

Computing

Vision – ‘all things are possible’

At Benedict Biscop we want our children to learn that all things are possible. We want our children to aspire and to achieve highly.

We want our children to develop as **IT professionals and Computer Scientists**, developing knowledge and skills through the core element of computing which are computer science, information technology and digital literacy.

Characteristics:

- **A love of technology** and **understand a variety of technology** that can be used for a range of different purposes.
- To be **patience** and be able to **problem solve** to ensure that the **technology is working correctly and effectively**.
- To be **resilient** and continue to correct and develop the way technology is used.
- To be able to **problem solve** and find a solution to problems when using technology.
- To **think logically** and **work methodically** to solving problems with technology.
- To work **collaboratively** with other people, **in person and online**, to ensure that problems are solved.
- To be **creative** and use a range of different software and programs to enhance and develop their work.
- To **use and apply computational thinking** to the core elements of computing

Our pupils begin their Computing journey at Benedict Biscop in our Early Years environment. Our provision has been carefully created, to provide a range of opportunities and experiences with technology both indoor and outdoor to help develop Computing knowledge and skills. Our pupils are also taken ‘beyond’ our school environment into the local area experiencing both forest school and beach school provision.

We continue this creative approach within Key Stage 1 and 2, where we actively encourage cross-curricular learning, to give pupils maximum opportunity to transfer skills and knowledge. Within Computing, we want children to understand elements from the National Curriculum which are **COMPUTER SCIENCE, INFORMATION TECHNOLOGY AND DIGITAL LITERACY**. The three core areas of Computing link our Computing curriculum which is separated into four strands: Programming and Coding (COMPUTER SCIENCE); Creating Digital Content (INFORMATION TECHNOLOGY); Technology in our Lives (COMPUTER SCIENCE, INFORMATION TECHNOLOGY and DIGITAL LITERACY); and Online Safety and Appropriate Use (DIGITAL LITERACY). Each area of Computing focuses on one or more of the core elements of computing. Within lessons, children will be given the opportunity to follow a clear sequence within the lesson which incorporates computational thinking approaches and concepts. A Computing lesson should include TINKER (opportunity to explore), PRACTICE SKILLS AND KNOWLEDGE (explicit teaching of skills and knowledge needed), CREATE AND MASTER SKILLS AND KNOWLEDGE (application of existing and new skills and knowledge) and EVALUATE (evaluating their own learning and explore how to improve). Technology is continuing to become a huge part in everyday life, we want to ensure children have the appropriate and suitable skills and knowledge for the future workplace, and grow and develop into active participants in the digital world. We want our children to use computational thinking and creativity to understand and change the world through collaboration, as well as making links to industry.

EYFS Statutory Framework – Knowledge and Understanding

Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children’s personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children’s vocabulary will support later reading comprehension.

National Curriculum Aims:

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- Are responsible, competent, confident and creative users of information and communication technology.

Early Years Foundation Stage Computing looks at:

- Begin to understand what algorithms are through the following and giving of instructions, begin to explore how algorithms are implemented as programs on digital devices
- Begin to use technology independently and/or with support to purposefully create, organise, store, manipulate and retrieve digital content
- Begin to recognise common uses of information technology within school and beyond
- Begin to use understand how to use technology safely and respectfully with/without support, keeping personal information private; understanding where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Key Stage 1 Computing looks at:

- 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 Computing looks at:

- 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

Long Term Overview

The long term overview outlines how the curriculum is implemented in the long term. **Programming and Coding** and **Creating Digital Content** outlines what hardware of software will be used for each term to ensure the objectives are implemented effectively. **Technology in our Lives** outlines how the children will search the internet and elements of computer science which are important for children to know about different types of technology. **Online Safety and Appropriate Use** outlines the different parts of digital literacy and online safety stated from the 'Education for a Connected World' document.

Programming and Coding, **Creating Digital Content**, **Technology in our Lives**, **Online Safety and Appropriate Use**

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn Term	Programming and Coding - Bee Bot (Hardware) Creating Digital Content - Pages/Word - Showbie Technology in our Lives - Understanding what technology is - Using the internet with an adult Online Safety and Appropriate Use - Online bullying (Covered in PD) - Managing online behaviour - Copyright and ownership	Programming and Coding - Physical Coding - Bee Bots (hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint Technology in our Lives - Understand the uses and benefits of technology - Making internet searches Online Safety and Appropriate Use - Online bullying (Covered in PD) - Managing online behaviour - Copyright and ownership	Programming and Coding - Physical Coding - Bee Bots (hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Numbers/Excel Technology in our Lives - Explain how and why technology is used in school and local area - Making internet searches and answering questions Online Safety and Appropriate Use - Online bullying (Covered in PD) - Managing online behaviour - Copyright and ownership	Programming and Coding - Probots (Hardware) - Real life Programming Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips Technology in our Lives - Ways of communication online - how to collaborate online - using search engines and keywords - evaluating online images for work Online Safety and Appropriate Use - Online bullying (Covered in PD) - Managing online behaviour - Copyright and ownership	Programming and Coding - ScratchJr (Software) - Scottie Go (Software) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips/iMovie Technology in our Lives - Choosing appropriate digital application to meet a purpose - Choosing appropriate online platform to collaborate - using search engines and specific keywords - evaluating online images for work for specific purpose Online Safety and Appropriate Use - Online bullying (Covered in PD) - Managing online behaviour - Copyright and ownership	Programming and Coding - Real life Programming - Probots (Hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips/iMovie Technology in our Lives - Appropriate online and offline tools to collaborate - Online communication tools for different purposes - using search engines and specific keywords - being digitally critical and checking reliability of information Online Safety and Appropriate Use - Online bullying (Covered in PD) - Managing online behaviour - Copyright and ownership	Programming and Coding - Real life Programming - Microbits (Hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips/iMovie - Garageband Technology in our Lives - Online tools for communicating and collaboration for different purposes and situations - using search engines and specific keywords - being digitally critical and checking reliability and plausibility of information - evaluating reliability of websites Online Safety and Appropriate Use - Online bullying (Covered in PD) - Managing online behaviour - Copyright and ownership
Spring Term	Programming and Coding - Bee Bot (Hardware) - Daisy the Dinosaur (Software) Creating Digital Content - Pages/Word - Showbie Technology in our Lives - Technology at home - Using websites with an adult - Using the internet with an adult Online Safety and Appropriate Use - Privacy and Security (Covered in PD) - Online Relationships(Covered in PD) - Online Reputation	Programming and Coding - Daisy the Dinosaur (Software) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint Technology in our Lives - Technology used at home - Making internet searches Online Safety and Appropriate Use - Privacy and Security (Covered in PD) - Online Relationships(Covered in PD) - Online Reputation	Programming and Coding - Bee Bots (Software) - Scratch Jr (Software) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Numbers/Excel Technology in our Lives - Benefits of technology - How to share work online with others - Making internet searches and answering questions Online Safety and Appropriate Use - Privacy and Security (Covered in PD) - Online Relationships(Covered in PD) - Online Reputation	Programming and Coding - SrtachJr (Software) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips Technology in our Lives - Parts of a computer and how they work - using search engines and keywords - evaluating online images for work Online Safety and Appropriate Use - Privacy and Security (Covered in PD) - Online Relationships(Covered in PD) - Online Reputation	Programming and Coding - Real life Programming - Probots (Hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips/iMovie Technology in our Lives - Difference between World Wide Web (WWW) and the internet - Creating hyperlinks for websites - using search engines and specific keywords - evaluating online images for work for specific purpose Online Safety and Appropriate Use - Privacy and Security (Covered in PD) - Online Relationships(Covered in PD) - Online Reputation	Programming and Coding - Hopscotch (Software) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips/iMovie Technology in our Lives - Importance of the Internet - Webpage rankings on a search engine - using search engines and specific keywords - being digitally critical and checking reliability of information Online Safety and Appropriate Use - Privacy and Security (Covered in PD) - Online Relationships(Covered in PD) - Online Reputation	Programming and Coding - Hopscotch (Software) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips/iMovie - Garageband Technology in our Lives - What is a 'search index' - using search engines and specific keywords - being digitally critical and checking reliability and plausibility of information - evaluating reliability of websites Online Safety and Appropriate Use - Privacy and Security (Covered in PD) - Online Relationships(Covered in PD) - Online Reputation

Summer Term	Programming and Coding - Bee Bot (Hardware and Software) - Daisy the Dinosaur (Software) Creating Digital Content - Pages/Word - Showbie Technology in our Lives - Technology in the local area - Using the internet with an adult Online Safety and Appropriate Use - Self-image and identity - Health, well-being and lifestyle	Programming and Coding - Bee Bot (Software) - Daisy the Dinosaur (Software) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint Technology in our Lives - Ways technology is used in local community - Making internet searches Online Safety and Appropriate Use - Self-image and identity - Health, well-being and lifestyle	Programming and Coding - Scratch Jr (Software) - Probots (Hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Numbers/Excel Technology in our Lives - How is the real world different to the online world - Making internet searches and answering questions Online Safety and Appropriate Use - Self-image and identity - Health, well-being and lifestyle	Programming and Coding - SrtachJr (Software) - Probots (Hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips Technology in our Lives - Computer network and the functions of different parts - using search engines and keywords - evaluating online images for work Online Safety and Appropriate Use - Self-image and identity - Health, well-being and lifestyle	Programming and Coding - Hopscotch (Software) - Microbits (Hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips/iMovie Technology in our Lives - How are webpages views - Where internet services are located across the world - using search engines and specific keywords - evaluating online images for work for specific purpose Online Safety and Appropriate Use - Self-image and identity - Health, well-being and lifestyle	Programming and Coding - Hopscotch (Software) - Microbits (Hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips/iMovie Technology in our Lives - What is a 'data packet' and how is it transported on the internet - IP addresses - using search engines and specific keywords - being digitally critical and checking reliability of information Online Safety and Appropriate Use - Self-image and identity - Health, well-being and lifestyle	Programming and Coding - Swift Playground (Software) - Probots (Hardware) Creating Digital Content - Pages/Word - Showbie - Keynote/PowerPoint - Book Creator - Numbers/Excel - Clips/iMovie - Garageband Technology in our Lives - HTML - using search engines and specific keywords - being digitally critical and checking reliability and plausibility of information - evaluating reliability of websites Online Safety and Appropriate Use - Self-image and identity - Health, well-being and lifestyle
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LEARNING OVER TIME

Programming and Coding

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Objectives	- To understand how to make a floor robot move - To follow instructions from a friend or familiar adult - To know what instructions are - To begin to describe what actions I need to do for something to happen using hardware - To understand how to make a floor robot move and begin to give simple instructions - To begin to give simple instructions to a friend	- To use a piece of software and hardware to create simple algorithms - To give instructions to a friend and follow their instructions to move around - To understand and demonstrate what algorithms are - To describe what actions, I will need to do to make something happen. - To begin to predict what will happen in a short sequence of instructions - To press buttons to create an algorithm for a robot to achieve an outcome that I want - To understand and demonstrate what debug is - To understand the sequence of an algorithm is important	- To use a range of software/hardware to create simple programs - To give precise and simple instructions to a friends to make them move (forwards, backwards, turn right, turn left) - To write algorithms for everyday tasks - To understand the input and output of a program - To read an algorithm and predict the outcome using logical reasoning - To explain the sequence of a set of instructions as an algorithm - To program a robot to do a specific task by using precise instructions - To watch an algorithm and debug to make an algorithm precise - To begin to understand decomposition of an algorithm is to break down instructions	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand what software or hardware is appropriate to use to solve a problem - To decompose an open-ended problem into smaller parts - To sequence instructions to complete a specific outcome using abstraction - To understand how an input affects the output of a program - To use repeat commands to make an algorithm more precise - To detect debug programs/algorithms and begin to persevere until it achieves a specific goal - To identify patterns within a program - To evaluate the effectiveness of a program	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use abstraction to decompose an open-ended problem into smaller parts - To use algorithms to solve complex problems - To explain what the input is and how it affects the output to program a hardware/software - To use logical reasoning to simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and persevere until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable	- To use a range of programming software and hardware to solve open-ended problems - To use programs to control and simulate physical systems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve a problem - To solve open-ended problems using logical reasoning, decomposition and abstraction - To select appropriate commands for an algorithm to create a specific program - To change the input of a program to achieve a different output - To use sensors within a program - To use a variable within a program - To use 'if' and 'when' command in an algorithm - To refine and design a program using repeat commands effectively - To detect and debug errors using decomposition in an algorithm and persevere until it achieves a specific goal - To evaluate the effectiveness and efficiency of programs and explain how it is efficient	- To be proficient in using a range of programming software and hardware to solve open-ended problems - To effectively use programs to control and simulate physical systems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To use a range of instructions to simplify and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To recognise the use of a variable to achieve a specific outcome - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program

Software and Hardware	Bee Bot (Hardware) Bee Bot app (Software)	Bee Bot (Hardware) Bee Bot app (Software) Daisy the Dinosaur (Software)	Bee Bot (Hardware) Probots (Hardware) Bee Bot app (Software) Daisy the Dinosaur (Software) Scratch Jr (Software)	Probots (Hardware) Scottie GO (Software) Bee bots (Hardware) Scratch Jr (Software)	Microbits (Hardware) Probots (Hardware) Scottie GO (Software) Hopscotch (Software) Scratch Jr (Software)	Microbits (Hardware) Probots (Hardware) Hopscotch (Software)	Microbits (Hardware) Probots (Hardware) Hopscotch (Software) Swift Playground (Software)
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Creating digital Content							
	Eyfs	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Creating digital content	- To begin to create digital work with an adult - To begin to understand how to use information from the internet - To begin to save digital content on an online platform with adult support - To begin to know how to organize digital work with an adult - To say what I like and don't like about digital work	- To begin to use technology to create, organise and present my work using text, images and videos - To understand how to use information from the internet in my work - To begin to save, export and retrieve digital content on an online platform - To begin to understand how to modify a template - To begin to know how to organise digital work - To begin to evaluate my digital work	- To use technology to create, organise and present my work using text, images and videos - To use information that I have found on the internet - To save, export and retrieve digital content on an online platform - To understand how to modify a template - To understand how to organise my digital work - To use appropriate media that I have collected and from the internet in my work - To evaluate my digital work	- To use technology to create, organise and present my work using text, images and videos specific purpose - To effectively use information that I have found on the internet - To save, export, store and retrieve work on an online platform or school network - To evaluate digital work and explain how to improve it - To understand how to modify a template and use a range of tools to create a piece of work - To understand how to organise my digital work appropriately - To use appropriate and clear media that I have collected and from the internet in my work - To evaluate the effectiveness and appropriateness of my work	- To use technology to create, organise and present my work using text, images and videos specific purpose and audience - To effectively use information, I have found on the internet and check its reliability - To save, export, store and retrieve work on an online platform or school network - To modify a template and use a range of tools to create a piece of work for a specific purpose - To organise my digital work appropriately for a specific purpose - To use appropriate and clear media effectively that I have collected and from the internet in my work - To critically evaluate the effectiveness and appropriateness of my work	- To use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability - To save, export, store and retrieve work on an appropriate online platform or school network - To modify an appropriate template and use a range of tools to create a piece of work for a specific purpose - To effectively organise my digital work appropriately for a specific purpose and audience - To use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To use logical reasoning to critically evaluate the effectiveness appropriateness of my work	- To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work
Typing and Editing text	- To begin to know how to use a keyboard to type words - To begin to know how to make spaces between words - To begin to dictate words and phrases using a digital device	- To know and use a keyboard on a digital device to type text - To begin to use both hands to type quickly - To know how to make spaces between words and start a new line - To dictate short and clear sentences using a digital device and software - To begin to know how to undo by pressing or clicking the appropriate buttons	- To know and use a keyboard to start a new line, add, delete and space text - To use both hands to type quickly - To know how to capitalise letters using appropriate keyboard commands - To know how to undo by pressing or clicking the appropriate buttons - To begin to know how to edit the way text looks (font and letter size)	- To know and use keyboard commands already learned and understand how to capitalise letters quickly and create paragraphs - To confidently use both hands to type quickly - To know how to use the 'shift' function - To use the spellcheck tool to review my work - To know how to undo and redo by pressing or clicking appropriate buttons - To know how to use and edit bullet points - To know how to align text (left, centre, right, square)	- To know and use keyboard commands already learned quickly and fluently - To confidently use both hands to type quickly and efficiently - To accurately use spellchecker to review my work - To confidently know how to undo and redo by pressing or clicking an appropriate button - To use bullet points effectively - To align text appropriately to organise my work (left, centre, right, square)	- To use a range of keyboard commands already learned quickly and with increasing fluency - To confidently use both hands to type quickly and efficiently - To know how to add and use a hyperlink in digital work - To use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) - To organise and reorganise text to meet a specific purpose	- To effectively organise and reorganise text to meet a specific purpose and audience - To effectively use a range of keyboard commands already learned quickly and , with increasing fluency - To effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a specific purpose

