Parish Primary School - Core Computing Knowledge Overview:

Year Group and Unit of Work:	Core Knowledge (Our Learning Questions)	Assessment Outcomes:
Y1 - Computer Systems and Networks (Technology Around Us).	**What technology is in our classroom?** - To know that technology is something made by people that helps us understanding the reasons why – it does not need to be digital or electronic, although they often are. - To know examples of technology in the classroom e.g. printer, IPad, laptop. **What are the parts of a computer?** - To know that the main parts of a computer are the mouse, keyboard, screen and desktop. - To know how to switch on and log on to the computer. - To use a mouse to click and drag. **How can I use a computer mouse?** - To know how to use a mouse to open a program. - To know how to click and drag to make objects on a screen. - To know how to apply mouse control to make shapes on a screen. **How can I use a computer keyboard?** - To know that writing on a computer is called typing. - To know how to save work to a file. - To know how to type my name on a computer. **How can I develop my keyboard skills?** - To know how to open my work from a file. - To know how to use the arrow keys to move the cursor. - To know how to delete letters, using the backspace key. **How can I use a computer responsibly?** - To know rules to keep us safe and healthy when we are using technology. - To know examples of rules. - To know how we benefit from these rules	In this unit, learners will develop their understanding of technology and how it can help us. They will start to become familiar with the different components of a computer by developing their keyboard and mouse skills. Learners will also consider how to use technology responsibly.
Y1 - Creating Media (Digital Writing)	**How can I use a keyboard?** - To know how to use a computer to write. - To know how to open a word processor. - To recognise the keys on a keyboard. - To identify and find the keys on a keyboard. **How can I add and remove text?** - To know how to add and remove text on a computer.	In this unit, learners will develop their understanding of the various aspects of using a computer to create and manipulate text. Learners will become more familiar with using a keyboard and mouse to enter and remove text. Learners will become more familiar with using a keyboard and mouse to enter and remove text. Learners will also consider how to change the look of their text

	- To know how to enter text into a computer. - To know how to use letter, number and space keys. **How can I use the toolbar?** - To know that the look of text can be changed on a computer. - To know how to type capital letters. - To know how to explain what the keys that I have learnt about already do. - To know how I can identify the toolbar and use bold, italic and underline. **How can I make changes to text?** - To know how to make careful choices when changing text. - To know how to select a word by double clicking and dragging. - To know how I can change the font. **Which tools have I used and why?** - To be able to say which tools I have chosen and explain why I have used them to change the text. - To be able to decide if my changes have improved my writing. - To be able to use 'undo' to remove changes. **Which is better – writing using a pencil or writing using a keyboard?** - To be able to compare writing a computer with writing on paper. - To explain which method I like best.	and will be able to justify their reasoning in making these changes.
Y1 - Data Information (Grouping Data)	**How can I label objects?** - To know how to describe objects using labels. - To know how to match objects to groups. - To know how to identify the label for a group of objects. **How can I count and group objects?** - To know how to count objects. - To know how to group objects. - To know how to count a group of objects. **How can I describe objects in different ways?** - To know how to describe an object. - To know how to describe the properties of objects. - To know how to find objects with similar properties. **How can I count objects with the same properties?** - To know how to group similar objects. - To know how to group objects in more than one way. - To know how to count how many objects share a property. **How can I compare groups of objects?** - To know how best to group objects. - To know how to describe a group of objects. - To know how to record how many objects are in a group.	In this unit, learners will be introduced to the concept of labelling and grouping objects based on their properties.. In addition, pupils will begin to improve their ability to use dragging and dropping skills on a device. Pupils will develop their understanding that objects can be given labels, which is fundamental to their future learning concerning databases and spreadsheets.

