Computing Overview

National Curriculum Statement:
Key stage 1 Pupils should be taught to:

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private, identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key stage 2 Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs, work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet, how they can provide multiple services, such as the world wide web, and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly, recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns about content and contact.

Concept	Key Skills	Key Knowledge To know:	Key Vocabulary
Pre Nursery			
Technology around us	I investigate different types of technology in the classroom	• that some toys need batteries • that some toys light up, move, or make a noise and some don't	technology, batteries, charge, turn on, turn off, light up, move, music,
Creating media	I can make marks on a screen I can record my voice using a digital device	~~That I make marks on a digital device~~ ~~That I can record my voice~~	screen, (pen), record, play
Data & Information	I can use the Relish programme to choose my lunch with an adult	~~That I can use technology to choose my lunch~~	• choose, press,
Programming	I can press buttons on cause and effect toys to see what will happen I can predict what will happen when a press a button on a toy	• if I press a button something will happen	press, push,
Nursery			
Technology around us	I can use the touch screen on the IWB I can use a metal detector to explore and locate items	• that if I touch the IWB screen something will happen • how to use the metal detectors to find hidden items	interactive whiteboard, metal detector
Creating media	I can make marks on a screen and explain which tools I used ~~d~~ I can use the paint tools to draw a picture I can use a device to take a digital photograph I can record my voice on a mobile phone for a purpose	• how to use a computer to create a picture • how to take a photograph on a digital device • how to record my voice	screen, stylus, tool, paint, photograph, picture, record, play
Data & Information	I can independently choose my lunch on the Relish programme I can follow the commands on the traffic lights	• how to use the relish programme to make choices • what to do when the traffic lights change colour • what order the traffic lights change colour	choose, press, order, colours – red, amber, green - sequence
Programming	I can use the controls to move the remote control car I can give directions	• how to use the controls ~~How to give directions~~	directions: forwards, backwards, left, right, turn
Reception			
Technology around us	~~I can explain technology as something that helps us~~ I can locate examples of technology in the classroom	• that technology as something that helps us • what technology is • what technology is used in the classroom	computer, tablet, laptop, mobile phone, metal detector, walkie-talkie, microscope, visualiser
Creating media	I can use the shape and line tools effectively I can choose appropriate shapes I can make appropriate colour choices I can say which tools were helpful and why I can change the colour and brush sizes I can make dots of colour on the page I can say whether I prefer painting using a computer or using paper I can spot the differences between painting on a computer and on paper	• what different freehand tools do • what the line and shape tools do • how to change the brush and line size • how to use a computer to paint a picture on my own • the difference between a picture on the computer and on paper • that pictures can be made in lots of different ways • that different paint tools do different jobs	freehand, line, tools, shape (2d shape names – circle, square, rectangle, triangle), size – thin, thick, fill bucket
Data & Information	I can independently choose my lunch on the Relish programme I can use an electronic microscope to investigate objects	• how to navigate the relish programme to select my lunch options • how to use the microscope to investigate items	navigate, select, microscope
Programming	I can match a command to an outcome I can predict the outcome of a command on a device I can run a command on a device	• what a given command will do • how to- act out a given word • how to combine forwards and backwards commands to make a	outcome, sequence, direction, program, command, device, solution, possible, debug

Formatted: Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Not Strikethrough

Formatted: Indent: Left: 0 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Font: 11 pt, Not Strikethrough

Formatted: Normal, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, No bullets or numbering, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Strikethrough