Presentation and Document creation	- To begin to understand how to be creative using technology - To begin to add shapes - To begin to edit shapes with adult support - To begin to use images I have collected from the photo gallery - To begin to use the video function on the camera app - To begin to know what the camera app is - To take photos on a digital device with support from an adult - To know where photos are stored on a digital device	- To begin to be creative using different technology tools - To add shapes - To edit the colour and fill of shapes - To begin to use images I have collected from internet or photo gallery - To use the video function on the camera app - To use images, I have collected using the camera function - To begin to know how to use the camera function correctly to take photos and videos	- To know how to cut and paste images on digital content and from the internet - To begin to change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately - To use images, I have collected from internet or photo gallery - To take clear videos on camera app - To know how to use the camera function correctly to take photos and videos - To know how to edit a photo (crop, mark up, etc.)	- To know how to cut, copy and paste quickly to reorganise work - To know how to edit the way text looks (font, letter size, colour, etc.) - To add and edit the style of shapes (fill, border, shadow, reflection and opacity) - To know how to mask/crop an image - To know how to use instant alpha to remove unnecessary effects - To begin to understand how to group digital things together - To begin to use transitions and animations when creating presentations - To use images, I have collected from internet or photo gallery - To sequence images and videos to create a video for a specific purpose - To begin to know how to trim and cut videos - To confidently use the camera function correctly to take photos and videos - To begin to enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.)	- To change the appearance of text to increase its effectiveness for a specific purpose - To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose - To use transitions and animations when creating presentations - To begin to know how to format digital work - To understand how to group digital things together - To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose - To sequence images and videos to create a video for a specific purpose - To begin to use transitions and animations between frames on a video - To know how to trim and cut videos - To add music or sound track to a video - To begin to add simple subtitles - To confidently use the camera function correctly to take photos and videos - To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.)	- To choose appropriate effects to edit the appearance of text to meet a specific purpose - To add and edit effectively the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose - To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience - To use cutaway and spilt screen tools on digital software (iMovie) - To accurately edit a video by trimming and cutting videos - To add music, sound track and voice overs for a specific purpose - To add simple subtitles - To add and edit voice overs and sound effects (volume, pitch, fade) - To confidently use the camera function correctly to take photos and videos in a range of contexts - To appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.)	- To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a specific purpose - To add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose and audience - To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience - To use transitions and animations between frames - To confidently and accurately edit a video by trimming and cutting videos - To add appropriate music, sound track and voice overs for a specific purpose - To add subtitles to a video - To add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) - To confidently and effectively use the camera function correctly to take photos and videos in a range of context - To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.)
Data Handling COVERED IN MATHS AND SCIENCE	- To sort objects into two groups - To begin to sort objects into more than two groups - To record data with help from an adult - To begin to explain my data	- To know how to sort images into two or more groups on a digital device - To know how to collect data - To create tally charts and pictograms (links to maths) - To record myself explaining how I collected the data and explaining what I found out from my data	- To make and save spreadsheets created on a digital device - To begin to use charts and graphs to represent data - To begin to use branching database - To sort digital objects into an appropriate diagram (venn, carroll, etc.) - To begin to understand how to edit the scale on a bar chart	- To create a database and add data to it - To describe different ways data can be organised digitally (charts/graphs) - To search a ready-made database to gather information - To create a branching database using digital tools - To use a chart or graph to present data - To understand how to edit the scale on charts and graphs	- To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) - To create a multiple choice questionnaire - To accurately search a database to answer questions - To can collect data and identify when data could be inaccurate - To collect data for a specific purpose and present data using an appropriate way - To use a range of charts and graphs to present data - To accurately edit the scale on charts and graphs	- To use spreadsheets and databases to collect, record and analyse data - To create a questionnaire using a range of question types and analyse the responses - To choose an appropriate way to present data and explain why (spreadsheet, graphs or charts) - To search a database using different operators to refine my search - To edit data to amend inaccuracies - To begin input a range of formulas to create data (adding) using '=sum' - To edit the format of a cell on a database (decimal places, currency, percentage, etc.)	- To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs - To create an online quiz/questionnaire using a range of media (text, images, animations, videos) - To accurately search a database using different operators to refine my search - To input a range of formulas to create data (adding, averages) using appropriate formulas - To appropriately edit the format of a cell on a database for different purposes - To check the plausibility and accuracy of data collected and how it can be interpreted in different ways
Animations	•	•	•	•	- To create an animation for a specific purpose - To create animations of faces to speak in role with more life-like realistic outcomes. - To improve stop motion animation clips with techniques like onion skinning. - To use animation tools in presenting software to create simple animations.	- To create a GIF - To create, edit and evaluate an animation for a specific purpose - To record animations and edit them together to create an interview - To take multiple animations I have created and edit them together for a longer video.	- To mix animations and videos recordings of myself to create video interviews. - To plan, script and create an animation to explain a concept or tell a story. - To choose and create different types of animations to best explain my learning.

Technology in our Lives

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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How technology works	To understand what technology is To give example of technology To begin to use website links with adult support To begin to understand ways technology is used at home with adult support To begin to identify technology in the local area	<u>Use of technology</u> - To understand the uses of everyday technology - To begin to understand the benefits of using technology - To recognise ways that technology is used at home - To recognise ways that technology is used within the local community	<u>Uses and benefits of technology</u> - To identify and explain the benefits of using technology - To explain how the real world is different to the online world - To explain how I can share my work online with others - To explain how and why you use technology in the classroom and in the local area - To recognise common uses of information technology outside of school	<u>Computers and Computer Networks</u> - To explain ways to communicate with others online - To understand what a computer network is and describe the functions of the different parts of a network - To talk about the different parts of a computer and how they work - To understand how people, collaborate online	<u>World Wide Web (WWW) and the Internet</u> - To choose which digital application to use to meet a purpose - To choose an appropriate online platform to collaborate with others - To know what a hyperlink to a website is - To create a hyperlink to a website on the World Wide Web - To understand the services on the internet are located across the world - To understand the difference between the internet and the World Wide Web (WWW) - To understand how webpages are viewed across the internet	<u>Webpages and IP Addresses</u> - To choose an appropriate online or offline tool to share and create ideas - To understand how to use different online communication tools for different purposes - To understand how webpages are ranked in a search engine - To understand what a 'data packet' is and how they are transported on the internet - To understand what an IP address is and how they look and work - To understand why the internet is important	<u>HTML</u> - To understand different types of tools used online for collaboration and communication for different purposes and situations - To understand what a 'search index' is and how it works - To understand what HTML is and recognise HTML tags - To know a range of HTML tags and can remix HTML tags in a webpage
Using the internet	- To begin to make an internet search with an adult - To dictate voice to search the internet with adult support	- To understand how to make an internet search - To use website links to find information	- To make simple internet searches to find information - To retrieve information from the internet to investigate questions	- To use search engines to find appropriate websites using keywords - To evaluate if an image from online is appropriate for a specific purpose	- To use search engines safely to find appropriate websites using specific keywords - To evaluate if an image from online is appropriate for a specific purpose	- To use keywords in a search engine to find appropriate information - To be digitally critical when searching for information online by checking its reliability - To recognise and evaluate the way webpages are ranked to understand the reliability of the information	- To use keywords to make effective internet searches and evaluate rankings of websites and digital content - To be digitally critical when searching for information online by checking its reliability and plausibility - To evaluate the reliability of websites - To explain how website are ranked and selected based on how they are searched

Online Safety and Appropriate Use							
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Covered in Computing lessons	<u>Autumn (Managing Online Information)</u> - To talk about how to use the internet as a way of finding information online. - To identify devices I could use to access information on the internet. <u>Autumn (Copyright and Ownership)</u> - To know that work I create belongs to me. - To name my work so that others know it belongs to me. <u>Spring (Online Reputation)</u> - To identify ways that I can put information on the internet. <u>Summer (Self Image and Identify)</u> - To recognise, online or offline, which anyone can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset. <u>Summer (Health, Well-being and Lifestyle)</u> - To identify rules that help keep us safe and healthy in and beyond the home when using technology and give some simple examples of these rules.	<u>Autumn (Managing Online Information)</u> - To give examples of how to find information using digital technologies, e.g. search engines, voice activated searching) - To understand that we can encounter a range of things online including things we like and don't like as well as things which are real or make believe / a joke. <u>Autumn (Copyright and Ownership)</u> - To explain why work I create using technology belongs to me and work created by other does not belong to me even if I save it <u>Spring (Online Reputation)</u> - To recognise that information can stay online and could be copied. - To describe what information I should not put online without asking a trusted adult first. <u>Summer (Self Image and Identify)</u> - To recognise that there may be people online who could make someone feel sad, embarrassed or upset and explain how trusted adults can help with issues online <u>Summer (Health, Well-being and Lifestyle)</u> - To create rules to keep myself safe when using technology both in and beyond the home.	<u>Autumn (Managing Online Information)</u> - To explain what voice activated searching is, how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri). - To explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. - To explain why some information I find online may not be real or true. <u>Autumn (Copyright and Ownership)</u> - To recognise that content on the internet may belong to other people and explain why it belongs to them <u>Spring (Online Reputation)</u> - To explain how information put online about someone can last for a long time and be seen by others - To know who to talk to if something has been put online without consent or if it is incorrect. <u>Summer (Self Image and Identify)</u> - To explain how other people may look and act differently online and offline. - To explain how issues online might make someone feel sad, worried, uncomfortable or frightened <u>Summer (Health, Well-being and Lifestyle)</u> - To create and explain rules that can help anyone accessing online technologies in different environments	<u>Autumn (Managing Online Information)</u> - To explain how the internet can be used to sell and buy things. - To explain the difference between a 'belief', an 'opinion' and a 'fact' and where they might be shared online (e.g. in videos, memes, posts, news stories etc.) - To describe and explain how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable worried or frightened. <u>Autumn (Copyright and Ownership)</u> - To explain why copying someone else's work from the internet without permission isn't fair and what problems this may cause <u>Spring (Online Reputation)</u> - To explain how to search for information about others online. - To explain what anyone may or may not be willing to share about themselves online. - To explain the need to be careful before sharing anything personal and who to ask if they are unsure about putting something online <u>Summer (Self Image and Identify)</u> - To explain what is meant by the term 'identity' and how people present themselves online - To explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why. <u>Summer (Health, Well-being and Lifestyle)</u> - To explain why spending too much time using technology can sometimes have a negative impact on anyone, (e.g. mood, sleep, body, relationships) - To describe both positive and negative activities where it is easy to spend a lot of time engaged (e.g. doing homework, games, films, videos). - To explain why some online activities have age restrictions and why it is important to follow them - To explain who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).	<u>Autumn (Managing Online Information)</u> - To understand why it is important to make my own decisions regarding content and that my decisions are respected by others. - To describe and identify some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) - To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true and explain how technology can act like or impersonate living things - To explain what is meant by fake news (e.g. why some people will create stories or alter photographs and put them online to) <u>Autumn (Copyright and Ownership)</u> - To explain why I need to consider who owns digital content, whether I have the right to reuse it or to ask permission for using it. <u>Spring (Online Reputation)</u> - To describe and explain ways that some of the information about anyone online could have been created, copied or shared by others. <u>Summer (Self Image and Identify)</u> - To explain how my online identity can be different to my offline identity. - To describe positive ways for someone to interact with others online and the perception this will create - To explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how using technology can be a distraction from other things, in both a positive and negative way. - To identify situations when someone may need to limit the amount of time they use technology (e.g. I can suggest strategies to help with limiting this time.)	<u>Autumn (Managing Online Information)</u> - To explain the benefits and limitations of using different types of search technologies (e.g. voice-activation search engine.) - To explain what is meant by 'being sceptical' online and how and when to be sceptical. - To describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, influencers). - To explain what is meant by the term 'stereotype' and they are amplified and reinforced online - To describe how fake news and a 'hoax may affect someone's emotions and behaviour, and explain why this may be harmful. <u>Autumn (Copyright and Ownership)</u> - To assess and justify when it is acceptable to use the work of others. - To give examples of content that is permitted to be reused and know how this content can be found online. <u>Spring (Online Reputation)</u> - To search for information about an individual online and summarise the information found. - To describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect. <u>Summer (Self Image and Identify)</u> - To explain how identity online can be copied, modified or altered. - To explain how to make responsible choices about having an online identity, depending on context. <u>Summer (Health, Well-being and Lifestyle)</u> - To describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively - To describe some strategies, tips or advice to promote health and wellbeing with regards to technology. - To recognise the benefits and risks of accessing information about health and well-being online - To explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing.	<u>Autumn (Managing Online Information)</u> - To describe and explain how some online information can be an opinion and may present opinions as facts - To explain why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. - To understand the terms 'influence', 'manipulation' and 'persuasion' online and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). - To understand the concept of persuasive design and how it can be used to influences peoples' choices. - To explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this. - To describe the difference between online misinformation and dis-information. - To explain why information that is on a large number of sites may still be inaccurate or untrue and be the result of misinformation and disinformation - To identify, flag and report inappropriate content. <u>Autumn (Copyright and Ownership)</u> - To demonstrate how to make references to and acknowledge sources I have used from the internet. <u>Spring (Online Reputation)</u> - To explain the ways in which anyone can develop a positive online reputation. - To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity. <u>Summer (Self Image and Identify)</u> - To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups - To explain why it is important to challenge and reject inappropriate representations online. - To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. - To explain how to get help, both on and offline and the importance of asking until I get the help needed. <u>Summer Term- (Health, Well-being and Lifestyle)</u> - To describe common systems that regulate age-related content and describe their purpose. (e.g. PEGI, BBFC, parental warnings) - To recognise and explain how and when they could manage pressures that technology place on someone. - To recognise features of persuasive design and how they are used to keep users engaged (current and future use). - To assess and explain different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).
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Covered in Computing/Personal Development	[THE FOLLOWING OBJECTIVES ARE INCORPORATED INTO THE PERSONAL DEVELOPMENT CURRICULUM]						
	Online Bullying- Autumn 2 - To describe ways that some people can be unkind online and how this makes others feel Online Relationships- Spring 1 - To begin recognise some ways in which the internet can be used to communicate. - To identify how I (might) use technology to communicate with people I know. - To explain the importance of giving and gaining permission before sharing things online; - To understand how the principles of sharing online is the same as sharing offline e.g. sharing images and videos. Privacy and Security- Spring 1 - To identify some simple examples of my personal information (e.g. name, address, birthday, age, location). - To describe who would be trustworthy to share this information with and explain why they are trusted.	Online Bullying- Autumn 2 - To describe how to behave online in ways that do not upset others and can give examples. Online Relationships- Spring 1 - To understand when I should ask permission to do something online and explain why this is important. - To use the internet with adult support to communicate with people I know (e.g. video call apps or services). - To explain why it is important to be considerate and kind to people online and to respect their choices. - To explain why things one person finds funny or sad online may not always be seen in the same way by others. Privacy and Security- Spring 1 - To explain that passwords are used to protect information, accounts and devices. - To recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names). - To explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others.	Online Bullying- Autumn 2 - To explain what bullying is, how people may bully others and how bullying can make someone feel. - To explain why anyone who experiences bullying is not to blame. - To understand how anyone experiencing bullying can get help. Online Relationships Spring 1 - To understand how someone might use technology to communicate with others they don't also know offline and explain why this might be risky. (e.g. email, online gaming, a pen-pal in another school / country). - To explain who I should ask before sharing things about myself or others online. - To describe different ways to ask for, give, or deny my permission online and can identify who can help me if I am not sure. - To explain why I have a right to say 'no' or 'I will have to ask someone'. - To explain who can help me if I feel under pressure to agree to something I am unsure about or don't want to do. - To identify who can help me if something happens online without my consent. - To explain how it may make others feel if I do not ask their permission or ignore their answers before sharing something about them online. - To explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online. Privacy and Security- - Spring 1 - To explain how passwords can be used to protect information, accounts and devices. - To explain and give examples of what is meant by 'private' and 'keeping things private'. - To describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords).	Online Bullying- Autumn 2 - To describe appropriate ways to behave towards other people online and why this is important. - To understand how bullying behaviour could appear online and how someone can get support. Online Relationships- Spring 1 - To describe ways people who have similar likes and interests can get together online. - To explain what it means to 'know someone' online and why this might be different from knowing someone offline. - To explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with. - To explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried. - To explain how someone's feelings can be hurt by what is said or written online. - To explain the importance of giving and gaining permission before sharing thing online; how the principles of sharing online is the same as sharing offline e.g. sharing images and videos Privacy and Security- - Spring 1 - To describe simple strategies for creating and keeping passwords private. - To understand why someone should only share information with people they choose to and can trust. - To explain that if they are not sure or feel pressured then they should tell a trusted adult. - To describe how connected devices can collect and share anyone's information with others.	Online Bullying- Autumn 2 - To recognise when someone is upset, hurt or angry online. - To describe ways people can be bullied through a range of media (e.g. image, video, text, chat). - To explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation). Online Relationships- Spring 1 - To describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms) - To understand how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours. - To explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs. Privacy and Security - To describe strategies for keeping personal information private, depending on context. - To explain that internet use is never fully private and is monitored, e.g. adult supervision. - To describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure. - To know what the digital age of consent is and the impact this has on online services asking for consent.	Online Bullying- Autumn 2 - To recognise online bullying can be different to bullying in the physical world and can describe some of those differences. - To describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying. - To explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult. - To identify a range of ways to report concerns and access support both in school and at home about online bullying. - To explain how to block abusive users. - To describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline or The Mix). Online Relationships- Spring 1 - To explain different technology specific forms of communication (e.g. emojis, memes and GIFs). - To explain that there are some people I communicate with online who may want to do me or my friends harm and recognise that this is not my / our fault. - To describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups). - To explain how someone can get help if they are having problems and identify when to tell a trusted adult. - To demonstrate how to support others (including those who are having difficulties) online. Privacy and Security- - Spring 1 - To explain what a strong password is and demonstrate how to create one. - To explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. - To explain what app permissions are and can give some examples.	Online Bullying- Autumn 2 - To describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me. - To explain how someone would report online bullying in different contexts. Online Relationships- Spring 1 - To explain how sharing something online may have an impact either positively or negatively. - To describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not. - To describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs. - To explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this. Privacy and Security- - Spring 1 - To describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser). - To explain what to do if a password is shared, lost or stolen. - To describe how and why people should keep their software and apps up to date, e.g. auto updates. - To describe simple ways to increase privacy on apps and services that provide privacy settings. - To describe ways in which some online content targets people to gain money or information illegally and describe strategies to help me identify such content (e.g. scams, phishing). - To that online services have terms and conditions that govern their use.