	How can I answer questions about groups of objects? - To know how to describe how to group objects to answer a question. - To know how to compare groups of objects. - To know how to record and share what I have found.	
Y1 – Programming (Introduction to Programming).	**How can I move a robot forward and backwards? (Retrieval Lesson)** - To know how to run a command on a device. - To know how to give directions and create an algorithm. - To know how to start a sequence from the same place and move forward and backward. **How can I turn a robot? (Retrieval Lesson)** - To know how 'turn' and 'move' commands to move a robot. - To know how to choose the order of commands in a sequence. - To know how to identify several possible solutions to algorithm. **What tools can I used to give a command?** - To know that commands are used to move a sprite. - To compare different programming tools. **How I create simple algorithms?** - To know how to join more than one block of commands together. - To know how to use a Start block in a program. - To know how to run a program. **What can I change in my algorithm?** - To know how to find blocks that have numbers. - To know how to change the value. - To be able to explain the effect of what happens when a value is changed. **What instructions can I give to my sprite?** - To know that a project can include more than one sprite. - To know how to delete a sprite. - To know how to add blocks to each new sprite.	In this unit, learners will be introduced to on-screen programming through Scratch Jr. Learners will explore the way a project looks by investigating sprites and backgrounds. They will use programming blocks to use, modify, and create programs. Learners will also be introduced to the early stages of program design through the introduction of algorithms.
Y2 - Computer Systems and Networks (IT Around us)	**What is Information Technology?** - To know and be able to identify examples of computers. - To be able to describe some uses of computers. - To know that a computer is a part of Information Technology. **Where have we seen Information Technology in the home?** - To know and explain the purpose of Information Technology in the home. - To know how to independently open a file. - To know how to move and resize images. **Where have we seen Information Technology in the world?** - To know examples of Information Technology in the home. - To know the uses of Information Technology and compare different types.	In this unit, learners will look at Information Technology at school and beyond e.g. in shops, hospitals and libraries. They will also investigate how Information Technology improves our world.

	How does Information Technology improve our world? - To know how Information Technology is used in a shop. - To know that Information Technology can be connected. - To know how Information Technology helps people to improve their lives. **How can I use Information Technology safely and responsibly?** - To know how to use Information Technology responsibly and safely. - To know how rules and guides can help.	
Y2 - Creating Media (Digital Photography)	**How can I use a digital device to take a photograph?** - To know how to use a digital device to take a photograph. - To know how to recognise what devices can be used to take photographs. - To know how to explain what I did to capture a digital photo. **How can I take photographs in both landscape and portrait format?** - To know how to make choices when taking a photograph. - To know how to explain the process of taking a good photograph. - To know how to take photographs in both landscape and portrait format. - To know how to explain why a photo looks better in portrait or landscape. **What makes a good photograph?** - To know and describe what makes a good photograph. - To know and identify what is wrong with a photograph. - To know and discuss how to take a good photograph. - To know how to improve a photograph by retaking it. **What effect does light have on a photograph?** - To know and explore the effect that light has on a photo. - To know and experiment with different light sources. - To know and explain why a picture might be unclear. **How can I edit an image?** - To know how images can be changed. - To know how to use a tool to achieve a desired effect. - To know how to explain my choices. **Are the images we see always real?** - To know and apply a range of photography skills to capture a photo. - To know and recognise when a photo has been changed. - To know and identify which photos are real and which have been changed.	In this unit, learners will learn to recognise that devices can be used to capture photographs and will gain experience capturing, editing and improving photos. Finally, they will use this knowledge to recognise that images they see may not be real.
Y2 - Data Information (Pictograms)	**How can I count and compare objects using tally charts?** - To know how to record data in a tally chart. - To know how to represent a tally count as a total. - To know how to compare totals in a tally chart.	In this unit, learners will begin to understand what the term 'data' means and how data can be collected in the form of a tally chart. They will learn the term 'attribute' and use this to help them organise data. They will then progress onto presenting data in the form of pictograms