Formatted: Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

	I can predict the outcome of a sequence involving forwards and backwards commands I can start a sequence from the same place I can experiment with turn and move commands to move a robot I can predict the outcome of a sequence involving up to four commands I can choose the order of commands in a sequence I can debug my program I can explain what my program should do I can identify several possible solutions I can plan two programs I can use two different programs to get to the same place	sequence • how to combine four direction commands to make sequences • how to plan a simple program • how to find more than one solution to a problem	
Y1/2 cycle A			
Technology around us	I can name the main parts of a computer I can switch on and log into a computer I can use a mouse to click and drag I can use a mouse to create a picture & open a program I can save my work to a file and open it I can type my name on a computer I can delete letters I can use the arrow keys to move the cursor I can identify rules to keep us safe and healthy when we are using technology in and beyond the home	• how to keep safe when using technology ~~the main parts of a computer~~ • ~~how to use a mouse~~ • where the keys are on a keyboardhow to use the keyboard to edit text	mouse, keyboard, hard drive, monitor, keys, keyboard, click and drag, edit, delete, cursor,, internet safety, password, username,
Creating media	I can identify and find keys on a keyboard I can open a word processor- I can enter text into a computer I can use backspace to remove text I can use letter, number, and space keys I can identify the toolbar and use bold, italic, and underline I can type capital letters I can change the font I can select all of the text by clicking and dragging I can select a word by double-clicking I can decide if my changes have improved my writing I can say what tool I used to change the text I can use 'undo' to remove changes I can make changes to text on a computer I can say why I prefer typing or writing	• how to use a computer to write • how to add and remove text on a computer • that the look of text can be changed on a computer • make careful choices when changing text • when to use bold, italic and underline • ~~W~~when to use the undo tool • the differences between typing and writing	keyboard, type, text, word processor, backspace, toolbar, bold, italic, underline, double click, undo,
Data & Information	I can identify the label for a group of objects I can match objects to groups I can describe a property of an object I can find objects with similar properties I can group objects in more than one way I can choose how to group objects I can record how many objects are in a group I can compare groups of objects I can decide how to group objects to answer a question I can record and share what I have found	• how to describe objects using labels • ~~that~~ objects can be counted • to count objects with the same properties • how to compare groups of objects • how to answer questions about groups of objects	group, objects, property, compare, record, share,
Programming	I can compare different programming tools I can find which commands to move a sprite I can use commands to move a sprite I can run my program I can use a Start block in a program I can use more than one block by joining them together I can say what happens when I change a value I can delete a sprite I can show that a project can include more than one sprite	• w~~W~~hat commands do • t~~t~~hat a series of commands can be joined together • what an algorithm is • the effect of changing a value • that each sprite has its own instructions • how to delete a sprite	~~Comm~~code, sprite, block, value, algorithm, instructions, delete
Y1/2 cycle B			
Technology around us	I can describe some uses of computers I can identify examples of IT I can identify that some IT can be used in more than one way can sort school IT by what it's used for I can find examples of information technology I can sort IT by where it is found I can demonstrate how IT devices work together I can recognise common types of technology I can list different uses of information technology	• the uses and features of information technology • the uses of information technology in the school • about different uses of information technology • how information technology I use~~d~~ beyond school • how information technology helps us • how to use information technology safely • that choices are made when using information technology • why we use IT • why we use IT in different ways	information, technology, devices,

Formatted: Not Highlight

Formatted: Normal, No bullets or numbering, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap

Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap

	I can say how rules can help keep me safe I can talk about different rules for using IT I can identify the choices that I make when using IT I can use IT for different types of activities		
Creating media	I can say what I do and don't like about a piece of music I can connect images with sounds I can relate an idea to a piece of music I can use a computer to experiment with rhythm and pitch I can refine my musical pattern on a computer I can add a sequence of notes to my rhythm I can create a rhythm that represents an animal I've chosen I can create my animal's rhythm on a computer ~~I can explain how I changed my work~~I can listen to music and describe how it makes me feel I can review my work	• that music can make us feel different emotions • that there are patterns in music • ~~-~~how to experiment with sound using a computer • ~~-~~how to use a computer to create a musical pattern • ~~-~~how to create music for a purpose • How to review and refine our computer work • that music is created and played by humans • my music can be played in different ways	• pattern, rhythm, pitch, review, refine,
Data & Information	I can compare totals in a tally chart I can record data in a tally chart I can enter data onto a computer I can use a computer to view data in a different format I can use pictograms to answer simple questions about objects I can use a tally chart to create a pictogram I can create a pictogram to arrange objects by an attribute I can choose a suitable attribute to compare people and collect the data I need I can create a pictogram and draw conclusions from it	• that we can count and compare objects using tally charts • that objects can be represented as pictures • what a pictogram is used for • that objects can be sorted by attributes • to make comparisons using attributes • that people can be described by attributes • that we can present information using a computer • how to draw conclusions from a pictogram	data, tally, pictograms, attribute, comparison, conclusion,
Programming	I can follow instructions given by someone else I can give clear instructions I can show the difference in outcomes between two sequences that consist of the same commands I can use an algorithm to program a sequence on a floor robot I can use the same instructions to create different algorithms I can compare my prediction to the program outcome I can follow a sequence I can predict the outcome of a sequence I ~~can explain the choices I made for my mat design~~ explain the choices I made for my mat design I can identify different routes around my mat I can test my mat to make sure that it is usable I can create an algorithm to meet my goal I can explain what my algorithm should achieve I can use my algorithm to create a program I can plan algorithms for different parts of a task I can put together the different parts of my program I can test and debug each part of the program	• why instructions must be clear • that a series of instructions is a sequence • what will happen if we change the order of instructions • how use logical reasoning to predict the outcome of a program • that programming projects can have code and artwork • how to design an algorithm to meet a goal • how to create and debug a program that I have written	instructions, commands, algorithm, goal, prediction • ~~Outcome~~ • ~~Debug~~
Y3/4 cycle A			
Technology around us	I can follow a process I can classify input and output devices I can design a digital device I can explain how I use digital devices for different activities I can explain how messages are passed through multiple connections I can demonstrate how information can be passed between devices ~~I can explain the role of a switch, server, and wireless access point in a network~~I can identify how devices in a network are connected together I can identify networked devices around me I can identify the benefits of computer networks	• how digital devices function • ~~what~~ input and output devices are • that digital devices accept inputs and produce outputs • the role of a switch, server, and wireless access point in a network • how digital devices can change the way we work • how a computer network can be used to share information • how digital devices can be connected • the physical components of a network • why we need a network switch • the similarities and differences between using digital devices and non-digital tools	input, output, switch, server, network, access point
Creating media	I can create an effective flip book—style animation I can create an effective stop-frame animation I can predict what an animation will look like I can create a storyboard I can describe an animation that is achievable on screen I can evaluate the quality of my animation I can review a sequence of frames to check my work I can use onion skinning to help me make small changes between frames I can evaluate another learner's animation I can explain ways to make my animation better I can improve my animation based on feedback	• that animation is a sequence of drawings or photographs • that animated movements are made from a sequence of images • what a storyboard is • how an animation/flip book works • why little changes are needed for each frame • why I must be consistent and careful when I make each frame • ~~H~~how to review and improve an animation • h~~H~~ow to evaluate the impact of adding other media to an animation • w~~W~~hat makes a good film	animation, sequence, stop-frame, storyboard, frames

Formatted: Normal, Line spacing: Multiple 1.08 li, No bullets or numbering, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, No bullets or numbering, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, Indent: Left: 0.63 cm, No bullets or numbering, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap

	I can add other media to my animation I can evaluate my final film I can explain why I added other media to my animation		
Data & Information	I can create two groups of objects separated by one attribute I can make up a yes/no question about a collection of objects I can arrange objects into a tree structure I can create a group of objects within an existing group I can select an attribute to separate objects into groups I can group objects using my own yes/no questions I can select objects to arrange in a branching database I can test my branching database to see if it works I can compare two branching database structures I can create yes/no questions using given attributes I can create a physical version of a branching database I can create questions that will enable objects to be uniquely identified I can independently create questions to use in a branching database I can create a branching database that reflects my plan I can suggest real-world uses for branching databases	• how to create questions with yes/no answers • which attributes are needed to collect data about an object • that questions need to be ordered carefully to split objects into similarly sized groups • how to create a branching database • why it is helpful for a database to be well structured • how to plan the structure of a branching database • how to independently create an identification tool • when branching databases are used in real life	attribute, database, branch
Programming	I can identify the objects in a Scratch project (sprites, backdrops) I can choose a word which describes an on-screen action for my plan I can create a program following a design I can identify that each sprite is controlled by the commands I choose I can create a sequence of connected commands I can start a program in different ways I can combine sound commands I can order notes into a sequence I can build a sequence of commands I can decide the actions for each sprite in a program I can make design choices for my artwork	• what an attribute is • ~~identify~~that commands have an outcome • that a program has a start • what a sequence is • that a sequence of commands can have an order • that the objects in my project will respond exactly to the code • how change the appearance of my project • how to create a project from a task description	program, backdrop, sequence ~~code~~
Y3/4 cycle B			
Technology around us	I can demonstrate how information is shared across the internet I can describe the internet as a network of networks I can discuss why a network needs protecting I can describe networked devices and how they connect I can recognise that the World Wide Web contains websites and web pages I can describe where websites are stored when uploaded to the WWW I can explain the types of media that can be shared on the WWW I can explain that internet services can be used to create content online I can know that I can add content to the WWW I can explain that there are rules to protect content I can suggest who owns the content on websites	• how networks physically connect to other networks • how networked devices make up the internet • how websites can be shared via the World Wide Web (WWW) • ~~—~~how content can be added and accessed on the World Wide Web (WWW) • how the content of the WWW is created by people • how to evaluate the consequences of unreliable content • ~~why~~ that some information online might not be honest, accurate or legal • why I should not reshare some information • that not everything on the World Wide Web is true • that websites and their content are created by people	network, information, world wide web, media, upload, content, reliable, unreliable, website
Creating media	I can explain why I might crop an image I can improve an image by rotating it I can use photo editing software to crop an image I can experiment with different colour effects I can add to the composition of an image by cloning I can identify how a photo edit can be improved I can remove parts of an image using cloning I can experiment with tools to select and copy part of an image I can use a range of tools to copy between images I can choose suitable images for my project I can create a project that is a combination of other images I can combine text and my image to complete the project I can review images against a given criteria I can use feedback to guide making changes	• that the composition of digital images can be changed • that colours can be changed in digital images • that different colour effects can make you think and feel different things • how cloning can be used in photo editing • that images can be combined for a purpose • why photos may be edited • how changes can improve an image	image, editing, crop, composition, cloning, tools, effects, rotate
Data & Information	I can choose a data set to answer a given question I can suggest questions that can be answered using a given data set I can use data from a sensor to answer a given question I can identify the intervals used to collect data I can sort data to find information I can view data at different levels of detail I can plan how to collect data using a data logger I can propose a question that can be answered using logged data I can use a data logger to collect data I can draw conclusions from the data that I have collected	• ~~Kknow that~~ data gathered over time can be used to answer questions • ~~Know~~what data sensors can collect • ~~Know~~ that a digital device can be used to collect data automatically • ~~Know~~ that a data logger collects 'data points' from sensors over time • ~~Know~~ how a computer can help us analyse data • ~~Know~~ which data is needed to answer questions • ~~Know~~ how to use data from sensors to answer questions • ~~Know~~ why data loggers are useful	~~Data~~data logger, data sensor, data point

Formatted: Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap

Formatted: Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, No bullets or numbering, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, No bullets or numbering, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