ASSESSMENT PROGRESSION

To meet our curriculum aims, we have identified core strands of learning [generic learning units] which run throughout our curriculum. We have identified what this should look like at the end of key phases within the school [key skills demonstrated].

The curriculum is taught in a spiral design where learning is revisited and embedded – deepening learning and developing Mastery.

Computing Strand	EYFS working at the EXPECTED STANDARD	EYFS working ABOVE the expected standard	KS1 working at the EXPECTED STANDARD	KS1 working ABOVE the expected standard	Lower KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard	Upper KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
Programming and Coding	Bee Bot (Hardware)	Bee Bot (Hardware) Bee Bot app (Software)	Bee Bot (Hardware) Bee Bot app (Software) Daisy the Dinosaur (Software)	Bee Bot (Hardware) Probots (Hardware) Bee Bot app (Software) Daisy the Dinosaur (Software)	Microbits (Hardware) Probots (Hardware) Scottie GO (Software) Hopscotch (Software)	Microbits (Hardware) Probots (Hardware) Scottie GO (Software) Hopscotch (Software)	Microbits (Hardware) Probots (Hardware) Hopscotch (Software) Swift Playground (Software)	Microbits (Hardware) Probots (Hardware) Hopscotch (Software) Swift Playground (Software)

				Scratch Jr (Software)	Scratch Jr (Software)	Scratch Jr (Software)		
	- To understand how to make a floor robot move - To follow instructions from a friend or familiar adult - To know what instructions are - To begin to describe what actions I need to do for something to happen using hardware	- To understand how to make a floor robot move and begin to give simple instructions - To follow instructions from unfamiliar adults and friends - To know what instructions are and begin to give simple instructions to a friend - To begin to describe what actions I need to do for something to happen using hardware and software	- To use a range of software/hardware to create simple programs - To give precise and simple instructions to a friends to make them move (forwards, backwards, turn right, turn left) - To write algorithms for everyday tasks - To understand the input and output of a program - To read an algorithm and predict the outcome using logical reasoning - To explain the sequence of a set of instructions as an algorithm - To program a robot to do a specific task by using precise instructions - To watch an algorithm and debug to make an algorithm precise - To begin to understand decomposition of an algorithm is to break down instructions	- To use a range of software/hardware to create simple programs and begin to solve more complex problems - To confidently give precise and simple instructions to a friends to make them move and to complete other everyday tasks - To write algorithms for everyday tasks and accurately sequence instructions - To understand and explain the input and output of a program and how the input affects the output - To read an algorithm and predict the outcome using logical reasoning and explain whether their prediction was accurate - To program a robot to do a specific task by using precise instructions using different types of robots - To watch an algorithm and debug to make an algorithm precise by explaining why the algorithm needed debugging - To understand decomposition of an algorithm is to break down instructions	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use abstraction to decompose an open-ended problem into smaller parts - To use algorithms to solve complex problems - To explain what the input is and how it affects the output to program a hardware/software - To use logical reasoning to simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and persevere until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable	- To confidently use a range of programming software and hardware to solve open-ended problems in a range of situations - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem and why they have chosen the software and hardware - To accurately use abstraction to precisely decompose an open-ended problem into smaller parts - To confidently use algorithms to solve complex problems using a range of hardware and software - To explain what the input is and how it affects the output to program a hardware/software and how changing an input will change the output - To consistently use logical reasoning to precisely simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program and demonstrate using a range of hardware and software e.g. repeat command - To accurately detect and confidently debug errors, by explaining why debugging is necessary, in an algorithm and persevere until it achieves a specific goal - To critically evaluate the effectiveness of a program and why a program is suitable or unsuitable	- To be proficient in using a range of programming software and hardware to solve open-ended problems - To effectively use programs to control and simulate physical systems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To use a range of instructions to simplify and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To recognise the use of a variable to achieve a specific outcome - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program	- To be confident and proficient in using a range of programming software and hardware to solve open-ended problems in a range of situations - To effectively use programs to control and simulate physical systems as well as evaluating the effectiveness of the program for the physical system - To confidently use logical reasoning and critically evaluate to understand what software or hardware is appropriate and not to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction by demonstrating them in a range of situations - To confidently design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction using a range of hardware and software - To consistently use logical reasoning to accurately detect and confidently debug errors and use decomposition and abstraction to accurately correct errors in a program - To confidently use a range of instructions to simplify and refine programs and explain why a program needs simplifying and refining, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To accurately recognise the use of a variable to achieve a specific outcome - To critically evaluate the effectiveness and efficiency of my algorithm whole continually testing the program
Creating Digital Content	<u>Creating Digital Content</u> To begin to create digital work with an adult	<u>Creating Digital Content</u> - To begin to create simple digital work - To understand how to use information from the internet	<u>Creating Digital Content</u> To use technology to create, organise and present my work using text, images and videos	<u>Creating Digital Content</u> To confidently use technology to create, organise and present my work using text,	<u>Creating Digital Content</u> To use technology to create, organise and present my work using text, images and	<u>Creating Digital Content</u> To confidently use technology to create, organise and present my work using text, images and	<u>Creating Digital Content</u> To effectively use technology to create, organise and present my work by adding	<u>Creating Digital Content</u> To confidently and effectively use technology to create, organise and present

[illegible]

	• To begin to understand how to be creative using technology • To begin to add shapes • To begin to edit shapes with adult support • To begin to use images I have collected from the photo gallery • To begin to use the video function on the camera app • To begin to know what the camera app is • To take photos on a digital device with support from an adult • To know where photos are stored on a digital device	• To understand how to be creative using technology • To add shapes • To begin to edit shapes with some adult support • To use images I have collected from the photo gallery • To know what the camera app is and how to use it • To take photos on a digital device	• To know how to cut and paste images on digital content and from the internet • To begin to change the style of text (font, colour, bold, underline, italics, etc.) • To add and edit shapes (colour/fill and size) appropriately • To use images, I have collected from internet or photo gallery • To take clear videos on camera app • To know how to use the camera function correctly to take photos and videos • To know how to edit a photo (crop, mark up, etc.)	• To demonstrate how to cut and paste images on digital content and from the internet for a range of purpose • To change the style of text (font, colour, bold, underline, italics, etc.) • To add and edit shapes (colour/fill and size) appropriately and consider how the editing of shape works with other elements • To use appropriate images, I have collected from internet or photo gallery for a range of purposes • To take clear videos on camera app and evaluate the quality of the video • To know how to use the camera function correctly to take photos and videos and evaluate the quality • To know how to edit a photo to enhance the quality of digital work (crop, mark up, etc.)	• To change the appearance of text to increase its effectiveness for a specific purpose • To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose • To use transitions and animations when creating presentations • To begin to know how to format digital work • To understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose • To sequence images and videos to create a video for a specific purpose • To begin to use transitions and animations between frames on a video • To know how to trim and cut videos • To add music or sound track to a video • To begin to add simple subtitles • To confidently use the camera function correctly to take photos and videos • To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.)	• To confidently change the appearance of text to increase its effectiveness for a range of specific purposes • To confidently add and appropriately edit the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes • To use appropriate transitions and animations when creating presentations • To know how to format digital work • To confidently understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes • To appropriately sequence relevant images and videos to create a video for a specific purpose • To use transitions and animations between frames on a video • To know how to accurately trim and cut videos • To add appropriate music or sound track to a video • To add simple subtitles • To confidently use the camera function correctly to take photos and videos for a range of different purposes • To effectively enhance digital photos by using different effects appropriately (crop, brightness, contrast, resize, etc.)	• To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a specific purpose • To add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose and audience • To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience • To use transitions and animations between frames • To confidently and accurately edit a video by trimming and cutting videos • To add appropriate music, sound track and voice overs for a specific purpose • To add subtitles to a video • To add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) • To confidently and effectively use the camera function correctly to take photos and videos in a range of context • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.)	• To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a range of specific purposes • To confidently add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes and audiences • To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes and audiences • To confidently use transitions and animations between frames ensuring the speed of the transition or animation is appropriate • To confidently and accurately edit a video by trimming and cutting videos a range of specific purposes and audiences • To confidently add appropriate music, sound track and voice overs for a specific purpose • To add subtitles to a video and explain why subtitle are important • To confidently add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) • To confidently and effectively use the camera function correctly to take photos and videos in a range of context by ensuring the quality of the photo or video is appropriate • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) for a range of specific purposes and audiences
	Data Handling • To sort objects into two groups • To begin to sort objects into more than two groups • To record data with help from an adult • To begin to explain my data	Data Handling • To sort objects into two groups and explain how the objects have been sorted • To begin to sort objects into more than two groups and explain how the objects have been sorted	Data Handling • To make and save spreadsheets created on a digital device • To begin to use charts and graphs to represent data • To begin to use branching database • To sort digital objects into an appropriate	Data Handling • To confidently make and save spreadsheets created on a digital device for different learning experiences • To use charts and graphs to represent data • To begin to use branching database and explain how a	Data Handling • To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) • To use charts and graphs to represent data • To accurately search a database to answer questions	Data Handling • To confidently describe and explain different ways data can be organised digitally for different purposes and explain why a specific chart or graph has been used (charts/graphs) • To create a multiple choice questionnaire	Data Handling • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs • To create an online quiz/questionnaire using a range of media	Data Handling • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs for a range of purposes • To create an online quiz/questionnaire

	COVERED IN MATHS AND SCIENCE	- To record data for different reasons with help from an adult - To explain my data - COVERED IN MATHS AND SCIENCE	- diagram (venn, carroll, etc.) - To begin to understand how to edit the scale on a bar chart - COVERED IN MATHS AND SCIENCE	- branching database works - To sort digital objects into an appropriate diagram for different learning situations (venn, carroll, etc.) - To understand how to edit the scale on a bar chart - COVERED IN MATHS AND SCIENCE	- To collect data and identify when data could be inaccurate - To collect data for a specific purpose and present data using an appropriate way - To use a range of charts and graphs to present data - To accurately edit the scale on charts and graphs	- using a range of questions (choose from a multiple of different answer, true or false questions or rating questions 1-5) - To accurately search a database to answer questions and use evidence to explain my answer - To collect data and identify when data could be inaccurate using evidence to support their understanding - To confidently collect data for a specific purpose and clearly present data using an appropriate way - To use a range of charts and graphs to present data for a range of different purposes - To accurately and appropriately edit the scale on charts and graphs	(text, images, animations, videos) - To accurately search a database using different operators to refine my search - To input a range of formulas to create data (adding, averages) using appropriate formulas - To appropriately edit the format of a cell on a database for different purposes - To check the plausibility and accuracy of data collected and how it can be interpreted in different ways	- using a range of media (text, images, animations, videos) for a range of purposes - To confidently and accurately search a database using different operators to refine my search to ensure I get accurate information - To confidently input a range of formulas to create data (adding, averages) using appropriate formulas - To confidently and appropriately edit the format of a cell on a database for different purposes - To critically check the plausibility and accuracy of data collected and how it can be interpreted in different ways
					<u>Animations</u> - To create an animation for a specific purpose - To create animations of faces to speak in role with more life-like realistic outcomes. - To improve stop motion animation clips with techniques like onion skinning. - To use animation tools in presenting software to create simple animations.	<u>Animations</u> - To create an appropriate animation for a specific purpose - To confidently create animations of faces to speak in role with more life-like realistic outcomes. - To improve stop motion animation clips with techniques like onion skinning and explain why this technique can enhance the quality of an animation - To confidently use animation tools in presenting software to create simple animations.	<u>Animations</u> - To mix animations and videos recordings of myself to create video interviews. - To plan, script and create an animation to explain a concept or tell a story. - To choose and create different types of animations to best explain my learning.	<u>Animations</u> - To mix animations and videos recordings of myself to create video interviews for a specific purpose - To confidently plan, script and create an animation to explain a concept or tell a story. - To choose and create different types of appropriate animations to best explain my learning by using a range of different animation skills.
Technology within our Lives	- To understand what technology is - To give example of technology - To begin to use website links with adult support - To begin to understand ways technology is used at home with adult support - To begin to identify technology in the local area	- To understand what technology is and how it is used - To give example of technology and explain how it is used - To use website links with adult support - To understand ways technology is used at home with adult support - To identify technology in the local area	<u>Uses and benefits of technology</u> - To identify and explain the benefits of using technology - To explain how the real world is different to the online world - To explain how I can share my work online with others - To explain how and why you use technology in the classroom and in the local area - To recognise common uses of information technology outside of school	<u>Uses and benefits of technology</u> - To identify and explain the benefits of using technology and compare how the benefits of using different technology for the same purpose (iPad or laptop to complete work on) - To explain how and why the real world is different to the online world - To explain how and why I can share my work online with others - To explain how and why you use technology in the classroom and in the local area and compare their uses - To recognise common uses of information technology outside of school and how it is used	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> - To explain ways to communicate with others online - To understand what a computer network is and describe the functions of the different parts of a network - To talk about the different parts of a computer and how they work - To choose which digital application to use to meet a purpose - To choose an appropriate online platform to collaborate with others - To know what a hyperlink to a website is	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> - To explain ways to communicate with others online and understand the most appropriate way to communicate online - To understand what a computer network is and describe the functions of the different parts of a network and how the different parts are connected to together - To confidently talk about the different parts of a computer and how they work - To choose which digital application to use to meet	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> - To understand how webpages are ranked in a search engine - To understand what a 'data packet' is and how they are transported on the internet - To understand what an IP address is and how they look and work - To understand why the internet is important - To understand different types of tools used online for collaboration and communication for different purposes and situations - To understand what a 'search index' is and how it works	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> - To understand how webpages are ranked in a search engine and explain why they are ranked in a certain way - To understand what a 'data packet' is, how they are transported on the internet and why they are important - To understand what an IP address is and how they look and work and explain why IP addressed are important - To understand why the internet is important for different people - To understand different types of tools used online for collaboration and