	How can I represent objects as pictures? - To know how to enter data onto a computer. - To know how to use a computer to view data in a different format. - To know how to use pictograms to answer simple questions about objects. **How can I create a pictogram?** - To know how to organise data in a tally chart. - To know how to use a tally chart to create a pictogram. - To know how to explain what a pictogram shows. **What is an attribute?** - To know how to tally objects using a common attribute. - To know how to create a pictogram to arrange objects by an attribute. - To know how to answer 'more than' / 'less than' questions about an attribute. **How can I collect data about people?** - To know how to choose a suitable attribute to compare people. - To know how to collect relevant data. - To know how to create a pictogram and draw conclusions from it. **How can I present information using a computer?** - To know how to use a computer program to present information in different ways. - To know how to share what I have found out using a computer. - To know how to give simple examples of why information should not be shared.	and finally block diagrams. Learners will use the data presented to answer application of knowledge questions.
Y2 - Programming (An Introduction to Quizzzes).	**How can I give instructions as a sequence?** - To know how to follow instructions given by someone else. - To know how a series of words can be acted out as a sequence. - To know how to give clear instructions. **How can I design a mat for my robot?** - To know that programming projects can include both code and artwork. - To know how to explain the choices made when designing a mat. - To know how to identify different routes around a mat. - to know how to test a mat to make sure that it is usable. **How can I create an algorithm?** - To know how to design an algorithm and explain what an algorithm should achieve. - To know how to create an algorithm to meet an end goal. - To know how to use an algorithm to create a program. **How can I create an outcome using Scratch Jr?** - To know that a sequence of commands has a start. - To identify the start of a sequence. - To know how to run a program. - To know that a sequence of commands has an outcome. - To know how to match two sequences with the same outcome.	In this unit, learners will begin to understand that sequences of commands have an outcome and make predictions based on their learning. They will use and modify designs to create their own quiz questions in Scratch Jr and realise these designs in Scratch Jr using blocks of code. Finally, learners will evaluate their work and make improvements to their programming projects.

	- To know how to change the outcome of a sequence of commands. **How can I create a program using a given design?** - To know how to create a program using a given design. - To know how to work out the actions of a sprite in an algorithm. - To know which blocks can be used to meet the design. - To know how to build the sequence of the blocks that are needed. **How can I change a given quiz design?** - To know how to choose backgrounds for the design. - To know how to choose characters for the design. - To know how to create a program based on a new design.	
Y3 - Computer Systems and Networks (Connecting Computers)	**How does a digital device work?** - To know that digital devices accept inputs. - To know that digital devices produce outputs. - To know how to follow a process. **What parts make up a digital device?** - To know how to classify input and output devices. - To know how to model a simple process. - To know how to design a digital device. **How do digital devices help us?** - To know why I use digital devices for different activities. - To know similarities and differences between digital devices and non-digital tools. **How am I connected?** - To know how a computer network can be used to share information. - To recognise different connections. - To know how messages are passed through multiple connections. - To know why we need a network switch. **How are computers connected?** - To know that a computer network is made up of a number of devices. - To know and demonstrate how information can be passed between different devices. - To know and explain the role of a switch, server and wireless access point in a network. **What does our school network look like?** - To know the physical components of a network, including how devices in a network are connected with one another. - To know and identify network devices around me. - To know the benefits of computer networks.	In this unit, learners will develop their understanding of digital devices, with an initial focus on inputs, processes and output. They also compare digital and non-digital devices, before being introduced to computer networks.
Y3 - Creating Media (Desktop Publishing)	**How can text and images convey information?** - To know the difference between text and images.	In this unit, learners will become familiar with the terms 'text' and 'images' and understand that they can be used to communicate messages.

