SHERRIER CE PRIMARY
COMPUTING NATIONAL CURRICULUM COVERAGE

Progression in computing

Computing systems and network							
Key Skill:	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Use different digital devices Recognise that you can access content on a digital device. Use a mouse, touchscreen, or appropriate access to device to target and select options on screen. Recognise a selection of digital devices. Recognise the basic parts of a computer e.g. mouse, screen, keyboard. Select a digital device to fulfil a specific task e.g. to take a photo.	Recognise a range of digital devices. Select a digital device to fulfil a specific task e.g. to take a photo. Name a range of digital devices, e.g. laptop, phone, games console. Log on to the school computer/unlock the school tablet with support. Identify the basic parts of a computer e.g. mouse, keyboard, screen. Use suitable access device (mouse, keyboard, touchscreen, switch) to access and control an activity on a computer. Open key applications independently. Save and open files with support.	Recognise what a computer is (input > process > output). Recognise that a range of digital devices contain computers (phones, games console, smart speaker). Explain what the basic parts of a computer are used for. Identify and use input devices, e.g. mouse, keyboard; and output devices, e.g. speakers, screen. Open key applications independently. Save and open files to/from a given folder. Add an image to a document from a given folder/source. Resize an image in a document. Highlight	Describe what a computer is (input > process > output) Explain the difference between input and output devices on a computer. Know where to save and open files (e.g. shared folder). Save files with appropriate names. Use a keyboard effectively to type in text. Use left/right and double click on a the mouse. Add an image to a document from the internet. Resize and move an image in a document. Use a search engine to find simple information.	Recognise that you can organise files using a folder. Explain what a good file name would look like. Delete and move files. Use key parts of a keyboard effectively, e.g. shift, arrow keys, delete. Know how to copy and paste text or images in a document. Crop an image and apply simple filters. Use a search engine to find specific information. Recognise that school computers are connected on a network.	Type using fingers on both hands. Use common keyboard shortcuts e.g. ctrl C and ctrl V Explain what makes a strong password. Use folders to organise files. Know how to mute and unmute audio on a computer or tablet. Recognise that there is more than one search engine, and that they may produce different results. Use a search engine effectively to find information and images. Know how to search for an application on a computer/tablet.	Type efficiently using both hands. Use a range of keyboard shortcuts. Recognise that different devices may have different operating systems. Organise files effectively using folders and file names. Use the advanced search tools when using a search engine to find specific information and images. Explain the basic function of an operating system. Recognise common file types and extensions e.g. jpeg, png, doc, wav. Recognise a range of Internet services e.g. email, VOIP (e.g. Skype, FaceTime),

		Add an image to a document from a given folder/source with support.	text and use arrow keys. Capture media independently (e.g. take photos, record audio).	Recognise that school computers are connected.			World Wide Web, and what they do.

Presenting information and creating multi-media.							
Key Skill:	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Use technology to explore and access digital content. Operate a digital device with support to fulfil a task. Create simple digital content, e.g. digital art. Choose media to convey information, e.g. image for a poster.	Create digital content, e.g. digital art. Choose media from a selection (e.e. images, video, sound) to present information on a topic. Recognise that you can find out information from a website. Select basic tools/operations to change the appearance of digital content, e.e. filter on an image/font/size of paintbrush. Combine media with support to present information, e.g. text and images.	Create simple digital content for a purpose, e.g. digital art, poster. Recognise that we can use technology to record playback audio or take and view photographs. Apply edits to digital content to achieve a particular effect, e.g. emphasise part of a text. Present ideas and information by combining media, e.g. text and images. Explain that you can search for information on the internet. Plan out digital content, e.g. a simple sketch or storyboard. Identify the common features of digital	Present ideas and information by combining media independently, e.g. text and images. Design and create simple digital content for a purpose/audience, e.g. a poster. Edit digital content to improve, e.g. resize text. Identify the features of a good piece of digital content. Explain why we use technology to create digital content. Recognise why we use different types of media to convey information, e.g. text, image, audio, video.	Collect, organise and present information using a range of media. Design and create digital content for specific purpose, e.g. poster, animation. Edit digital content to improve it according to feedback. Identify the features of a good piece of digital content and apply these in own designs. Explain the benefits of using technology to present information. Know where to find copyright-free content, e.g. creative commons images. Collaborate with peers using online	Identify and use appropriate hardware and software to fulfil a specific task . Remix and edit a range of existing, and their own, media to create content. Consider the audience when designing and creating digital content. Recognise the benefits of using technology to collaborate with others. Identify success criteria for creating digital content for a given purpose and audience. Evaluate their own content against success criteria and	Select, combine and remix a range of media to create original content. Consider all steps of the design process when creating content (e.g. identify problems, plan, create, evaluate, share). Identify the most effective tools to present information for a specific purpose. Explain the benefits of using technology to collaborate with others. Evaluate existing digital content in terms of effectiveness and design.

			content, e.g. title, images. Recognise that we can use different types of media to convey Information, e.g. text, image, audio, video.		tools, e.g. blogs, Google Drive, Office 365 etc. a specific purpose, e.g. poster, animation.	make improvements accordingly.	