					- To create a hyperlink to a website on the World Wide Web - To understand the services on the internet are located across the world - To understand the difference between the internet and the World Wide Web (WWW) - To understand how webpages are viewed across the internet	- a purpose and why you have chosen a specific digital application - To choose an appropriate online platform to collaborate with others and explain why it is appropriate - To know what a hyperlink to a website is and explain how it works - To create a hyperlink to a website on the World Wide Web and present it appropriately within digital content - To understand the services on the internet are located across the world and explain how they are connected - To understand the difference between the internet and the World Wide Web (WWW) and why people can sometimes think they are the same thing - To understand how webpages are viewed across the internet and explain why they are viewed that way	- To understand what HTML is and recognise HTML tags - To know a range of HTML tags and can remix HTML tags in a webpage	communication for different purposes and situations and evaluate which is the most appropriate - To understand what a 'search index' is and how it works and explore how it relates to the way they use technology - To understand and explain what HTML is and recognise HTML tags in a range of scenarios - To know a range of HTML tags and can remix HTML tags in a webpage to improve the quality of the webpage
	- To begin to make an internet search with an adult - To dictate voice to search the internet with adult support	- To make an internet search with an adult - To dictate voice to search the internet with some adult support	- To make simple internet searches to find information - To retrieve information from the internet to investigate questions	- To make simple internet searches to find information using appropriate keywords - To accurately retrieve information from the internet to investigate a range of questions	- To use search engines safely to find appropriate websites using specific keywords - To evaluate if an image from online is appropriate for a specific purpose	- To confidently use search engines safely to find appropriate websites using specific keywords to find appropriate information - To critically evaluate if an image from online is appropriate for a range of specific purposes	- To use keywords to make effective internet searches and evaluate rankings of websites and digital content - To be digitally critical when searching for information online by checking its reliability and plausibility - To evaluate the reliability of websites - To explain how website are ranked and selected based on how they are searched	- To use specific keywords to make effective and accurate internet searches and critically evaluate rankings of websites and digital content - To be digitally critical when searching for information online by consistently checking its reliability and plausibility for a range of purposes - To critically evaluate the reliability of websites - To confidently explain how website are ranked and selected based on how they are searched
Online Safety and Appropriate Use	<u>Autumn (Managing Online Information)</u> - To talk about how to use the internet as a way of finding information online. - To identify devices I could use to access information on the internet. <u>Autumn (Copyright and Ownership)</u> - To know that work I create belongs to me. - To name my work so that others know it belongs to me. <u>Spring (Online Reputation)</u> - To identify ways that I can put information on the internet. <u>Summer (Self Image and Identify)</u> - To recognise, online or offline, which anyone can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody	<u>Autumn (Managing Online Information)</u> To demonstrate how to use the internet with adult support. - To talk confidently about how to use the internet as a way of finding information online - To identify and use devices I could use to access information on the internet linked to my learning <u>Autumn (Copyright and Ownership)</u> - To know that work I create belongs to me and begin to explain why it belongs to me - To name my work so that others know it belongs to me with minimal adult support <u>Spring (Online Reputation)</u>	<u>Autumn (Managing Online Information)</u> - To explain what voice activated searching is, how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri). - To explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. - To explain why some information I find online may not be real or true. <u>Autumn (Copyright and Ownership)</u> - To recognise that content on the internet may belong to other people and explain why it belongs to them - To recognise that work I create belongs to me and work created by other does not belong to me <u>Spring (Online Reputation)</u>	<u>Autumn (Managing Online Information)</u> - To explain what voice activated searching is, how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri). Explain the advantages and disadvantages of using voice activated searching. - To explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. Explain how they know the difference - To explain why some information I find online may not be real or true. Explain how to find out if information online is true or not <u>Autumn (Copyright and Ownership)</u>	<u>Autumn (Managing Online Information)</u> - To understand why it is important to make my own decisions regarding content and that my decisions are respected by others. - To describe and identify some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) - To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true - To explain how technology can act like or impersonate living things - To explain what is meant by fake news (e.g. why some people will create stories or alter photographs and put them online to)	<u>Autumn (Managing Online Information)</u> - To understand why it is important to make my own decisions regarding content and that my decisions are respected by others. Understand what to do if my decision is not respected. - To describe and identify some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and how they may present online - To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true and how to prove whether something is not true. - To explain how technology can act like or impersonate	<u>Autumn (Managing Online Information)</u> - To describe and explain how some online information can be an opinion and may present opinions as facts - To explain why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. - To understand the terms 'influence', 'manipulation' and 'persuasion' online and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). - To understand the concept of persuasive design and how it can be used to influences peoples' choices. - To explain how companies and news providers target people with online news	<u>Autumn (Managing Online Information)</u> - To describe and explain how some online information can be an opinion and may present opinions as facts, explaining how to be skeptical about online information. - To explain why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. Give example of how this may present in their lives. - To understand the terms 'influence', 'manipulation' and 'persuasion' online and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). explain how they could

	who makes them feel sad, uncomfortable, embarrassed or upset. <u>Summer (Health, Well-being and Lifestyle)</u> To identify rules that help keep us safe and healthy in and beyond the home when using technology and give some simple examples of these rules.	- To identify begin to explain ways that I can put information on the internet To know what information I should not put online <u>Summer (Self Image and Identify)</u> - To recognise and explain, online or offline, ways anyone can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset. To know that trusted adults can help with online issues <u>Summer (Health, Well-being and Lifestyle)</u> - To identify and explain rules that help keep us safe and healthy in and beyond the home when using technology and give some simple examples of these rules to their peers.	- To explain how information put online about someone can last for a long time, be seen by others and could be copied - To know who to talk to if something has been put online without consent or if it is incorrect. <u>Summer (Self Image and Identify)</u> - To explain how other people may look and act differently online and offline. - To explain how issues online might make someone feel sad, worried, uncomfortable or frightened and who can help with online issues <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how to use technology in different environments and settings (e.g. accessing online technologies in public places and the home environment.) - To create and explain rules that can help anyone accessing online technologies in different environments	- To confidently recognise that content on the internet may belong to other people and explain why it belongs to them giving clear reasons - To recognise that work I create belongs to me and work created by other does not belong to me. Explain why it is important to understand this <u>Spring (Online Reputation)</u> - To explain how information put online about someone can last for a long time, be seen by others and could be copied. Explain why it is important to be careful what is posted online. - To know who to talk to and other methods of reporting if something has been put online without consent or if it is incorrect. <u>Summer (Self Image and Identify)</u> - To explain how and why other people may look and act differently online and offline. - To explain how and why issues online might make someone feel sad, worried, uncomfortable or frightened and who can help with online issues <u>Summer (Health, Well-being and Lifestyle)</u> - To create and explain rules that can help anyone accessing online technologies in different environments and apply rules consistently in their own life	<u>Autumn (Copyright and Ownership)</u> - To explain why I need to consider who owns digital content, whether I have the right to reuse it or to ask permission for using it. <u>Spring (Online Reputation)</u> - To describe and explain ways that some of the information about anyone online could have been created, copied or shared by others. - To explain the need to be careful before sharing anything personal and who to ask if they are unsure about putting something online <u>Summer (Self Image and Identify)</u> - To explain how my online identity can be different to my offline identity. - To describe positive ways for someone to interact with others online and the perception this will create - To explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how using technology can be a distraction from other things, in both a positive and negative way. - To identify situations when someone may need to limit the amount of time they use technology (e.g. I can suggest strategies to help with limiting this time.) - To explain why some online activities have age restrictions and why it is important to follow them - To explain who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).	living things and give example of this. - To explain what is meant by fake news (e.g. why some people will create stories or alter photographs and put them online to) and why people may post this online <u>Autumn (Copyright and Ownership)</u> - To explain why I need to consider who owns digital content, whether I have the right to reuse it or to ask permission for using it and explain what happens if I do not ask for permission. <u>Spring (Online Reputation)</u> - To describe and explain ways that some of the information about anyone online could have been created, copied or shared by others. Explain why it is important to only share information that is not private. - To explain the need to be careful before sharing anything personal and who to ask if they are unsure about putting something online. Explain the consequences of sharing personal information online. <u>Summer (Self Image and Identify)</u> - To explain how my online identity can be different to my offline identity and explain why it may be different. - To describe positive ways for someone to interact with others online and the perception this will create and understand how negative interactions can have negative perceptions. - To explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this as well as understand what to do if you are unsure about someone's online identity. <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how using technology can be a distraction from other things, in both a positive and negative way and explain why - To identify situations when someone may need to limit the amount of time they use technology and why it is important to do so (e.g. I can suggest strategies to help with limiting this time.) - To explain why some online activities have age restrictions and why it is important to follow them. Explore the reasons for certain age restrictions	stories they are more likely to engage with and how to recognise this. - To describe the difference between online misinformation and dis-information. - To explain why information that is on a large number of sites may still be inaccurate or untrue and be the result of misinformation and disinformation - To identify, flag and report inappropriate content. <u>Autumn (Copyright and Ownership)</u> - To demonstrate how to make references to and acknowledge sources I have used from the internet. <u>Spring (Online Reputation)</u> - To explain the ways in which anyone can develop a positive online reputation. - To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity. <u>Summer (Self Image and Identify)</u> - To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups - To explain why it is important to challenge and reject inappropriate representations online. - To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. - To explain how to get help, both on and offline and the importance of asking until I get the help needed. <u>Summer Term- (Health, Well-being and Lifestyle)</u> - To describe common systems that regulate age-related content and describe their purpose. (e.g. PEGI, BBFC, parental warnings) - To recognise and explain how and when they could manage pressures that technology place on someone. - To recognise features of persuasive design and how they are used to keep users engaged (current and future use). - To assess and explain different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).	present in similar or different ways online. - To understand the concept of persuasive design and how and why it can be used to influences peoples' choices. - To explain how companies and news providers target people with online news stories they are more likely to engage with, explain why they do this and how to recognise this. - To describe the difference between online misinformation and dis-information. Giving example of how this may present online. - To explain why information that is on a large number of sites may still be inaccurate or untrue and be the result of misinformation and disinformation and explain why it is important to be sceptical about information - To identify, flag and report inappropriate content and how to do this on a range of apps and websites <u>Autumn (Copyright and Ownership)</u> - To demonstrate how to make references to and acknowledge sources I have used from the internet. Explain why it is important to acknowledge sources from the internet. <u>Spring (Online Reputation)</u> - To explain the ways in which anyone can develop a positive online reputation and why it is important to develop a positive inline reputation - To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity and why it is important to protect themselves online. <u>Summer (Self Image and Identify)</u> - To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups and show an understanding of how this could present online. - To explain why it is important to challenge and reject inappropriate representations online. Explain how to do this in a positive way. - To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened and explain how and why issues could make people feel this way - To explain how to get help, both on and offline and the importance of asking until I
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						online (social media, gaming, etc.) To explain who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites). Explain why I should never be pressured into anything online.		get the help needed. Understand the consequences if someone does not ask for help Summer Term- (Health, Well-being and Lifestyle) - To describe common systems that regulate age-related content and describe their purpose and explain why these systems are important (e.g. PEGI, BBFC, parental warnings) - To recognise and explain how and when they could manage pressures that technology place on someone and how to overcome these pressures. - To recognise features of persuasive design and how they are used to keep users engaged (current and future use). Explain how persuasive design can look differently depending on the context. - To assess and explain different strategies to limit the impact of technology on health and understand the positive outcomes they can have(e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).
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	Online Bullying- Autumn 2 - To describe ways that some people can be unkind online and how this makes others feel Online Relationships- Spring 1 - To begin recognise some ways in which the internet can be used to communicate. - To identify how I (might) use technology to communicate with people I know. - To explain the importance of giving and gaining permission before sharing things online; - To understand how the principles of sharing online is the same as sharing offline e.g. sharing images and videos. Privacy and Security- Spring 1 - To identify some simple examples of my personal information (e.g. name, address, birthday, age, location). - To describe who would be trustworthy to share this information with and explain why they are trusted.	Online Bullying- Autumn 2 (PERSONAL DEVELOPMENT CURRICULUM) - To describe ways that some people can be kind and unkind online and how this makes others feel To know that being unkind online is similar to being unkind in person Online Relationships- Spring 1 (PERSONAL DEVELOPMENT CURRICULUM) - To recognise some ways in which the internet can be used to communicate. - To identify and explain how I (might) use technology to communicate with people I know. - To explain the importance of giving and gaining permission before sharing things online and who I should ask permission from - To understand how the principles of sharing online is the same as sharing offline e.g. sharing images and videos, and give examples Privacy and Security- Spring 1(PERSONAL DEVELOPMENT CURRICULUM) - To confidently identify some simple examples of my personal information (e.g. name, address, birthday, age, location). - To describe who would be trustworthy and not trustworthy to share this information with and can explain why they are trusted or not trusted.	Online Bullying- Autumn 2 - To explain what bullying is, how people may bully others and how bullying can make someone feel. - To explain why anyone who experiences bullying is not to blame. - To understand how anyone experiencing bullying can get help. Online Relationships Spring 1 - To understand how someone might use technology to communicate with others they don't also know offline and explain why this might be risky. (e.g. email, online gaming, a pen-pal in another school / country). - To explain who I should ask before sharing things about myself or others online. - To describe different ways to ask for, give, or deny my permission online and can identify who can help me if I am not sure. - To explain why I have a right to say 'no' or 'I will have to ask someone'. - To explain who can help me if I feel under pressure to agree to something I am unsure about or don't want to do. - To identify who can help me if something happens online without my consent. - To explain how it may make others feel if I do not ask their answers before sharing something about them online. - To explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online. Privacy and Security- - Spring 1 - To explain how passwords can be used to protect information, accounts and devices. - To explain and give examples of what is meant by 'private' and 'keeping things private'. - To describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords).	Online Bullying- Autumn 2 As expected but give real life examples to demonstrate their understanding Online Relationships Spring 1 - To understand how someone might use technology to communicate with others they don't also know offline and explain why this might be risky. (e.g. email, online gaming, a pen-pal in another school / country). Compare this to people they do know. - To explain who I should ask before sharing things about myself or others online and why it is important to do so. - To describe different ways to ask for, give, or deny my permission online and can identify who can help me if I am not sure. Understand the importance of permission. - To explain who can help me if I feel under pressure to agree to something I am unsure about or don't want to do. Apply this to different scenarios. - To identify who can help me and reporting methods if something happens online without my consent. - To explain how it may make others feel if I do not ask their permission or ignore their answers before sharing something about them online. Explain why it is important to always ask for permission - To explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online. Understand the consequences if I do not ask. Privacy and Security- - Spring 1 - To explain how passwords can be used to protect information, accounts and devices. Demonstrate how to create a strong password. - To explain and give examples of what is meant by 'private' and 'keeping things private'. Explain what I should keep private. - To describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords). Explaining the importance of each rule	Online Bullying- Autumn 2 - To recognise when someone is upset, hurt or angry online. - To describe ways people can be bullied through a range of media (e.g. image, video, text, chat). - To explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation). Online Relationships- Spring 1 - To describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms) - To understand how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours. - To explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs. - To explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with. - To explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried. Privacy and Security - To describe strategies for keeping personal information private, depending on context. - To explain that internet use is never fully private and is monitored, e.g. adult supervision. - To describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure. - To know what the digital age of consent is and the impact this has on online services asking for consent.	Online Bullying- Autumn 2 - To recognise when someone is upset, hurt or angry online and explain why they feel that way. - To describe ways people can be bullied through a range of media (e.g. image, video, text, chat). Give real life situations to explain different ways. - To explain why people need to think carefully about how and why content they post might affect others, their feelings and how and why it may affect how others feel about them (their reputation). Online Relationships- Spring 1 - To describe strategies for safe and fun experiences in a range of online social environments and explain why it is important (e.g. livestreaming, gaming platforms) - To understand and explain how to be respectful to others online and why it is important to be respectful; and describe how to recognise healthy and unhealthy online behaviours. - To explain how and why content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs. Linked to 'trusting and liking others online', pupils must demonstrate how they may interact differently with people online Privacy and Security - To describe strategies for keeping personal information private, depending on context and explain why it is important - To explain that internet use is never fully private and is monitored giving examples of why this is positive, e.g. adult supervision. - To describe how some online services may seek consent to store information about me and know how to respond appropriately and who I can ask if I am not sure. Give examples of when and how this could happen. - To know what the digital age of consent is and the impact this has on online services asking for consent. Give examples of how this could happen in online activities.	Online Bullying- Autumn 2 - To describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me. - To explain how someone would report online bullying in different contexts. Online Relationships- Spring 1 - To explain how sharing something online may have an impact either positively or negatively. - To describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not. - To describe how things shared privately online can have unintended consequences for others, e.g. screen-grabs. - To explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this. Privacy and Security- - Spring 1 - To describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser). - To explain what to do if a password is shared, lost or stolen. - To describe how and why people should keep their software and apps up to date, e.g. auto updates. - To describe simple ways to increase privacy on apps and services that provide privacy settings. - To describe ways in which some online content targets people to gain money or information illegally and describe strategies to help me identify such content (e.g. scams, phishing). - To that online services have terms and conditions that govern their use.	Online Bullying- Autumn 2 - To describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me and explain why it is important to capture evidence. - To explain how someone would report online bullying in different contexts and explain how this may present in different contexts. Online Relationships- Spring 1 - To explain how and why sharing something online may have an impact either positively or negatively. - To describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not. Explain why it is important to respect the boundaries of others, be kind and respectful online. - To describe how things shared privately online can have unintended consequences for others, e.g. screen-grabs, and explain why it is important to consider the consequences of what I share online. - To explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this. Show a clear understanding that their actions online have the same consequences as offline. Privacy and Security- - Spring 1 - To describe effective ways people can manage passwords and why it is important to manage them effectively (e.g. storing them securely or saving them in the browser). - To explain what to do if a password is shared, lost or stolen and why it is important to act immediately. - To describe how and why people should keep their software and apps up to date, e.g. auto updates, and understand what could happen if they are not up to date.
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								- To describe and explain the importance of simple ways to increase privacy on apps and services that provide privacy settings. - To describe ways in which some online content targets people to gain money or information illegally and describe strategies to help me identify such content (e.g. scams, phishing). Explain the consequences of these activities. - To know that online services have terms and conditions that govern their use and explain why they are important for staying safe online.
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EYFS