	- To know that text and images can communicate messages clearly. - To know the advantages and disadvantages of using text and images. **How can I edit the text and layout of a document?** - To know that text and layout can be edited. - To know how to change the font style, size and colours for a given purpose. - To know how to edit text and explain that text can be changed to communicate more clearly. **How can you I choose appropriate page settings?** - To be able to choose appropriate page settings. - To know and define the term 'page orientation'. - To know and recognise placeholders and say why they are important. - To know how to create a template for a particular purpose. **How can I add content to a desktop publishing publication?** - To know how to add content to a desktop publishing publication. - To know how to select the best locations for my content. - To know how to paste text and images to create a magazine cover. - To know how to make changes to content after adding it. **How can I choose suitable layouts for different purposes?** - To know how to identify different layouts. - To know how to match a layout to a purpose. - To know how to choose a suitable layout for a given purpose. **What are the benefits of using desktop publishing?** - To know how to consider the benefits of desktop publishing in the real world. - To know why desktop publishing might be helpful. - To know how to compare work made by desktop publishing to work created by hand.	
Y3 - Data Information (Branching Databases)	**How can I create questions with yes/no answers?** - To know how to investigate questions with yes/no answers. - To know how to make up a yes/no question about a collection of objects. - To know how to create two groups of objects separated by one attribute. **How can I collect relevant data?** - To know how to select an attribute to separate objects into groups. - To know how to create a group of objects within an existing group. - To know how to arrange objects into a tree structure. **How can I create a branching database?** - To know how to select objects to arrange in a branching database. - To know how to group objects using my own yes/no questions. - To know how to prove my branching database works. **How can I structure a branching database?** - To know how to create yes/no questions using given attributes.	In this unit, learners will develop their understanding of what a branching database is and how to create one. They will gain an understanding of what attributes are and how to use them to sort groups of objects by using yes/no questions. The learners will create physical and on-screen branching databases. Finally, they will evaluate the effectiveness of branching databases and will decide what types of data should be presented as a branching database.

	- To know how to explain that questions need to be ordered carefully to split objects into similarly sized groups. **How can I identify objects using a branching database?** - To know how to select a theme and choose a variety of objects. - To know how to create questions and apply them to a tree structure. - To know how to use a branching database to answer questions. **How can I compare the information shown in a pictogram with a branching database?** - To know how to explain what a pictogram shows. - To know how to explain what a branching database tells me. - To know how to compare two ways of presenting information.	
Y3 – Programming (Sequence in Music).	**What are the features of Scratch?** - To know and identify the different objects in a Scratch project (sprites, backdrops). - To know that objects in Scratch have attributes (linked to). - To know that commands in Scratch are represented as blocks. **How can I program a sprite?** - To know that each sprite is controlled by the commands chosen. - To know that commands have an outcome. - To know how to describe an-screen action for my plan. - To know how to create a program following a design. **How can I sequence by joining blocks together?** - To know how to start a program in different ways. - To know how to create a sequence of connected commands. - To know how to explain that the objects in my project will respond exactly to the code. **Why is the order of commands important?** - To be able to explain what a sequence is. - To know how to combine sound commands. - To know how to order notes in a sequence. **How can I change the appearance of my project?** - To know how to build a sequence of commands. - To know how to decide the actions for each sprite in a program. - To be able to design choices for my artwork. **How can I create a project from a design brief?** - To identify and name the objects I will need for a project. - To relate a task description to a design. - To know how to implement my algorithm as code.	In this unit, learners will be introduced to a selection of motion, sound, and event blocks which they will use to create their own programs, featuring sequences. The final project is to make a representation of a piano. The unit is paced to focus on all aspects of sequences, and make sure that knowledge is built in a structured manner. Learners also apply stages of program design through this unit.
Y4 - Computer Systems and Networks (The Internet)	**How do networks connect?** - To know how networks physically connect to other networks. - To know that the internet can be described as a network of networks.	In this unit, learners will apply their knowledge of networks to appreciate the internet as a 'network of