Data and information							
Key Skill:	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Access content in a range of formats, e.g. video, image, audio. Answer basic questions about information displayed in images.	Recognise different forms of digital content, e.g. text, image, video and audio. Collect simple data (e.g. likes/dislikes) on a topic. Present simple data using images e.g. number of animals/favourite colour. Recognise tally charts and pictograms and why we use them.	Recognise tally charts, charts, pictograms and branching databases and why we use them. Explain all information shown in a simple chart or pictogram. Identify key features of a chart of pictogram. Collect data on a topic (eye colour, pets etc) and present in a pictogram or a chart. Modify simple charts/pictograms, e.g. add title, item or labels.	Recognise charts. Pictograms and databases and why we use them. Present information using a suitable chart. Explore a record card database to find out information. Use filters in a database to find out specific information. Name they key parts of a database, e.g. record, field, search. Answer questions about information in a database. Create questions using yes or no. Name some benefits of using a computer to create charts and databases.	Draw conclusions from information story in a database, chart or table. Design a questionnaire and collect a range of data on a theme. Choose appropriate formats to present data to convey information. Recognise that data can be collected on digital devices and sensors automatically. Use a computer program to sort data by attributes. Present the same data in a graph and in a chart. Know that you use a	Explain the differences between data and information. Appreciate that different programs work with different types of data, e.g. text, number, video, paper database. Explain the different between the Internet and the World Wide Web. Know the difference between a search engine and a web browser. Explain the basics of how search engines work. Perform searches for information using advanced settings in search engines.	Recognise what a spreadsheet is and what it is used for. Explain the difference between physical, mobile and wireless networks. Use simple formulae in a spreadsheet to find out information from a set of data. Collect data for a purpose and plan out a spreadsheet to present it effectively, using relevant formulae. Produce graphs from data in a spreadsheet to answer a question. Analyse and evaluate data and information in a spreadsheet, chart or database.

				Recognise that search engines store information in databases. Compare databases and branching data to a pictogram.	web browser to access information stored on the internet. Appreciate that you need to use specific software to work with video, images, audio etc.	Recognise the benefits and risks of sharing data online. Use, create and compare visual databases.	Recognise that poor quality data leads to unreliable results.

Programming and algorithms.							
Key Skill:	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Explore technology. Repeat an action wit technology to trigger a specific outcome. Recognise the success or failure of an action. Follow simple instructions to control a digital device. Recognise that we control computers. Input a short sequence of instructions to control a device.	Recognise that computers don't have a brain. Explain that we control computers by giving them instructions. Explain that we control computers by giving instructions. Create a simple program, e.g. to control a floor robot – create a simple algorithm. Predict the outcome of a simple algorithm or program. Explain what an algorithm is – a sequence of instructions to make something happen.	Explain that computers have no intelligence and we have to program them to do things. Create a program with multiple steps, e.g. to control a floor robot. Predict the outcome of an algorithm or program with multiple steps. Recognise that the instructions in an algorithm need to be clear and unambiguous. Identify and correct errors in each algorithm and program and recognise the term debugging.	Predict the outcome of a block or text-based program (Scratch/discovery coding). Modify an existing program, e.g. change background, number of times things happen. Identify repeated steps in a program or algorithm. Create examples of algorithms containing count controlled loops. Use a count-controlled loop to make a program more efficient. Recognise that we can create an algorithm to help plan out a program.	Create a program using a range of events/inputs to control what happens. Recognise that we can decompose a problem into smaller parts to help solve it. Explain when to use forever loops and count-controlled loops, and use them in programs. Recognise selection in a program or algorithm. Use selection in algorithms in programs to alter what happens when a condition changes, e.g. if…then… Design a program for a purpose.	Name a range of sensors in physical systems. Recognise that different solutions may exist for the same problem. Predict what will happen in a program algorithm when the input changes (e.g. sensor, data or event). Use two-way selection in a program and what they do. Create problems including 'repeat until' loops. Create and use simple variables, e.g. to keep score.	Design and program a physical computing system that uses sensors. Recognise and use producers (sub-routines) in programs. Plan out a program in detail, including task, algorithm, code and execution level. Explain common errors in programs and how to fix them. Use nested selection statements in a program or algorithm effectively. Combine a variable with relational operators (< = >) to determine when a program changes,

		Recognise that the order of instructions in an algorithm is important. Debug an error in a simple algorithm or program, e.g. for a floor robot.	Explain what an algorithm is, and that when inputted on a computer it is called a program. Plan out a program by creating an algorithm and evaluate its success.	Identify errors in a block or text-based program and correct them. Recognise that different inputs can be used to control a program.	Recognise common mistakes in programs and how to correct them.	Evaluate a program and make improvements to the code or design accordingly. Create an algorithm for a physical system containing a sensor.	e.g. if score >5 say 'well done'. Recognise key concepts (sequence, selection, repetition and variable) in a range of languages and contexts.