	EYFS- ELG	EYFS- Exceeding ELG
CODING AND PROGRAMMING	- To understand how to make a floor robot move - To follow instructions from a friend or familiar adult - To know what instructions are - To begin to describe what actions I need to do for something to happen using hardware	- To understand how to make a floor robot move and begin to give simple instructions - To follow instructions from unfamiliar adults and friends - To know what instructions are and begin to give simple instructions to a friend - To begin to describe what actions I need to do for something to happen using hardware and software
CREATING DIGITAL CONTENT COVERED IN MATHS AND	<u>Creating Digital Content</u> - To begin to create digital work with an adult - To begin to understand how to use information from the internet - To begin to save digital content on an online platform with adult support - To begin to know how to organize digital work with an adult - To say what I like and don't like about digital work	<u>Creating Digital Content</u> - To begin to create simple digital work - To understand how to use information from the internet - To begin to save digital content on an online platform with adult support and name the document - To begin to know how to organise digital work with an adult and explain why they have organized digital work that way - To say what I like and don't like about digital work and give reasons for their opinions

	<u>Typing and Editing text</u> - To begin to know how to use a keyboard to type words - To begin to know how to make spaces between words - To begin to dictate words and phrases using a digital device <u>Presentation and Document creation</u> - To begin to understand how to be creative using technology - To begin to add shapes - To begin to edit shapes with adult support - To begin to use images I have collected from the photo gallery - To begin to use the video function on the camera app - To begin to know what the camera app is - To take photos on a digital device with support from an adult - To know where photos are stored on a digital device <u>Data Handling</u> - To sort objects into two groups - To begin to sort objects into more than two groups - To record data with help from an adult - To begin to explain my data	<u>Typing and Editing text</u> - To know how to use a keyboard to type words - To know how to make spaces between words - To dictate words and phrases using a digital device <u>Presentation and Document creation</u> - To understand how to be creative using technology - To add shapes - To begin to edit shapes with some adult support - To use images I have collected from the photo gallery - To know what the camera app is and how to use it - To take photos on a digital device <u>Data Handling</u> - To sort objects into two groups and explain how the objects have been sorted - To begin to sort objects into more than two groups and explain how the objects have been sorted - To record data for different reasons with help from an adult - To explain my data
TECHNOLOGY WITHIN OUR LIVES	- To understand what technology is - To give examples of technology - To begin to use website links with adult support - To begin to understand ways technology is used at home with adult support - To begin to identify technology in the local area - To begin to make an internet search with an adult - To dictate voice to search the internet with adult support	- To understand what technology is and where it is used - To give examples a range of technology - To use website links with adult support - To understand ways technology is used at home with adult support - To identify technology in the local area - To make an internet search with an adult - To dictate voice to search the internet with minimal adult support
ONLINE SAFETY AND APPROPRIATE USE	<u>Autumn (Managing Online Information)</u> - To talk about how to use the internet as a way of finding information online. - To identify devices I could use to access information on the internet. <u>Autumn (Copyright and Ownership)</u> - To know that work I create belongs to me. - To name my work so that others know it belongs to me with adult support <u>Spring (Online Reputation)</u> - To identify ways that I can put information on the internet. <u>Summer (Self Image and Identify)</u> - To recognise, online or offline, ways anyone can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset. <u>Summer (Health, Well-being and Lifestyle)</u> - To identify rules that help keep us safe and healthy in and beyond the home when using technology and give some simple examples of these rules.	<u>Autumn (Managing Online Information)</u> To demonstrate how to use the internet with adult support. - To talk confidently about how to use the internet as a way of finding information online - To identify and use devices I could use to access information on the internet linked to my learning <u>Autumn (Copyright and Ownership)</u> - To know that work I create belongs to me and begin to explain why it belongs to me - To name my work so that others know it belongs to me with minimal adult support <u>Spring (Online Reputation)</u> - To identify begin to explain ways that I can put information on the internet To know what information I should not put online <u>Summer (Self Image and Identify)</u> - To recognise and explain, online or offline, ways anyone can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset. To know that trusted adults can help with online issues <u>Summer (Health, Well-being and Lifestyle)</u> - To identify and explain rules that help keep us safe and healthy in and beyond the home when using technology and give some simple examples of these rules to their peers.
	<u>Online Bullying- Autumn 2 (PERSONAL DEVELOPMENT CURRICULUM)</u> - To describe ways that some people can be unkind online and how this makes others feel <u>Online Relationships- Spring 1 (PERSONAL DEVELOPMENT CURRICULUM)</u> - To begin recognise some ways in which the internet can be used to communicate. - To identify how I (might) use technology to communicate with people I know. - To explain the importance of giving and gaining permission before sharing things online; - To understand how the principles of sharing online is the same as sharing offline e.g. sharing images and videos. <u>Privacy and Security- Spring 1(PERSONAL DEVELOPMENT CURRICULUM)</u> - To identify some simple examples of my personal information (e.g. name, address, birthday, age, location). - To describe who would be trustworthy to share this information with and explain why they are trusted.	<u>Online Bullying- Autumn 2 (PERSONAL DEVELOPMENT CURRICULUM)</u> - To describe ways that some people can be kind and unkind online and how this makes others feel To know that being unkind online is similar to being unkind in person <u>Online Relationships- Spring 1 (PERSONAL DEVELOPMENT CURRICULUM)</u> - To recognise some ways in which the internet can be used to communicate. - To identify and explain how I (might) use technology to communicate with people I know. - To explain the importance of giving and gaining permission before sharing things online and who I should ask permission from - To understand how the principles of sharing online is the same as sharing offline e.g. sharing images and videos, and give examples <u>Privacy and Security- Spring 1(PERSONAL DEVELOPMENT CURRICULUM)</u> - To confidently identify some simple examples of my personal information (e.g. name, address, birthday, age, location). - To describe who would be trustworthy and not trustworthy to share this information with and can explain why they are trusted or not trusted.

YEAR 1

AUTUMN UNIT	Computing Strand	Unit specific learning objectives	KS1 working at the EXPECTED STANDARD	KS1 working ABOVE the expected standard
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Me, My family, My World	Coding and Programming	- To use a piece of software and hardware to create simple algorithms - To give instructions to a friend and follow their instructions to move around - To describe what actions, I will need to do to make something happen. - To press buttons to create an algorithm for a robot to achieve an outcome that I want	- To use a range of software/hardware to create simple programs - To give precise and simple instructions to a friends to make them move (forwards, backwards, turn right, turn left) - To write algorithms for everyday tasks - To understand the input and output of a program - To read an algorithm and predict the outcome using logical reasoning - To explain the sequence of a set of instructions as an algorithm - To program a robot to do a specific task by using precise instructions - To watch an algorithm and debug to make an algorithm precise - To begin to understand decomposition of an algorithm is to break down instructions	- To use a range of software/hardware to create simple programs and begin to solve more complex problems - To confidently give precise and simple instructions to a friends to make them move and to complete other everyday tasks - To write algorithms for everyday tasks and accurately sequence instructions - To understand and explain the input and output of a program and how the input affects the output - To read an algorithm and predict the outcome using logical reasoning and explain whether their prediction was accurate - To program a robot to do a specific task by using precise instructions using different types of robots - To watch an algorithm and debug to make an algorithm precise by explaining why the algorithm needed debugging - To understand decomposition of an algorithm is to break down instructions
	Creating Digital Content	<u>Creating Digital Content</u> To begin to use technology to create, organise and present my work using text, images and videos To understand how to use information from the internet in my work To begin to save, export and retrieve digital content on an online platform To begin to understand how to modify a template To begin to know how to organise digital work To begin to evaluate my digital work <u>Typing and Editing text</u> To know and use a keyboard on a digital device to type text To begin to use both hands to type quickly To know how to make spaces between words and start a new line To dictate short and clear sentences using a digital device and software To begin to know how to undo by pressing or clicking the appropriate buttons <u>Presentation and Document Creation</u> To begin to be creative using different technology tools To add shapes To edit the colour and fill of shapes To begin to use images I have collected from internet or photo gallery To use the video function on the camera app To use images, I have collected using the camera function To begin to know how to use the camera function correctly to take photos and videos	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos - To use information that I have found on the internet - To save, export and retrieve digital content on an online platform - To understand how to modify a template - To understand how to organise my digital work - To use appropriate media that I have collected and from the internet in my work - To evaluate my digital work <u>Typing and Editing text</u> - To know and use a keyboard to start a new line, add, delete and space text - To use both hands to type quickly - To know how to capitalise letters using appropriate keyboard commands - To know how to undo by pressing or clicking the appropriate buttons To begin to know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> - To know how to cut and paste images on digital content and from the internet - To begin to change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately - To use images, I have collected from internet or photo gallery - To take clear videos on camera app - To know how to use the camera function correctly to take photos and videos To know how to edit a photo (crop, mark up, etc.) <u>Data Handling</u> - To make and save spreadsheets created on a digital device - To begin to use charts and graphs to represent data - To begin to use branching database To sort digital objects into an appropriate diagram (venn, carroll, etc.) To begin to understand how to edit the scale on a bar chart COVERED IN MATHS AND SCIENCE	<u>Creating Digital Content</u> - To confidently use technology to create, organise and present my work using text, images and videos in a range of digital work - To effectively use information that I have found on the internet - To confidently save, export and retrieve digital content on an online platform - To understand how to modify a template for a specific purpose - To understand how to clearly organise my digital work - To use appropriate and relevant media that I have collected and from the internet in my work - To evaluate my digital work explain what works well, what works less well and how I would improve my digital work <u>Typing and Editing text</u> - To confidently and consistently know and use a keyboard to start a new line, add, delete and space text - To confidently use both hands to type quickly - To know and demonstrate consistently how to capitalise letters using appropriate keyboard commands - To confidently know how to undo by pressing or clicking the appropriate buttons To know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> - To demonstrate how to cut and paste images on digital content and from the internet for a range of purpose - To change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately and consider how the editing of shape works with other elements - To use appropriate images, I have collected from internet or photo gallery for a range of purposes - To take clear videos on camera app and evaluate the quality of the video - To know how to use the camera function correctly to take photos and videos and evaluate the quality To know how to edit a photo to enhance the quality of digital work (crop, mark up, etc.) <u>Data Handling</u> - To confidently make and save spreadsheets created on a digital device for different learning experiences - To use charts and graphs to represent data - To begin to use branching database and explain how a branching database works To sort digital objects into an appropriate diagram for different learning situations (venn, carroll, etc.) To understand how to edit the scale on a bar chart COVERED IN MATHS AND SCIENCE
	Technology in our Lives	<u>Use of technology</u> - To understand the uses of everyday technology - To begin to understand the benefits of using technology <u>Making Internet Searches</u> To understand how to make an internet search To use website links to find information	<u>Uses and benefits of technology</u> - To identify and explain the benefits of using technology - To explain how the real world is different to the online world - To explain how I can share my work online with others - To explain how and why you use technology in the classroom and in the local area - To recognise common uses of information technology outside of school <u>Making Internet Searches</u> - To make simple internet searches to find information - To retrieve information from the internet to investigate questions	<u>Uses and benefits of technology</u> - To identify and explain the benefits of using technology and compare how the benefits of using different technology for the same purpose (iPad or laptop to complete work on) - To explain how and why the real world is different to the online world - To explain how and why I can share my work online with others - To explain how and why you use technology in the classroom and in the local area and compare their uses - To recognise common uses of information technology outside of school and how it is used <u>Making Internet Searches</u> - To make simple internet searches to find information using appropriate keywords - To accurately retrieve information from the internet to investigate a range of questions

	Online Safety and Appropriate Use	<u>Managing Online Information</u> - To give examples of how to find information using digital technologies, e.g. search engines, voice activated searching) - To understand that we can encounter a range of things online including things we like and don't like as well as things which are real or make believe / a joke. <u>Copyright and Ownership</u> - To explain why work I create using technology belongs to me and work created by other does not belong to me even if I save it	<u>Autumn (Managing Online Information)</u> - To explain what voice activated searching is, how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri). - To explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. - To explain why some information I find online may not be real or true. <u>Autumn (Copyright and Ownership)</u> - To recognise that content on the internet may belong to other people and explain why it belongs to them - To recognise that work I create belongs to me and work created by other does not belong to me	<u>Autumn (Managing Online Information)</u> - To explain what voice activated searching is, how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri). Explain the advantages and disadvantages of using voice activated searching. - To explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. Explain how they know the difference - To explain why some information I find online may not be real or true. Explain how to find out if information online is true or not <u>Autumn (Copyright and Ownership)</u> - To confidently recognise that content on the internet may belong to other people and explain why it belongs to them giving clear reasons - To recognise that work I create belongs to me and work created by other does not belong to me. Explain why it is important to understand this
SPRING UNIT	Computing Strand	Unit specific learning objectives	KS1 working at the EXPECTED STANDARD	KS1 working ABOVE the expected standard
Light and Dark: Living in Victorian Sunderland	Coding and Programming	- To use a piece of software and hardware to create simple algorithms - To understand and demonstrate what algorithms are - To begin to predict what will happen in a short sequence of instructions - To understand and demonstrate what debug is - To understand the sequence of an algorithm is important	- To use a range of software/hardware to create simple programs - To give precise and simple instructions to a friends to make them move (forwards, backwards, turn right, turn left) - To write algorithms for everyday tasks - To understand the input and output of a program - To read an algorithm and predict the outcome using logical reasoning - To explain the sequence of a set of instructions as an algorithm - To program a robot to do a specific task by using precise instructions - To watch an algorithm and debug to make an algorithm precise - To begin to understand decomposition of an algorithm is to break down instructions	- To use a range of software/hardware to create simple programs and begin to solve more complex problems - To confidently give precise and simple instructions to a friends to make them move and to complete other everyday tasks - To write algorithms for everyday tasks and accurately sequence instructions - To understand and explain the input and output of a program and how the input affects the output - To read an algorithm and predict the outcome using logical reasoning and explain whether their prediction was accurate - To program a robot to do a specific task by using precise instructions using different types of robots - To watch an algorithm and debug to make an algorithm precise by explaining why the algorithm needed debugging - To understand decomposition of an algorithm is to break down instructions
	Creating Digital Content	<u>Creating Digital Content</u> To begin to use technology to create, organise and present my work using text, images and videos To understand how to use information from the internet in my work To begin to save, export and retrieve digital content on an online platform To begin to understand how to modify a template To begin to know how to organise digital work To begin to evaluate my digital work <u>Typing and Editing text</u> To know and use a keyboard on a digital device to type text To begin to use both hands to type quickly To know how to make spaces between words and start a new line To dictate short and clear sentences using a digital device and software To begin to know how to undo by pressing or clicking the appropriate buttons <u>Presentation and Document Creation</u> To begin to be creative using different technology tools To add shapes To edit the colour and fill of shapes To begin to use images I have collected from internet or photo gallery To use the video function on the camera app To use images, I have collected using the camera function To begin to know how to use the camera function correctly to take photos and videos	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos - To use information that I have found on the internet - To save, export and retrieve digital content on an online platform - To understand how to modify a template - To understand how to organise my digital work - To use appropriate media that I have collected and from the internet in my work - To evaluate my digital work <u>Typing and Editing text</u> - To know and use a keyboard to start a new line, add, delete and space text - To use both hands to type quickly - To know how to capitalise letters using appropriate keyboard commands - To know how to undo by pressing or clicking the appropriate buttons To begin to know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> - To know how to cut and paste images on digital content and from the internet - To begin to change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately - To use images, I have collected from internet or photo gallery - To take clear videos on camera app - To know how to use the camera function correctly to take photos and videos To know how to edit a photo (crop, mark up, etc.) <u>Data Handling</u> - To make and save spreadsheets created on a digital device - To begin to use charts and graphs to represent data - To begin to use branching database To sort digital objects into an appropriate diagram (venn, carroll, etc.) - To begin to understand how to edit the scale on a bar chart COVERED IN MATHS AND SCIENCE	<u>Creating Digital Content</u> - To confidently use technology to create, organise and present my work using text, images and videos in a range of digital work - To effectively use information that I have found on the internet - To confidently save, export and retrieve digital content on an online platform - To understand how to modify a template for a specific purpose - To understand how to clearly organise my digital work - To use appropriate and relevant media that I have collected and from the internet in my work - To evaluate my digital work explain what works well, what works less well and how I would improve my digital work <u>Typing and Editing text</u> To confidently and consistently know and use a keyboard to start a new line, add, delete and space text To confidently use both hands to type quickly - To know and demonstrate consistently how to capitalise letters using appropriate keyboard commands To confidently know how to undo by pressing or clicking the appropriate buttons To know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> - To demonstrate how to cut and paste images on digital content and from the internet for a range of purpose - To change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately and consider how the editing of shape works with other elements - To use appropriate images, I have collected from internet or photo gallery for a range of purposes - To take clear videos on camera app and evaluate the quality of the video - To know how to use the camera function correctly to take photos and videos and evaluate the quality To know how to edit a photo to enhance the quality of digital work (crop, mark up, etc.) <u>Data Handling</u> - To confidently make and save spreadsheets created on a digital device for different learning experiences - To use charts and graphs to represent data - To begin to use branching database and explain how a branching database works To sort digital objects into an appropriate diagram for different learning situations (venn, carroll, etc.) - To understand how to edit the scale on a bar chart