	- To know why a network needs protecting. - To know and demonstrate how information is shared across the internet. **What is the internet made of?** - To know that network devices make up the internet. - To know and describe different networked devices and how they connect. - To know and be able to explain how the internet allows us to view the World Wide Web. - To know that the World Wide Web is part of the internet that contains websites and web pages. **How can I share information?** - To know that websites can be shared via the World Wide Web. - To know where websites are stored when uploaded to the World Wide Web. - To know how to access websites on the World Wide Web. **What is a website?** - To know how content can be added and accessed on the World Wide Web. - To know how to create media which can be found on websites. - To know that anyone can add content to the World Wide Web. **Who owns the web?** - To recognise that the content of the World Wide Web is created by people. - To know that there are rules to protect content. **Can I believe what I read?** - To know that not everything on the World Wide Web is true. - To know how to explain why some information found online may not be honest, accurate or legal. - To know that I need to think carefully before I share or re-share content.	networks'. Children will also explore the World Wide Web for themselves and learn about who owns content.
Y4 - Creating Media (Audio Editing)	**Which digital devices are capable of recording sound?** - To know that sound can be digitally recorded. - To know and identify digital devices that can record sound and play it back. - To know and identify the inputs and outputs required to play audio or record sound. - To know and recognise the range of sounds that can be recorded. **How can I use a digital device to record sound?** - To know how to use a device to record sound. - To know how to use a device to record audio and play back sound. - To know how to improve my recording. - To discuss what other people include when recording sound for a podcast. **How can I make a podcast using a digital recording?** - To know that a digital recording is stored as a file. - To know how to plan for a podcast. - To know why it is useful to be able to save digital recordings. - To know how to save a digital recording as a file. **How can I edit a digital recording?** - To know that audio can be changed through editing.	In this unit, learners will initially examine devices capable of recording dgital audio, which will include identifying the input device (microphone) and output devices (speaker or headphones) if available. Learners will discuss the ownership of digital audio and the copyright implications of duplicating the work of others.

	- To know how to open a digital recording from a file. - To know how to discuss ways in which audio recordings can be altered. - To know how to edit sections of an audio recording. **How can I combine audio to a digital recording?** - To know that different types of audio can be combined and played together. - To discuss sounds that other people combine. - To know how to choose suitable sounds to include in a podcast. - To know how to use editing tools to arrange sections of audio.	
Y4 - Data Information (Data Loggers)	**How can I use data to answer questions?** - To know how to choose a data set to answer a given question. - To know how to suggest questions that can be answered using a given data set. - To know how to identify data that can be gathered over time. **How can I use a digital device to collect data automatically?** - To know how to explain that sensors are input devices. - To know how to use data from a sensor to answer a given question. - To know how to identify that data from sensors can be recorded. **How do data loggers work?** - To know how to identify a suitable place to collect data. - To know how to identify the intervals used to collect data. - To know how to talk about the data that has been captured. **How can I analyse data?** - To know how to import a data set. - To know how to use a computer to view data in different ways. - To know how to use a computer program to sort data. **How can I identify the data needed to answer questions?** - To know how to propose a question that can be answered using logged data. - To know how to plan effectively for how to collect data using a data logger. - To know how to use a data logger to collect data. **How can collected data be used to answer questions?** - To know how to interpret data that has been collected using a data logger. - To know how to draw conclusions from data which has been collected. - To know and explain the benefits of using a data logger.	In this unit, learners will consider how and why data is collected overtime, collecting their own data as well as access data captured over long periods of time. They will look at data points, data sets and logging intervals.
Y4 – Programming (Repetition in Shapes).	**How can I program an on-screen turtle?** - To know that accuracy in programming is important. - To know how to program a computer by typing commands. - To know the effect of changing a value of a command. - To know how to create a code snippet for a given purpose.	In this unit, learners will create programs by planning, modifying, and testing commands to create shapes and patterns. They will use Logo, a text-based programming language.

