count-controlled loops	To explain why a variable is used in a program
To explain what 'repeat' means	To explain that a loop can stop when a condition is met	To choose how to improve a game by using variables
To modify a count-controlled loop to produce a given outcome	To explain that a loop can be used to repeatedly check whether a condition has been met	To design a project that builds on a given example
To decompose a task into small steps	To design a physical project that includes selection	To use my design to create a project
To create a program that uses count-controlled loops to produce a given outcome	To create a program that controls a physical computing project	To evaluate my project

Sequence of Learning	Current Vocabulary	New Vocabulary
Connecting crumbles Combining output components Controlling with conditions Starting with selection Drawing designs Writing and testing algorithms	Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure.	microcontroller, USB, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, LED, Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer

Trip/Visitor

Other Information	<p>Crumble controller (hardware)</p> <p>Kodu or Scratch.mit (not physical – virtual alternative)</p> <p>NCCE Lesson resources</p>
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