				COVERED IN MATHS AND SCIENCE
	Technology in our Lives	- To begin to understand the benefits of using technology - To recognise ways that technology is used at home Making Internet Searches To understand how to make an internet search To use website links to find information	<u>Uses and benefits of technology</u> - To identify and explain the benefits of using technology - To explain how the real world is different to the online world - To explain how I can share my work online with others - To explain how and why you use technology in the classroom and in the local area - To recognise common uses of information technology outside of school Making Internet Searches - To make simple internet searches to find information - To retrieve information from the internet to investigate questions	<u>Uses and benefits of technology</u> - To identify and explain the benefits of using technology and compare how the benefits of using different technology for the same purpose (iPad or laptop to complete work on) - To explain how and why the real world is different to the online world - To explain how and why I can share my work online with others - To explain how and why you use technology in the classroom and in the local area and compare their uses - To recognise common uses of information technology outside of school and how it is used Making Internet Searches - To make simple internet searches to find information using appropriate keywords - To accurately retrieve information from the internet to investigate a range of questions
	Online Safety and Appropriate Use	Online Reputation - To recognise that information can stay online and could be copied. - To describe what information I should not put online without asking a trusted adult first.	Spring (Online Reputation) - To explain how information put online about someone can last for a long time, be seen by others and could be copied - To know who to talk to if something has been put online without consent or if it is incorrect.	Spring (Online Reputation) - To explain how information put online about someone can last for a long time, be seen by others and could be copied. Explain why it is important to be careful what is posted online. - To know who to talk to and other methods of reporting if something has been put online without consent or if it is incorrect.
SUMMER UNIT	Computing Strand	Unit specific learning objectives	KS1 working at the EXPECTED STANDARD	KS1 working ABOVE the expected standard
The Seaside: Sunderland's History	Coding and Programming	- To use a piece of software and hardware to create simple algorithms - To understand and demonstrate what algorithms are - To begin to predict what will happen in a short sequence of instructions - To understand and demonstrate what debug is - To understand the sequence of an algorithm is important	- To use a range of software/hardware to create simple programs - To give precise and simple instructions to a friends to make them move (forwards, backwards, turn right, turn left) - To write algorithms for everyday tasks - To understand the input and output of a program - To read an algorithm and predict the outcome using logical reasoning - To explain the sequence of a set of instructions as an algorithm - To program a robot to do a specific task by using precise instructions - To watch an algorithm and debug to make an algorithm precise - To begin to understand decomposition of an algorithm is to break down instructions	- To use a range of software/hardware to create simple programs and begin to solve more complex problems - To confidently give precise and simple instructions to a friends to make them move and to complete other everyday tasks - To write algorithms for everyday tasks and accurately sequence instructions - To understand and explain the input and output of a program and how the input affects the output - To read an algorithm and predict the outcome using logical reasoning and explain whether their prediction was accurate - To program a robot to do a specific task by using precise instructions using different types of robots - To watch an algorithm and debug to make an algorithm precise by explaining why the algorithm needed debugging - To understand decomposition of an algorithm is to break down instructions
	Creating Digital Content	<u>Creating Digital Content</u> To begin to use technology to create, organise and present my work using text, images and videos To understand how to use information from the internet in my work To begin to save, export and retrieve digital content on an online platform To begin to understand how to modify a template To begin to know how to organise digital work To begin to evaluate my digital work <u>Typing and Editing text</u> To know and use a keyboard on a digital device to type text To begin to use both hands to type quickly To know how to make spaces between words and start a new line To dictate short and clear sentences using a digital device and software To begin to know how to undo by pressing or clicking the appropriate buttons <u>Presentation and Document Creation</u> To begin to be creative using different technology tools To add shapes To edit the colour and fill of shapes To begin to use images I have collected from internet or photo gallery To use the video function on the camera app To use images, I have collected using the camera function To begin to know how to use the camera function correctly to take photos and videos	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos - To use information that I have found on the internet - To save, export and retrieve digital content on an online platform - To understand how to modify a template - To understand how to organise my digital work - To use appropriate media that I have collected and from the internet in my work - To evaluate my digital work <u>Typing and Editing text</u> - To know and use a keyboard to start a new line, add, delete and space text - To use both hands to type quickly - To know how to capitalise letters using appropriate keyboard commands - To know how to undo by pressing or clicking the appropriate buttons To begin to know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> - To know how to cut and paste images on digital content and from the internet - To begin to change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately - To use images, I have collected from internet or photo gallery - To take clear videos on camera app - To know how to use the camera function correctly to take photos and videos To know how to edit a photo (crop, mark up, etc.) <u>Data Handling</u> - To make and save spreadsheets created on a digital device - To begin to use charts and graphs to represent data - To begin to use branching database	<u>Creating Digital Content</u> - To confidently use technology to create, organise and present my work using text, images and videos in a range of digital work - To effectively use information that I have found on the internet - To confidently save, export and retrieve digital content on an online platform - To understand how to modify a template for a specific purpose - To understand how to clearly organise my digital work - To use appropriate and relevant media that I have collected and from the internet in my work - To evaluate my digital work explain what works well, what works less well and how I would improve my digital work <u>Typing and Editing text</u> - To confidently and consistently know and use a keyboard to start a new line, add, delete and space text - To confidently use both hands to type quickly - To know and demonstrate consistently how to capitalise letters using appropriate keyboard commands - To confidently know how to undo by pressing or clicking the appropriate buttons To know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> - To demonstrate how to cut and paste images on digital content and from the internet for a range of purpose - To change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately and consider how the editing of shape works with other elements - To use appropriate images, I have collected from internet or photo gallery for a range of purposes - To take clear videos on camera app and evaluate the quality of the video - To know how to use the camera function correctly to take photos and videos and evaluate the quality

			- To sort digital objects into an appropriate diagram (venn, carroll, etc.) - To begin to understand how to edit the scale on a bar chart - COVERED IN MATHS AND SCIENCE	To know how to edit a photo to enhance the quality of digital work (crop, mark up, etc.) Data Handling - To confidently make and save spreadsheets created on a digital device for different learning experiences - To use charts and graphs to represent data - To begin to use branching database and explain how a branching database works - To sort digital objects into an appropriate diagram for different learning situations (venn, carroll, etc.) - To understand how to edit the scale on a bar chart - COVERED IN MATHS AND SCIENCE
	Technology in our Lives	- To begin to understand the benefits of using technology - To recognise ways that technology is used within the local community Making Internet Searches - To understand how to make an internet search - To use website links to find information	Uses and benefits of technology - To identify and explain the benefits of using technology - To explain how the real world is different to the online world - To explain how I can share my work online with others - To explain how and why you use technology in the classroom and in the local area - To recognise common uses of information technology outside of school Making Internet Searches - To make simple internet searches to find information - To retrieve information from the internet to investigate questions	Uses and benefits of technology - To identify and explain the benefits of using technology and compare how the benefits of using different technology for the same purpose (iPad or laptop to complete work on) - To explain how and why the real world is different to the online world - To explain how and why I can share my work online with others - To explain how and why you use technology in the classroom and in the local area and compare their uses - To recognise common uses of information technology outside of school and how it is used Making Internet Searches - To make simple internet searches to find information using appropriate keywords - To accurately retrieve information from the internet to investigate a range of questions
	Online Safety and Appropriate Use	Self-Image and Identify - To recognise that there may be people online who could make someone feel sad, embarrassed or upset and explain how trusted adults can help with issues online Health, Well-being and Lifestyle - To create rules to keep myself safe when using technology both in and beyond the home.	Summer (Self Image and Identify) - To explain how other people may look and act differently online and offline. - To explain how issues online might make someone feel sad, worried, uncomfortable or frightened and who can help with online issues Summer (Health, Well-being and Lifestyle) - To explain how to use technology in different environments and settings (e.g. accessing online technologies in public places and the home environment.) - To create and explain rules that can help anyone accessing online technologies in different environments	Summer (Self Image and Identify) - To explain how and why other people may look and act differently online and offline. - To explain how and why issues online might make someone feel sad, worried, uncomfortable or frightened and who can help with online issues Summer (Health, Well-being and Lifestyle) To create and explain rules that can help anyone accessing online technologies in different environments and apply rules consistently in their own life

YEAR 2

AUTUMN UNIT	Computing Strand	Unit specific learning objectives	KS1 working at the EXPECTED STANDARD	KS1 working ABOVE the expected standard
Homes in Tudor times and the Great Fire of London	Coding and Programming	- To use a range of software/hardware to create simple programs - To watch an algorithm and debug to make an algorithm precise - To give precise and simple instructions to a friends to make them move (forwards, backwards, turn right, turn left) - To write algorithms for everyday tasks - To program a robot to do a specific task by using precise instructions	- To use a range of software/hardware to create simple programs - To give precise and simple instructions to a friends to make them move (forwards, backwards, turn right, turn left) - To write algorithms for everyday tasks - To understand the input and output of a program - To read an algorithm and predict the outcome using logical reasoning - To explain the sequence of a set of instructions as an algorithm - To program a robot to do a specific task by using precise instructions - To watch an algorithm and debug to make an algorithm precise - To begin to understand decomposition of an algorithm is to break down instructions	- To use a range of software/hardware to create simple programs and begin to solve more complex problems - To confidently give precise and simple instructions to a friends to make them move and to complete other everyday tasks - To write algorithms for everyday tasks and accurately sequence instructions - To understand and explain the input and output of a program and how the input affects the output - To read an algorithm and predict the outcome using logical reasoning and explain whether their prediction was accurate - To program a robot to do a specific task by using precise instructions using different types of robots - To watch an algorithm and debug to make an algorithm precise by explaining why the algorithm needed debugging - To understand decomposition of an algorithm is to break down instructions
	Creating Digital Content	Creating Digital Content - To use technology to create, organise and present my work using text, images and videos - To use information that I have found on the internet - To save, export and retrieve digital content on an online platform	Creating Digital Content - To use technology to create, organise and present my work using text, images and videos - To use information that I have found on the internet - To save, export and retrieve digital content on an online platform	Creating Digital Content - To confidently use technology to create, organise and present my work using text, images and videos in a range of digital work - To effectively use information that I have found on the internet

		• To understand how to modify a template • To understand how to organise my digital work • To use appropriate media that I have collected and from the internet in my work • To evaluate my digital work <u>Typing and Editing text</u> • To know and use a keyboard to start a new line, add, delete and space text • To use both hands to type quickly • To know how to capitalise letters using appropriate keyboard commands • To know how to undo by pressing or clicking the appropriate buttons • To begin to know how to edit the way text looks (font and letter size) <u>Presentation and Document Creation</u> • To know how to cut and paste images on digital content and from the internet • To begin to change the style of text (font, colour, bold, underline, italics, etc.) • To add and edit shapes (colour/fill and size) appropriately • To use images, I have collected from internet or photo gallery • To take clear videos on camera app • To know how to use the camera function correctly to take photos and videos • To know how to edit a photo (crop, mark up, etc.) <u>Data Handling</u> • To make and save spreadsheets created on a digital device • To begin to use charts and graphs to represent data • To begin to use branching database • To begin to understand how to edit the scale on a bar chart	• To understand how to modify a template • To understand how to organise my digital work • To use appropriate media that I have collected and from the internet in my work • To evaluate my digital work <u>Typing and Editing text</u> • To know and use a keyboard to start a new line, add, delete and space text • To use both hands to type quickly • To know how to capitalise letters using appropriate keyboard commands • To know how to undo by pressing or clicking the appropriate buttons To begin to know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> • To know how to cut and paste images on digital content and from the internet • To begin to change the style of text (font, colour, bold, underline, italics, etc.) • To add and edit shapes (colour/fill and size) appropriately • To use images, I have collected from internet or photo gallery • To take clear videos on camera app • To know how to use the camera function correctly to take photos and videos To know how to edit a photo (crop, mark up, etc.) <u>Data Handling</u> • To make and save spreadsheets created on a digital device • To begin to use charts and graphs to represent data • To begin to use branching database • To sort digital objects into an appropriate diagram (venn, carroll, etc.) • To begin to understand how to edit the scale on a bar chart • COVERED IN MATHS AND SCIENCE	• To confidently save, export and retrieve digital content on an online platform • To understand how to modify a template for a specific purpose • To understand how to clearly organise my digital work • To use appropriate and relevant media that I have collected and from the internet in my work • To evaluate my digital work explain what works well, what works less well and how I would improve my digital work <u>Typing and Editing text</u> • To confidently and consistently know and use a keyboard to start a new line, add, delete and space text • To confidently use both hands to type quickly • To know and demonstrate consistently how to capitalise letters using appropriate keyboard commands • To confidently know how to undo by pressing or clicking the appropriate buttons To know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> • To demonstrate how to cut and paste images on digital content and from the internet for a range of purpose • To change the style of text (font, colour, bold, underline, italics, etc.) • To add and edit shapes (colour/fill and size) appropriately and consider how the editing of shape works with other elements • To use appropriate images, I have collected from internet or photo gallery for a range of purposes • To take clear videos on camera app and evaluate the quality of the video • To know how to use the camera function correctly to take photos and videos and evaluate the quality To know how to edit a photo to enhance the quality of digital work (crop, mark up, etc.) <u>Data Handling</u> • To confidently make and save spreadsheets created on a digital device for different learning experiences • To use charts and graphs to represent data • To begin to use branching database and explain how a branching database works • To sort digital objects into an appropriate diagram for different learning situations (venn, carroll, etc.) • To understand how to edit the scale on a bar chart • COVERED IN MATHS AND SCIENCE
	Technology in our Lives	<u>How technology is used</u> • To explain how and why you use technology in the classroom and in the local area • To recognise common uses of information technology outside of school <u>Making internet searches</u> • To make simple internet searches to find information • To retrieve information from the internet to investigate questions	<u>Uses and benefits of technology</u> • To identify and explain the benefits of using technology • To explain how the real world is different to the online world • To explain how I can share my work online with others • To explain how and why you use technology in the classroom and in the local area • To recognise common uses of information technology outside of school <u>Making Internet Searches</u> • To make simple internet searches to find information • To retrieve information from the internet to investigate questions	<u>Uses and benefits of technology</u> • To identify and explain the benefits of using technology and compare how the benefits of using different technology for the same purpose (iPad or laptop to complete work on) • To explain how and why the real world is different to the online world • To explain how and why I can share my work online with others • To explain how and why you use technology in the classroom and in the local area and compare their uses • To recognise common uses of information technology outside of school and how it is used <u>Making Internet Searches</u> • To make simple internet searches to find information using appropriate keywords • To accurately retrieve information from the internet to investigate a range of questions
	Online Safety and Appropriate Use	<u>Managing Online Information</u> • To explain what voice activated searching is and how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri). • To explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. • To explain why some information I find online may not be real or true. <u>Copyright and Ownership</u> • To recognise that content on the internet may belong to other people and explain why it belongs to them	<u>Autumn (Managing Online Information)</u> • To explain what voice activated searching is, how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri). • To explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. • To explain why some information I find online may not be real or true. <u>Autumn (Copyright and Ownership)</u> • To recognise that content on the internet may belong to other people and explain why it belongs to them • To recognise that work I create belongs to me and work created by other does not belong to me	<u>Autumn (Managing Online Information)</u> • To explain what voice activated searching is, how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri). Explain the advantages and disadvantages of using voice activated searching. • To explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. Explain how they know the difference • To explain why some information I find online may not be real or true. Explain how to find out if information online is true or not <u>Autumn (Copyright and Ownership)</u> • To confidently recognise that content on the internet may belong to other people and explain why it belongs to them giving clear reasons • To recognise that work I create belongs to me and work created by other does not belong to me. Explain why it is important to understand this
SPRING UNIT	Computing Strand	Unit specific learning objectives	KS1 working at the EXPECTED STANDARD	KS1 working ABOVE the expected standard