	Can I create algorithms to make shapes? - To know what 'repeat' means. - To be able to identify patterns in everyday tasks. - To be able to identify patterns in a sequence. - To know how to use a count-controlled loop to produce a given outcome. **Can I create algorithms to make complex shapes?** - To know how to modify a count-controlled loop to produce a given outcome. - To know how to identify the effect of changing the number of times a task is repeated. - To know how to predict the outcome of a program containing a count-controlled loop. - To be able to choose which values change in a loop. **How can I create shapes in a game?** - To know how to make a list of everyday instructions, which include repetition. - To be able to predict the outcome of a snippet of code. - To know how to modify a snippet of code to create a given outcome. **How can I use infinite loops in a game?** - To know how to modify loops to produce a given outcome. - To know how to choose when to use a count-controlled and an infinite loop. - To know how to recognise that some programming languages enable more than one process to run at once. **How can I animate my name in Scratch?** - To know which action will be repeated for each object. - To know how to explain what the outcome of the repeated action should be. - To know how to evaluate the effectiveness of repeated sequences.	
Y5 - Computer Systems and Networks (Sharing Information).	**What is a computer system?** - To know that computers can be connected together to form systems. - To know and explain that systems are built using a number of parts. - To know that a computer system features inputs, processes and outputs. - To know that computer systems communicate with other devices. **How do we use computer systems?** - To know and recognise the role of computer systems in our lives. - To know tasks that are managed by computer systems. - To know that there are human elements of a computer system. - To know and explain the benefits of a given computer system. **How is information transferred over the internet?** - To know that data is transferred using agreed methods over the internet. - To know that network digital devices have unique addresses. - To know and explain that data is transferred over networks in packets. **How does sharing information help us to work together?** - To know that sharing information online lets people in different places work together.	In this unit, learners will develop their understanding of computer systems and how information is transferred between systems and devices. Learners will consider small scale systems as well as large scale systems, explaining the 'input - process – output' aspects of a variety of different real world systems.

	- To know that I can send information over the internet in different ways, allowing different media to be shared. - To know that digital devices can allow us to access shared files that have been stored online. **How does sharing information help us to work together?** [2] - To know and apply strategies to ensure successful group work. - To be able to compare working online with working offline.	
Y5 - Creating Media (Video Editing)	**What is a video?** - To know that a video can include both visual and audio media. - To know the benefits of adding audio to a video. - To know how to plan for a video project using a storyboard. **What is a device?** - To know how to identify and name digital devices that can record both video and sound. - To know how to select the most suitable digital device for recording a project. - To know how to locate and identify the working features of a digital device that can record video. **How can I used a device?** - To know how to select a suitable device and software, to capture videos. - To know how to demonstrate suitable methods of using a digital device, to capture videos. - To know how to safely use and handle digital devices. **What are the features of an effective video?** - To know the features of an effective video and be able to confidently list the features. - To know how to record a video that demonstrates some of the features of an effective video.. - To know how to explain why lighting and angles are important in creating an effective video. **How can I import or export a video?** - To know how to store, retrieve and export a recording to a computer. - To know how to improve a video by reshooting and editing. - To know how to select the correct tools to make edits to a video. **How can I evaluate a video?** - To know how to make edits to a video and how to improve the final outcome. - To know that the choices made when making a video will impact on the quality of the final outcome. - To know how to evaluate a video and share opinions.	In this unit, learners will be provided with the opportunity to create short videos in groups. As they progress through this unit, they will be exposed to topic-based language and develop the skills of capturing, editing and manipulating video.
Y5 - Data Information (Flatfile Databases)	**How can I create a paper-based database?** - To know how to create multiple questions about the same field. - To know how to explain how information can be recorded. - To know how to order, sort and group data cards. **How can I compare paper and computer-based databases?** - To know how to navigate a flat-file database to compare different views of information. _ To know how to explain what a 'field' and a 'record' is in a database. - To know how to choose which field to sort data by to answer a given question.	In this unit, learners will look at how a flat-file database can be used to organise data in records. Pupils will use tools within a database to order and answer questions about data. They will create graphs and charts from their data to help solve problems. Finally, they will use a real-life database to answer a question and present their work to others.