	I can interpret data that has been collected using a data logger		
Programming	I can modify a snippet of code to create a given outcome I can predict the outcome of a snippet of code I can choose when to use a count-controlled and an infinite loop I can modify loops to produce a given outcome I can evaluate the effectiveness of the repeated sequences used in my program I can explain the effect of my changes I can identify which parts of a loop can be changed I can re-use existing code snippets on new sprites I can develop my own design explaining what my project will do I can evaluate the use of repetition in a project I can select key parts of a given project to use in my own design I can build a program that follows my design I can evaluate the steps I followed when building my project I can refine the algorithm in my design	• ~~Know H~~how to use count-controlled loops in a different programming environment • that in programming there are infinite loops and count controlled loops • ~~To develop~~ ~~Know~~ how to ~~a~~ create a design that includes two or more loops which run at the same time • ~~H~~how to modify an infinite loop in a given program • ~~W~~what the outcome of a repeated action should be • ~~H~~how to design a project that includes repetition • h~~H~~ow to create a project that includes repetition	~~Code~~infinite loop, count controlled loop, repetition
	Year 5/6 Cycle A		
Technology Around Us	~~I can explain the benefits of a given computer system~~I can compare results from different search engines I can make use of a web search to find specific information I can refine my web search to use a search engines I ~~can explain why we need tools to find things onli~~ can recognise the role of web crawlers in creating an index I can relate a search term to the search engine's index ~~I can explain that a search engine follows rules to rank resultsI can give examples of criteria used by search engines to rank results~~I can order a list by rank I can describe some of the ways that search results can be influenced	• the benefits of a given computer system • why we need tools to find things online • that a search engine follows rules to rank results • examples of criteria used by search engines to rank results • that computers can be connected together to form systems • that computer systems communicate with other devices that systems are built using a number of parts • the role of computer systems in our lives~~to use a search engines~~ • how search engines select results • how search results are ranked • why the order of results is important, and to whom • how search engines make money • that search engines have limitations	search engine, web search, web crawlers, index, rank
Creating Media	I can compare features in different videos ~~I can identify features of videos~~I can experiment with different camera angles I can identify and find features on a digital video recording device I can make use of a microphone I can capture video using a range of filming techniques I can review how effective my video is I can create and save video content I can decide which filming techniques I will use I can outline the scenes of my video I can explain how to improve a video by reshooting and editing I can select the correct tools to make edits to my video I can store, retrieve, and export my recording to a computer I can evaluate my video and share my opinions I can make edits to my video and improve the final outcome	• that video is a visual media format • features of videos • what makes a video effective • which digital devices- can record video • how to capture video using a range of techniques • how to create a storyboard • that video can be improved through reshooting and editing • the impact of the choices made when making and sharing a video • different filming techniques	microphone, recording device, video, visual media
Data & Information	I can create a database using cards I can order, sort, and group my data cards I can choose which field to sort data by to answer a given question I can navigate a flat-file database to compare different views of information I can combine grouping and sorting to answer specific questions I can group information using a database I can choose multiple criteria to answer a given question I can choose which field and value are required to answer a given question I can outline how 'and' and 'or' can be used to refine data selection I can refine a chart by selecting a particular filter I can select an appropriate chart to visually compare data I can ask questions that will need more than one field to answer I can refine a search in a real-world context	• t~~T~~hat forms record information • ~~T~~ the similarities and differences between paper and computer-based databases • how you can answer questions by grouping and then sorting data • ~~T~~that data -can be grouped using chosen values • that tools can be used to select specific data • that computer programs can be used to compare data visually • what a field and a record is in a database	field, value, criteria, selection
Programming	I can create a simple circuit and connect it to a microcontroller I can program a microcontroller to make an led switch on I can connect more than one output component to a microcontroller I can design sequences that use count-controlled loops I can use a count-controlled loop to control outputs I can design a conditional loop I can program a microcontroller to respond to an input	• h~~H~~ow to control a simple circuit connected to a computer • h~~h~~ow to write a program that includes count-controlled loops • that a loop can stop when a condition is met • that a loop can be used to repeatedly check whether a condition has been met • what an infinite loop does • how to -design a physical project that includes selection	circuit, microcontroller, output component, conditional loop, selection, debug, action ~~Count-controlled loops~~ ~~Infinite loop~~

Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, Indent: Left: 0.63 cm, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, No bullets or numbering, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