What I Believe: I have the right to a safe place to live.	Coding and Programming	- To use a range of software/hardware to create simple programs - To watch an algorithm and debug to make an algorithm precise - To understand the input and output of a program - To read an algorithm and predict the outcome using logical reasoning - To explain the sequence of a set of instructions as an algorithm	- To use a range of software/hardware to create simple programs - To give precise and simple instructions to a friends to make them move (forwards, backwards, turn right, turn left) - To write algorithms for everyday tasks - To understand the input and output of a program - To read an algorithm and predict the outcome using logical reasoning - To explain the sequence of a set of instructions as an algorithm - To program a robot to do a specific task by using precise instructions - To watch an algorithm and debug to make an algorithm precise - To begin to understand decomposition of an algorithm is to break down instructions	- To use a range of software/hardware to create simple programs and begin to solve more complex problems - To confidently give precise and simple instructions to a friends to make them move and to complete other everyday tasks - To write algorithms for everyday tasks and accurately sequence instructions - To understand and explain the input and output of a program and how the input affects the output - To read an algorithm and predict the outcome using logical reasoning and explain whether their prediction was accurate - To program a robot to do a specific task by using precise instructions using different types of robots - To watch an algorithm and debug to make an algorithm precise by explaining why the algorithm needed debugging - To understand decomposition of an algorithm is to break down instructions
	Creating Digital Content	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos - To use information that I have found on the internet - To save, export and retrieve digital content on an online platform - To understand how to modify a template - To understand how to organise my digital work - To use appropriate media that I have collected and from the internet in my work - To evaluate my digital work <u>Typing and Editing text</u> - To know and use a keyboard to start a new line, add, delete and space text - To use both hands to type quickly - To know how to capitalise letters using appropriate keyboard commands - To know how to undo by pressing or clicking the appropriate buttons - To begin to know how to edit the way text looks (font and letter size) <u>Presentation and Document Creation</u> - To know how to cut and paste images on digital content and from the internet - To begin to change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately - To use images, I have collected from internet or photo gallery - To take clear videos on camera app - To know how to use the camera function correctly to take photos and videos - To know how to edit a photo (crop, mark up, etc.) <u>Data Handling</u> - To make and save spreadsheets created on a digital device - To begin to use charts and graphs to represent data - To begin to use branching database To begin to understand how to edit the scale on a bar chart	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos - To use information that I have found on the internet - To save, export and retrieve digital content on an online platform - To understand how to modify a template - To understand how to organise my digital work - To use appropriate media that I have collected and from the internet in my work - To evaluate my digital work <u>Typing and Editing text</u> - To know and use a keyboard to start a new line, add, delete and space text - To use both hands to type quickly - To know how to capitalise letters using appropriate keyboard commands - To know how to undo by pressing or clicking the appropriate buttons To begin to know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> - To know how to cut and paste images on digital content and from the internet - To begin to change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately - To use images, I have collected from internet or photo gallery - To take clear videos on camera app - To know how to use the camera function correctly to take photos and videos To know how to edit a photo (crop, mark up, etc.) <u>Data Handling</u> - To make and save spreadsheets created on a digital device - To begin to use charts and graphs to represent data - To begin to use branching database - To sort digital objects into an appropriate diagram (venn, carroll, etc.) - To begin to understand how to edit the scale on a bar chart - COVERED IN MATHS AND SCIENCE	<u>Creating Digital Content</u> - To confidently use technology to create, organise and present my work using text, images and videos in a range of digital work - To effectively use information that I have found on the internet - To confidently save, export and retrieve digital content on an online platform - To understand how to modify a template for a specific purpose - To understand how to clearly organise my digital work - To use appropriate and relevant media that I have collected and from the internet in my work - To evaluate my digital work explain what works well, what works less well and how I would improve my digital work <u>Typing and Editing text</u> - To confidently and consistently know and use a keyboard to start a new line, add, delete and space text - To confidently use both hands to type quickly - To know and demonstrate consistently how to capitalise letters using appropriate keyboard commands - 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To begin to use branching database and explain how a branching database works - To sort digital objects into an appropriate diagram for different learning situations (venn, carroll, etc.) - To understand how to edit the scale on a bar chart - COVERED IN MATHS AND SCIENCE
	Technology in our Lives	<u>Benefits of technology and sharing work online</u> - To identify and explain the benefits of using technology - To explain how I can share my work online with others <u>Making internet searches</u> - To make simple internet searches to find information - To retrieve information from the internet to investigate questions	<u>Uses and benefits of technology</u> - To identify and explain the benefits of using technology - To explain how the real world is different to the online world - To explain how I can share my work online with others - To explain how and why you use technology in the classroom and in the local area - To recognise common uses of information technology outside of school <u>Making Internet Searches</u> - To make simple internet searches to find information - To retrieve information from the internet to investigate questions	<u>Uses and benefits of technology</u> - To identify and explain the benefits of using technology and compare how the benefits of using different technology for the same purpose (iPad or laptop to complete work on) - To explain how and why the real world is different to the online world - To explain how and why I can share my work online with others - To explain how and why you use technology in the classroom and in the local area and compare their uses - To recognise common uses of information technology outside of school and how it is used <u>Making Internet Searches</u> - To make simple internet searches to find information using appropriate keywords - To accurately retrieve information from the internet to investigate a range of questions

	Online Safety and Appropriate Use	<u>Online Reputation</u> - To explain how information put online about someone can last for a long time and be seen by others - To know who to talk to if something has been put online without consent or if it is incorrect.	<u>Spring (Online Reputation)</u> - To explain how information put online about someone can last for a long time, be seen by others and could be copied - To know who to talk to if something has been put online without consent or if it is incorrect. <u>Summer (Self Image and Identify)</u> - To explain how other people may look and act differently online and offline. - To explain how issues online might make someone feel sad, worried, uncomfortable or frightened and who can help with online issues	<u>Spring (Online Reputation)</u> - To explain how information put online about someone can last for a long time, be seen by others and could be copied. Explain why it is important to be careful what is posted online. - To know who to talk to and other methods of reporting if something has been put online without consent or if it is incorrect.
SUMMER UNIT	Computing Strand	Unit specific learning objectives	KS1 working at the EXPECTED STANDARD	KS1 working ABOVE the expected standard
Transport: Planes, trains and automobiles	Coding and Programming	To use a range of software/hardware to create simple programs To watch an algorithm and debug to make an algorithm precise - to understand the input and output of a program - To explain the sequence of a set of instructions as an algorithm - To program a robot to do a specific task by using precise instructions - To begin to understand decomposition of an algorithm is to break down instructions	- To use a range of software/hardware to create simple programs - To give precise and simple instructions to a friends to make them move (forwards, backwards, turn right, turn left) - To write algorithms for everyday tasks - To understand the input and output of a program - To read an algorithm and predict the outcome using logical reasoning - To explain the sequence of a set of instructions as an algorithm - To program a robot to do a specific task by using precise instructions - To watch an algorithm and debug to make an algorithm precise - To begin to understand decomposition of an algorithm is to break down instructions	- To use a range of software/hardware to create simple programs and begin to solve more complex problems - To confidently give precise and simple instructions to a friends to make them move and to complete other everyday tasks - To write algorithms for everyday tasks and accurately sequence instructions - To understand and explain the input and output of a program and how the input affects the output - To read an algorithm and predict the outcome using logical reasoning and explain whether their prediction was accurate - To program a robot to do a specific task by using precise instructions using different types of robots - To watch an algorithm and debug to make an algorithm precise by explaining why the algorithm needed debugging - To understand decomposition of an algorithm is to break down instructions
	Creating Digital Content	<u>Creating Digital Content</u> To use technology to create, organise and present my work using text, images and videos To use information that I have found on the internet To save, export and retrieve digital content on an online platform To understand how to modify a template To understand how to organise my digital work To use appropriate media that I have collected and from the internet in my work To evaluate my digital work <u>Typing and Editing text</u> To know and use a keyboard to start a new line, add, delete and space text To use both hands to type quickly To know how to capitalise letters using appropriate keyboard commands To know how to undo by pressing or clicking the appropriate buttons To begin to know how to edit the way text looks (font and letter size) <u>Presentation and Document Creation</u> To know how to cut and paste images on digital content and from the internet To begin to change the style of text (font, colour, bold, underline, italics, etc.) To add and edit shapes (colour/fill and size) appropriately To use images, I have collected from internet or photo gallery To take clear videos on camera app To know how to use the camera function correctly to take photos and videos To know how to edit a photo (crop, mark up, etc.) <u>Data Handling</u> To make and save spreadsheets created on a digital device To begin to use charts and graphs to represent data To begin to use branching database To begin to understand how to edit the scale on a bar chart	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos - To use information that I have found on the internet - To save, export and retrieve digital content on an online platform - To understand how to modify a template - To understand how to organise my digital work - To use appropriate media that I have collected and from the internet in my work - To evaluate my digital work <u>Typing and Editing text</u> - To know and use a keyboard to start a new line, add, delete and space text - To use both hands to type quickly - To know how to capitalise letters using appropriate keyboard commands - To know how to undo by pressing or clicking the appropriate buttons To begin to know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> - To know how to cut and paste images on digital content and from the internet - To begin to change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately - To use images, I have collected from internet or photo gallery - To take clear videos on camera app - To know how to use the camera function correctly to take photos and videos To know how to edit a photo (crop, mark up, etc.) <u>Data Handling</u> - To make and save spreadsheets created on a digital device - To begin to use charts and graphs to represent data - To begin to use branching database To sort digital objects into an appropriate diagram (venn, Carroll, etc.) To begin to understand how to edit the scale on a bar chart COVERED IN MATHS AND SCIENCE	<u>Creating Digital Content</u> - To confidently use technology to create, organise and present my work using text, images and videos in a range of digital work - To effectively use information that I have found on the internet - To confidently save, export and retrieve digital content on an online platform - To understand how to modify a template for a specific purpose - To understand how to clearly organise my digital work - To use appropriate and relevant media that I have collected and from the internet in my work - To evaluate my digital work explain what works well, what works less well and how I would improve my digital work <u>Typing and Editing text</u> To confidently and consistently know and use a keyboard to start a new line, add, delete and space text To confidently use both hands to type quickly To know and demonstrate consistently how to capitalise letters using appropriate keyboard commands To confidently know how to undo by pressing or clicking the appropriate buttons To know how to edit the way text looks (font and letter size) <u>Presentation and Document creation</u> - To demonstrate how to cut and paste images on digital content and from the internet for a range of purpose - To change the style of text (font, colour, bold, underline, italics, etc.) - To add and edit shapes (colour/fill and size) appropriately and consider how the editing of shape works with other elements - To use appropriate images, I have collected from internet or photo gallery for a range of purposes - To take clear videos on camera app and evaluate the quality of the video - To know how to use the camera function correctly to take photos and videos and evaluate the quality To know how to edit a photo to enhance the quality of digital work (crop, mark up, etc.) <u>Data Handling</u> - To confidently make and save spreadsheets created on a digital device for different learning experiences - To use charts and graphs to represent data - To begin to use branching database and explain how a branching database works To sort digital objects into an appropriate diagram for different learning situations (venn, Carroll, etc.) To understand how to edit the scale on a bar chart COVERED IN MATHS AND SCIENCE

	Technology in our Lives	How is the real world different to the online world - To explain how the real world is different to the online world <u>Making internet searches and answering questions</u> To make simple internet searches to find information To retrieve information from the internet to investigate questions	Uses and benefits of technology - To identify and explain the benefits of using technology - To explain how the real world is different to the online world - To explain how I can share my work online with others - To explain how and why you use technology in the classroom and in the local area - To recognise common uses of information technology outside of school <u>Making Internet Searches</u> - To make simple internet searches to find information - To retrieve information from the internet to investigate questions	Uses and benefits of technology - To identify and explain the benefits of using technology and compare how the benefits of using different technology for the same purpose (iPad or laptop to complete work on) - To explain how and why the real world is different to the online world - To explain how and why I can share my work online with others - To explain how and why you use technology in the classroom and in the local area and compare their uses - To recognise common uses of information technology outside of school and how it is used <u>Making Internet Searches</u> - To make simple internet searches to find information using appropriate keywords To accurately retrieve information from the internet to investigate a range of questions
	Online Safety and Appropriate Use	<u>Summer (Self Image and Identify)</u> - To explain how other people may look and act differently online and offline. - To explain how issues online might make someone feel sad, worried, uncomfortable or frightened <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how to use technology in different environments and settings (e.g. accessing online technologies in public places and the home environment.) - To create and explain rules that can help anyone accessing online technologies in different environments	<u>Summer (Self Image and Identify)</u> - To explain how other people may look and act differently online and offline. - To explain how issues online might make someone feel sad, worried, uncomfortable or frightened and who can help with online issues <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how to use technology in different environments and settings (e.g. accessing online technologies in public places and the home environment.) - To create and explain rules that can help anyone accessing online technologies in different environments	<u>Summer (Self Image and Identify)</u> - To explain how and why other people may look and act differently online and offline. - To explain how and why issues online might make someone feel sad, worried, uncomfortable or frightened and who can help with online issues <u>Summer (Health, Well-being and Lifestyle)</u> - To create and explain rules that can help anyone accessing online technologies in different environments and apply rules consistently in their own life

YEAR 3

AUTUMN UNIT	Computing Strand	Unit specific learning objectives	Lower KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
Over 2000 years ago... Stone, Bronze and Iron Age	Coding and Programming	To use a range of programming software and hardware to solve open-ended problems To use logical reasoning to understand what software or hardware is appropriate to use to solve a problem To detect debug programs/algorithms and begin to preserve until it achieves a specific goal To evaluate the effectiveness of a program - To decompose an open-ended problem into smaller parts - To understand how an input affects the output of a program	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use abstraction to decompose an open-ended problem into smaller parts - To use algorithms to solve complex problems - To explain what the input is and how it affects the output to program a hardware/software - To use logical reasoning to simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and persevere until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable	- To confidently use a range of programming software and hardware to solve open-ended problems in a range of situations - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem and why they have chosen the software and hardware - To accurately use abstraction to precisely decompose an open-ended problem into smaller parts - To confidently use algorithms to solve complex problems using a range of hardware and software - To explain what the input is and how it affects the output to program a hardware/software and how changing an input will change the output - To consistently use logical reasoning to precisely simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program and demonstrate using a range of hardware and software e.g. repeat command - To accurately detect and confidently debug errors, by explaining why debugging is necessary, in an algorithm and persevere until it achieves a specific goal - To critically evaluate the effectiveness of a program and why a program is suitable or unsuitable
	Creating Digital Content	<u>Creating Digital Content</u> To use technology to create, organise and present my work using text, images and videos specific purpose To effectively use information that I have found on the internet To save, export, store and retrieve work on an online platform or school network To evaluate digital work and explain how to improve it To understand how to modify a template and use a range of tools to create a piece of work To organise my digital work appropriately To use appropriate and clear media that I have collected and from the internet in my work To evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> To know and use keyboard commands already learned and understand how to capitalise letters quickly and create paragraphs To confidently use both hands to type quickly To know how to use the 'shift' function To use the spellcheck tool to review my work	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos specific purpose and audience - To effectively use information, I have found on the internet and check its reliability - To save, export, store and retrieve work on an online platform or school network - To modify template and use a range of tools to create a piece of work for a specific purpose - To organise my digital work appropriately for - To use appropriate and clear media effectively that I have collected and from the internet in my work - To critically evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> - To know and use keyboard commands already learned quickly and fluently - To confidently use both hands to type quickly and efficiently - To accurately use spellchecker to review my work	<u>Creating Digital Content</u> - To confidently use technology to create, organise and present my work using text, images and videos for a range of specific purpose and audience - To effectively use appropriate and accurate information, I have found on the internet and check its reliability - To confidently save, export, store and retrieve work on an online platform or school network - To modify an appropriate template and confidently use a range of tools to create a piece of work for a range of specific purpose - To organise and reorganise my digital work appropriately for a range of specific purposes - To confidently use appropriate and clear media effectively that I have collected and from the internet in my work To critically evaluate the effectiveness and appropriateness of my work and refine digital work appropriately <u>Typing and Editing text</u> - To confidently and consistently know and use keyboard commands already learned quickly and fluently