	How can I group and sort data on a computer-based database? - To know how information can be grouped. - To know how to group information to answer questions. - To know how to combine grouping and sorting to answer more specific questions. **How can search tools be used to select data?** - To know which field and value are required to answer a given question. - To know how to outline how 'AND' and 'OR' can be used to refine data selection. - To know how to choose criteria to answer a given question. **How can I use a computer program to compare data visually?** - To know how to select an appropriate char to visually compare data. - To know how to refine a chart by selecting a particular filter. - To know and explain the benefits of using a computer to create graphs. **How can I apply my knowledge of a database to the real-world?** - To know how to ask questions that will need more than one field to answer. - To know how to refine a search in a real-world context. - To know how to present findings to a group.	
Y5 – Programming (Selection in Quizzes)	**How can I explore conditions in programming?** - To know how selection is used in computer programs. - To know how conditions are used in a selection. - To know how to identify conditions in a program. - To know how to modify a condition in a program. **How can I select different outcomes?** - To know how to use selection in an infinite loop to check a condition. - To know how to identify the condition and outcomes in an 'if... then... else' statement. - To know how to create a program that uses selection to produce different outcomes. **How can I ask questions in an algorithm?** - To know how selection directs the flow of a program. - To know that program flow can branch according to a condition. - To know how to design a program that contains 'if... then... else'. **Can I design my own quiz?** - To know how to design a program that uses selection. - To know how to outline a given task. - To know how to use a design format to outline my project. - To know how to identify the outcome of user input in an algorithm. **Can I create my own quiz?** - To know how to create a program that uses selection. - To know how to implement an algorithm to create the first section of a program. - To know how to test a program. - To know how to share a program with others.	In this unit, learners will develop their knowledge of 'selection' by revisiting how 'conditions' can be used in programming, and then learning how the 'if... then... else...' structure can be used to select different outcomes depending on whether a condition is 'true' or 'false'. The children will represent this understanding in algorithms, and then by constructing programs in the Scratch programming environment. They will also learn how to write programs that ask questions and use selection to control the outcomes based on the answers given. Moreover, they will be provided with opportunities to design a quiz in response to a given task and implement it as a program. To conclude, learners will evaluate their program by identifying how it meets the requirements of the task, the way they have improved it, and further ways it could be improved.

	How can I evaluate a quiz? - To know how to evaluate a program. - To identify ways in which a program could be improved. - To identify the setup code required in a program. - To know how to extend my program further.	
Y6 - Computer Systems and Networks (Communication).	**How can I search the World Wide Web using a search engine?** - To know how to complete a web search to find specific information. - To know and be able to refine my search. - To know how to compare results from different search engines. **How do search engines select results?** - To be able to explain why we needs search engines. - To know the role of web crawlers in creating an index. - To know how to relate a search term to the search engine's index. **How are search results ranked?** - To know how search results are ranked and ordered. - To know that search engines follow rules to rank relevant pages. - To know and suggest some of the criteria a search engine checks to decide on the order of results. **Why are the order of results important?** - To know why the order of results are important and how they can be influenced. - To know and recognise some of the limitations of search engines. - To explain how search engines make money. **How can we communicate using technology?** - To know that there are many ways in which people can communicate. - To be able to identify a variety of ways of communicating over the internet and choose these for particular purposes. **How can I evaluate different methods of online communication?** - To be able to evaluate different methods of online communication. - To compare different methods of communicating on the internet. - To know what I should and should not share. - To know that communication on the internet may not be private.	In this unit, learners will learn about the World Wide Web as a communication tool, how search engines work and compare different search engines. They will investigate different methods of communication and evaluate them.
Y6 - Creating Media (Webpage Creation)	**What makes a good website?** To be how to explore a website. To know how to effectively discuss the different types of media used on websites. To know that websites are written in HTML. **How would you lay out your web page?** To know how to effectively plan the features of a web page. To know and name the common features of a web page. To know different types of media that I could include on my page.	In this unit, learners will create websites for a chosen purpose. Learners will identify what makes a good web page and use this information to design and evaluate their own website. Throughout the process learners pay specific attention to copyright and fair use of media.