	I can identify a condition and an action in my project I can use selection (an 'if…then…' statement) to direct the flow of a program I can identify a real-world example of a condition starting an action I can test and debug my project I can use selection to produce an intended outcome I can write an algorithm that describes what my model will do	• how to create a program that controls a physical computing project	
		Y5/6 Cycle B	
Technology Around Us	I can describe how computers use addresses to access websites I can recognise that data is transferred using agreed methods ~~I can identify and explain the main parts of a data packet~~I can explain that the internet allows different media to be shared~~~~I can access shared files stored online I can send information over the internet in different ways ~~I can identify different ways of working together online~~I can choose methods of communication to suit particular purposes I can compare different methods of communicating on the internet I can decide when i should and should not share information online	• that internet devices have addresses • the importance of internet addresses • how data is transferred over networks in packets • how sharing information online can help people to work together • that the internet allows different media to be shared • different ways of working together online • how we communicate using technology • different methods of online communication • that communication on the internet may not be private • the main parts of a data packet	packet, data packets ~~network~~
Creating Media	~~I can discuss the different types of media used on websites~~I can draw a web page layout that suits my purpose ~~I can recognise the common features of a web page~~I can suggest media to include on my page I can find copyright-free images ~~I can say why I should use copyright-free images~~I can add content to my own web page I can evaluate what my web page looks like on different devices and suggest/make edits I can preview what my web page looks like ~~I can describe why navigation paths are useful~~I can make multiple web pages and link them using hyperlinks I can create hyperlinks to link to other people's work I can evaluate the user experience of a website	• the different types of media used on websites • the ~~can recognise~~common features of a web page • how to review an existing website and consider its structure • that websites are written in html • w~~can say w~~hy I should use copyright-free images • I how to plan the features of a web page • t~~T~~he importance of considering ownership and use of images (copyright) • ~~-~~the need to preview pages • ~~can describe~~ why navigation paths are useful • what a navigation path is and why it is needed • the implications of linking to content owned by other people • what is meant by the term 'fair use'	web page~~Website~~, html, copyright, copyright-free ~~Edit~~ media
Data & Information	I can enter data into a spreadsheet I can suggest how to structure my data I can apply an appropriate format to a cell I can choose an appropriate format for a cell I can construct a formula in a spreadsheet I can apply a formula to multiple cells by duplicating it I can calculate data using different operations I can create a formula which includes a range of cells I can apply a formula to calculate the data i need to answer questions I can use a spreadsheet to answer questions I can produce a chart I an suggest when to use a table or chart I can use a chart to show the answer to questions	• how to create a data set in a spreadsheet • how to build a data set in a spreadsheet • that formulas can be used to produce calculated data • ~~H~~how to apply formulas to data • that a spreadsheet can be created to plan an event • that there are different ways to present data • that changing inputs changes outputs • what an item of data is	input, output, duplicate, multiple, chart, format, cell~~Data~~ Seadsheetformulainputoutput
Programming	~~I can identify examples of information that is variable~~I can identify that variables can hold numbers or letters~~I can identify a program variable as a placeholder in memory for a single value~~I can decide where in a program to change a variable I can make use of an event in a program to set a variable I can choose the artwork for my project I can create algorithms for my project I can choose a name that identifies the role of a variable I can create the artwork for my project I can test the code that I have written I can identify ways that my game could be improved I can share my game with others I can use variables to extend my game	• examples of information that is variable • that variables can hold numbers or letters • program variable as a placeholder in memory for a single value • that a 'variable' i~~a~~s something that Is changeable • that the way a variable changes can be defined • why a variable is used in a program • that a variable has a name and a value • that the value of a variable can be changed • how to improve a game by using variables • that the value of a variable can be used by a program • how to design a project that builds on a given example • how to use my design to create a project • how to evaluate my project	variable, changeable, event, placeholder

Formatted: Normal, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around

Formatted: Normal, Position: Horizontal: Center, Relative to: Margin, Vertical: -0.13 cm, Relative to: Paragraph, Horizontal: 0.32 cm, Wrap Around