	To be able to draw a web page layout for a particular purpose. **What is copyright?** To consider the ownership and use of images (copyright) To know why I should use copyright-free images To know how to find copyright-free images To know what is meant by the term 'fair use' **How does the web page look?** To recognise the need to preview pages To know how to content to my own web page To know how to preview what my web page looks like To know how to evaluate what my web page looks like on different devices and suggest/make edits. **What are navigation paths?** To outline the need for a navigation path To know what a navigation path is and why navigation paths are useful To know how to make multiple web pages and link them using hyperlinks. **How effective is my website?** To recognise the implications of linking to content owned by other people To be able to create hyperlinks to link to other people's work To effectively evaluate the user experience of a website.	
Y6 - Data Information (Spreadsheets)	**What is a spreadsheet?** - To know the relevance of data headings. - To know how to answer questions from an existing data set. - To know how to ask simple, relevant questions which can be answered using data. **How can I modify a spreadsheet?** - To know what an item of data is. - To know how to apply an appropriate number format to a cell. - To know how to build a data set in a spreadsheet application. **How can formulas be used to produce calculated data?** - To know and explain the relevance of a cell's data type. - To know how to construct a formula in a spreadsheet. - To know and identify how to change inputs and outputs **How can I calculate and duplicate data?** - To know that data can be calculated using different operations. - To know that a formula includes a range of cells. - To know how to apply a formula to multiple cells by duplicating it. **How can I create a spreadsheet to plan for an event?** - To know how to use a spreadsheet to answer questions. - To know why data should be organised. - To know how to apply a formula to calculate the data I need to answer questions.	In this unit, learners will be introduced to spreadsheets. They will be supported in organising data into columns and rows to create their own data set. Learners will be taught about the importance of formatting data to support calculations, while also being introduced to formulas and will begin to understand how they can be used to produce calculated data. They will also be taught how to apply formulas to a range of cells and apply formulas to multiple cells by duplicating them.

	How can I present data? - To know how to produce a graph. - To know how to use a graph to show the answer to questions. - To know when to use a table or graph.	
Y6 – Programming (Variables in Games).	**What is a variable?** - To know that a variable is changeable. - To be able to identify examples of information that is a variable. - To know that variables can hold numbers or letters. **How can I use variables?** - To know why a variable is used in a program. - To be able to identify a program variable as a placeholder in memory for a single value. - To know that a variable has a name and a value. - To know that a value of a variable can be changed. **How can I improve a game?** - To know how to improve a game by using variables. - To know how to make use of an event in a program to set a variable. - To know that the value of a variable can be used by a program. **How can I design my own game? [Part A]** - To know how to design a project that builds on a given example. _ To be able to select artwork for my project. - To know how to create algorithms for a project. - To know how to explain different design ideas. **How can I design my own game? [Part B]** - To know how to design a project that builds on a given example. _ To be able to select artwork for my project. - To be able to choose a name that identifies the role of a variable. - To know how to test a code that has been written. **How can I improve and share my game?** - To be able to evaluate a project. - To be able to identify ways that game designs can be improved. - To know how to share my game safely with others.	Learners will explore the concept of variables in programming through games in Scratch. First, learners find out what variables are and relate them to real-world examples of values that can be set and changed. Then they use variables to create a simulation of a scoreboard. In Lessons 2, 3, and 5, which follow the Use-Modify-Create model, learners' experiment with variables in an existing project, then modify them, before they create their own project. In Lesson 4, learners focus on design. Finally, in Lesson 6, learners apply their knowledge of variables and design to improve their games in Scratch.