		• To know how to undo and redo by pressing or clicking appropriate buttons • To know how to use and edit bullet points • To know how to align text (left, centre, right, square) <u>Presentation and Document Creation</u> • To know how to cut, copy and paste quickly to reorganise work • To know how to edit the way text looks (font, letter size, colour, etc.) • To add and edit the style of shapes (fill, border, shadow, reflection and opacity) • To know how to mask/crop an image • To know how to use instant alpha to remove unnecessary effects • To begin to understand how to group digital things together • To begin to use transitions and animations when creating presentations • To use images, I have collected from internet or photo gallery • To sequence images and videos to create a video for a specific purpose • To begin to know how to trim and cut videos • To confidently use the camera function correctly to take photos and videos • To begin to enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To create a database and add data to it • To describe different ways data can be organised digitally (charts/graphs) • To search a ready-made database to gather information • To create a branching database using digital tools • To use a chart or graph to present data • To understand how to edit the scale on charts and graphs	• To confidently know how to undo and redo by pressing or clicking an appropriate button • To use bullet points effectively • To align text appropriately to organise my work (left, centre, right, square) <u>Presentation and Document creation</u> • To change the appearance of text to increase its effectiveness for a specific purpose • To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose • To use transitions and animations when creating presentations • To begin to know how to format digital work • To understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose • To sequence images and videos to create a video for a specific purpose • To begin to use transitions and animations between frames on a video • To know how to trim and cut videos • To add music or sound track to a video • To begin to add simple subtitles • To confidently use the camera function correctly to take photos and videos To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) • To create a multiple choice questionnaire • To accurately search a database to answer questions • To collect data and identify when data could be inaccurate • To collect data for a specific purpose and present data using an appropriate way • To use a range of charts and graphs to present data • To accurately edit the scale on charts and graphs	• To confidently and consistently use both hands to type quickly and efficiently • To accurately and effectively use spellchecker to review my work • To confidently and consistently demonstrate how to undo and redo by pressing or clicking an appropriate button • To confidently use bullet points effectively organise and reorganise digital work • To confidently align text appropriately to organise and reorganise my work (left, centre, right, square) <u>Presentation and Document creation</u> • To confidently change the appearance of text to increase its effectiveness for a range of specific purposes • To confidently add and appropriately edit the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes • To use appropriate transitions and animations when creating presentations • To know how to format digital work • To confidently understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes • To appropriately sequence relevant images and videos to create a video for a specific purpose • To use transitions and animations between frames on a video • To know how to accurately trim and cut videos • To add appropriate music or sound track to a video • To add simple subtitles • To confidently use the camera function correctly to take photos and videos for a range of different purposes To effectively enhance digital photos by using different effects appropriately (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To confidently describe and explain different ways data can be organised digitally for different purposes and explain why a specific chart or graph has been used (charts/graphs) • To create a multiple choice questionnaire using a range of questions (choose from a multiple of different answer, true or false questions or rating questions 1-5) • To accurately search a database to answer questions and use evidence to explain my answer • To collect data and identify when data could be inaccurate using evidence to support their understanding • To confidently collect data for a specific purpose and clearly present data using an appropriate way • To use a range of charts and graphs to present data for a range of different purposes • To accurately and appropriately edit the scale on charts and graphs
	Technology in our Lives	<u>Ways of communication online</u> • To explain ways to communicate with others online <u>How to collaborate online</u> • To understand how people, collaborate online <u>Using search engines and keywords</u> • To use search engines to find appropriate websites using keywords <u>Evaluating online images for work</u> • To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> • To explain ways to communicate with others online • To understand what a computer network is and describe the functions of the different parts of a network • To talk about the different parts of a computer and how they work • To choose which digital application to use to meet a purpose • To choose an appropriate online platform to collaborate with others • To know what a hyperlink to a website is • To create a hyperlink to a website on the World Wide Web • To understand the services on the internet are located across the world • To understand the difference between the internet and the World Wide Web (WWW) • To understand how webpages are viewed across the internet <u>Using search engines and evaluating online images</u> • To use search engines safely to find appropriate websites using specific keywords • To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> • To explain ways to communicate with others online and understand the most appropriate way to communicate online • To understand what a computer network is and describe the functions of the different parts of a network and how the different parts are connected to together • To confidently talk about the different parts of a computer and how they work • To choose which digital application to use to meet a purpose and why you have chosen a specific digital application • To choose an appropriate online platform to collaborate with others and explain why it is appropriate • To know what a hyperlink to a website is and explain how it works • To create a hyperlink to a website on the World Wide Web and present it appropriately within digital content • To understand the services on the internet are located across the world and explain how they are connected • To understand the difference between the internet and the World Wide Web (WWW) and why people can sometimes think they are the same thing • To understand how webpages are viewed across the internet and explain why they are viewed that way <u>Using search engines and evaluating online images</u> • To confidently use search engines safely to find appropriate websites using specific keywords to find appropriate information • To critically evaluate if an image from online is appropriate for a range of specific purposes

	Online Safety and Appropriate Use	Managing Online Information - To explain how the internet can be used to sell and buy things. - To explain the difference between a 'belief', an 'opinion' and a 'fact' and where they might be shared online (e.g. in videos, memes, posts, news stories etc.) - To explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed) - To describe and explain how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable worried or frightened. Copyright and Ownership - To explain why copying someone else's work from the internet without permission isn't fair and what problems this may cause	Autumn (Managing Online Information) - To understand why it is important to make my own decisions regarding content and that my decisions are respected by others. - To describe and identify some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) - To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true - To explain how technology can act like or impersonate living things - To explain what is meant by fake news (e.g. why some people will create stories or alter photographs and put them online to) Autumn (Copyright and Ownership) - To explain why I need to consider who owns digital content, whether I have the right to reuse it or to ask permission for using it.	Autumn (Managing Online Information) - To understand why it is important to make my own decisions regarding content and that my decisions are respected by others. Understand what to do if my decision is not respected. - To describe and identify some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and how they may present online - To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true and how to prove whether something is not true. - To explain how technology can act like or impersonate living things and give example of this. - To explain what is meant by fake news (e.g. why some people will create stories or alter photographs and put them online to) and why people may post this online Autumn (Copyright and Ownership) - To explain why I need to consider who owns digital content, whether I have the right to reuse it or to ask permission for using it and explain what happens if I do not ask for permission.
SPRING UNIT	Computing Strand	Unit specific learning objectives	Lower KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
Along the river	Coding and Programming	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand what software or hardware is appropriate to use to solve a problem - To detect debug programs/algorithms and begin to preserve until it achieves a specific goal - To evaluate the effectiveness of a program - To sequence instructions to complete a specific outcome using abstraction - To use repeat commands to make an algorithm more precise - To identify patterns within a program	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use abstraction to decompose an open-ended problem into smaller parts - To use algorithms to solve complex problems - To explain what the input is and how it affects the output to program a hardware/software - To use logical reasoning to simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and persevere until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable	- To confidently use a range of programming software and hardware to solve open-ended problems in a range of situations - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem and why they have chosen the software and hardware - To accurately use abstraction to precisely decompose an open-ended problem into smaller parts - To confidently use algorithms to solve complex problems using a range of hardware and software - To explain what the input is and how it affects the output to program a hardware/software and how changing an input will change the output - To consistently use logical reasoning to precisely simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program and demonstrate using a range of hardware and software e.g. repeat command - To accurately detect and confidently debug errors, by explaining why debugging is necessary, in an algorithm and persevere until it achieves a specific goal - To critically evaluate the effectiveness of a program and why a program is suitable or unsuitable
	Creating Digital Content	Creating Digital Content - To use technology to create, organise and present my work using text, images and videos specific purpose - To effectively use information that I have found on the internet - To save, export, store and retrieve work on an online platform or school network - To evaluate digital work and explain how to improve it - To understand how to modify a template and use a range of tools to create a piece of work - To understand how to organise my digital work appropriately - To use appropriate and clear media that I have collected and from the internet in my work - To evaluate the effectiveness and appropriateness of my work Typing and Editing text - To know and use keyboard commands already learned and understand how to capitalise letters quickly and create paragraphs - To confidently use both hands to type quickly - To know how to use the 'shift' function - To use the spellcheck tool to review my work - To know how to undo and redo by pressing or clicking appropriate buttons - To know how to use and edit bullet points - To know how to align text (left, centre, right, square) Presentation and Document Creation - To know how to cut, copy and paste quickly to reorganise work - To know how to edit the way text looks (font, letter size, colour, etc.) - To add and edit the style of shapes (fill, border, shadow, reflection and opacity) - To know how to mask/crop an image - To know how to use instant alpha to remove unnecessary effects - To begin to understand how to group digital things together - To begin to use transitions and animations when creating presentations	Creating Digital Content - To use technology to create, organise and present my work using text, images and videos specific purpose and audience - To effectively use information, I have found on the internet and check its reliability - To save, export, store and retrieve work on an online platform or school network - To modify template and use a range of tools to create a piece of work for a specific purpose - To organise my digital work appropriately for - To use appropriate and clear media effectively that I have collected and from the internet in my work - To critically evaluate the effectiveness and appropriateness of my work Typing and Editing text - To know and use keyboard commands already learned quickly and fluently - To confidently use both hands to type quickly and efficiently - To accurately use spellchecker to review my work - To confidently know how to undo and redo by pressing or clicking an appropriate button - To use bullet points effectively - To align text appropriately to organise my work (left, centre, right, square) Presentation and Document creation - To change the appearance of text to increase its effectiveness for a specific purpose - To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose - To use transitions and animations when creating presentations - To begin to know how to format digital work - To understand how to group digital things together	Creating Digital Content - To confidently use technology to create, organise and present my work using text, images and videos for a range of specific purpose and audience - To effectively use appropriate and accurate information, I have found on the internet and check its reliability - To confidently save, export, store and retrieve work on an online platform or school network - To modify an appropriate template and confidently use a range of tools to create a piece of work for a range of specific purpose - To organise and reorganise my digital work appropriately for a range of specific purposes - To confidently use appropriate and clear media effectively that I have collected and from the internet in my work To critically evaluate the effectiveness and appropriateness of my work and refine digital work appropriately Typing and Editing text - To confidently and consistently know and use keyboard commands already learned quickly and fluently - To confidently and consistently use both hands to type quickly and efficiently - To accurately and effectively use spellchecker to review my work - To confidently and consistently demonstrate how to undo and redo by pressing or clicking an appropriate button - To confidently use bullet points effectively organise and reorganise digital work - To confidently align text appropriately to organise and reorganise my work (left, centre, right, square) Presentation and Document creation - To confidently change the appearance of text to increase its effectiveness for a range of specific purposes

		• To use images, I have collected from internet or photo gallery • To sequence images and videos to create a video for a specific purpose • To begin to know how to trim and cut videos • To confidently use the camera function correctly to take photos and videos • To begin to enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To create a database and add data to it • To describe different ways data can be organised digitally (charts/graphs) • To search a ready-made database to gather information • To create a branching database using digital tools • To use a chart or graph to present data • To understand how to edit the scale on charts and graphs	• To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose • To sequence images and videos to create a video for a specific purpose • To begin to use transitions and animations between frames on a video • To know how to trim and cut videos • To add music or sound track to a video • To begin to add simple subtitles • To confidently use the camera function correctly to take photos and videos To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) • To create a multiple choice questionnaire • To accurately search a database to answer questions • To collect data and identify when data could be inaccurate • To collect data for a specific purpose and present data using an appropriate way • To use a range of charts and graphs to present data • To accurately edit the scale on charts and graphs	• To confidently add and appropriately edit the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes • To use appropriate transitions and animations when creating presentations • To know how to format digital work • To confidently understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes • To appropriately sequence relevant images and videos to create a video for a specific purpose • To use transitions and animations between frames on a video • To know how to accurately trim and cut videos • To add appropriate music or sound track to a video • To add simple subtitles • To confidently use the camera function correctly to take photos and videos for a range of different purposes To effectively enhance digital photos by using different effects appropriately (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To confidently describe and explain different ways data can be organised digitally for different purposes and explain why a specific chart or graph has been used (charts/graphs) • To create a multiple choice questionnaire using a range of questions (choose from a multiple of different answer, true or false questions or rating questions 1-5) • To accurately search a database to answer questions and use evidence to explain my answer • To collect data and identify when data could be inaccurate using evidence to support their understanding • To confidently collect data for a specific purpose and clearly present data using an appropriate way • To use a range of charts and graphs to present data for a range of different purposes • To accurately and appropriately edit the scale on charts and graphs
	Technology in our Lives	<u>Parts of a computer and how they work</u> • To talk about the different parts of a computer and how they work <u>Using search engines and keywords</u> • To use search engines to find appropriate websites using keywords <u>Evaluating online images for work</u> • To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> • To explain ways to communicate with others online • To understand what a computer network is and describe the functions of the different parts of a network • To talk about the different parts of a computer and how they work • To choose which digital application to use to meet a purpose • To choose an appropriate online platform to collaborate with others • To know what a hyperlink to a website is • To create a hyperlink to a website on the World Wide Web • To understand the services on the internet are located across the world • To understand the difference between the internet and the World Wide Web (WWW) • To understand how webpages are viewed across the internet <u>Using search engines and evaluating online images</u> • To use search engines safely to find appropriate websites using specific keywords • To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> • To explain ways to communicate with others online and understand the most appropriate way to communicate online • To understand what a computer network is and describe the functions of the different parts of a network and how the different parts are connected to together • To confidently talk about the different parts of a computer and how they work • To choose which digital application to use to meet a purpose and why you have chosen a specific digital application • To choose an appropriate online platform to collaborate with others and explain why it is appropriate • To know what a hyperlink to a website is and explain how it works • To create a hyperlink to a website on the World Wide Web and present it appropriately within digital content • To understand the services on the internet are located across the world and explain how they are connected • To understand the difference between the internet and the World Wide Web (WWW) and why people can sometimes think they are the same thing • To understand how webpages are viewed across the internet and explain why they are viewed that way <u>Using search engines and evaluating online images</u> • To confidently use search engines safely to find appropriate websites using specific keywords to find appropriate information • To critically evaluate if an image from online is appropriate for a range of specific purposes
	Online Safety and Appropriate Use	<u>Online Reputation</u> • To explain how to search for information about others online. • To explain what anyone may or may not be willing to share about themselves online. • To explain the need to be careful before sharing anything personal and who to ask if they are unsure about putting something online	<u>Spring (Online Reputation)</u> • To describe and explain ways that some of the information about anyone online could have been created, copied or shared by others. • To explain the need to be careful before sharing anything personal and who to ask if they are unsure about putting something online	<u>Spring (Online Reputation)</u> • To describe and explain ways that some of the information about anyone online could have been created, copied or shared by others. Explain why it is important to only share information that is not private. • To explain the need to be careful before sharing anything personal and who to ask if they are unsure about putting something online. Explain the consequences of sharing personal information online.
SUMMER UNIT	Computing Strand	Unit specific learning objectives	Lower KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
	Coding and Programming	• To use a range of programming software and hardware to solve open-ended problems	• To use a range of programming software and hardware to solve open-ended problems	• To confidently use a range of programming software and hardware to solve open-ended problems in a range of situations

What I Believe: The right to choose religion and beliefs [exploring religion around the world]		• To use logical reasoning to understand what software or hardware is appropriate to use to solve a problem • To detect debug programs/algorithms and begin to preserve until it achieves a specific goal • To understand how an input affects the output of a program • To use repeat commands to make an algorithm more precise • To identify patterns within a program • To evaluate the effectiveness of a program	• To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem • To use abstraction to decompose an open-ended problem into smaller parts • To use algorithms to solve complex problems • To explain what the input is and how it affects the output to program a hardware/software • To use logical reasoning to simplify a program using appropriate instructions in an algorithm • To use a variety of commands to create a precise program e.g. repeat command • To detect and debug errors in an algorithm and persevere until it achieves a specific goal • To evaluate the effectiveness of a program and why a program is suitable	• To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem and why they have chosen the software and hardware • To accurately use abstraction to precisely decompose an open-ended problem into smaller parts • To confidently use algorithms to solve complex problems using a range of hardware and software • To explain what the input is and how it affects the output to program a hardware/software and how changing an input will change the output • To consistently use logical reasoning to precisely simplify a program using appropriate instructions in an algorithm • To use a variety of commands to create a precise program and demonstrate using a range of hardware and software e.g. repeat command • To accurately detect and confidently debug errors, by explaining why debugging is necessary, in an algorithm and persevere until it achieves a specific goal • To critically evaluate the effectiveness of a program and why a program is suitable or unsuitable
	Creating Digital Content	<u>Creating Digital Content</u> • To use technology to create, organise and present my work using text, images and videos specific purpose • To effectively use information that I have found on the internet • To save, export, store and retrieve work on an online platform or school network • To evaluate digital work and explain how to improve it • To understand how to modify a template and use a range of tools to create a piece of work • To understand how to organise my digital work appropriately • To use appropriate and clear media that I have collected and from the internet in my work • To evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> • To know and use keyboard commands already learned and understand how to capitalise letters quickly and create paragraphs • To confidently use both hands to type quickly • To know how to use the ‘shift’ function • To use the spellcheck tool to review my work • To know how to undo and redo by pressing or clicking appropriate buttons • To know how to use and edit bullet points • To know how to align text (left, centre, right, square) <u>Presentation and Document Creation</u> • To know how to cut, copy and paste quickly to reorganise work • To know how to edit the way text looks (font, letter size, colour, etc.) • To add and edit the style of shapes (fill, border, shadow, reflection and opacity) • To know how to mask/crop an image • To know how to use instant alpha to remove unnecessary effects • To begin to understand how to group digital things together • To begin to use transitions and animations when creating presentations • To use images, I have collected from internet or photo gallery • To sequence images and videos to create a video for a specific purpose • To begin to know how to trim and cut videos • To confidently use the camera function correctly to take photos and videos • To begin to enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To create a database and add data to it • To describe different ways data can be organised digitally (charts/graphs) • To search a ready-made database to gather information • To create a branching database using digital tools • To use a chart or graph to present data • To understand how to edit the scale on charts and graphs	<u>Creating Digital Content</u> • To use technology to create, organise and present my work using text, images and videos specific purpose and audience • To effectively use information, I have found on the internet and check its reliability • To save, export, store and retrieve work on an online platform or school network • To modify template and use a range of tools to create a piece of work for a specific purpose • To organise my digital work appropriately for • To use appropriate and clear media effectively that I have collected and from the internet in my work • To critically evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> • To know and use keyboard commands already learned quickly and fluently • To confidently use both hands to type quickly and efficiently • To accurately use spellchecker to review my work • To confidently know how to undo and redo by pressing or clicking an appropriate button • To use bullet points effectively • To align text appropriately to organise my work (left, centre, right, square) <u>Presentation and Document creation</u> • To change the appearance of text to increase its effectiveness for a specific purpose • To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose • To use transitions and animations when creating presentations • To begin to know how to format digital work • To understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose • To sequence images and videos to create a video for a specific purpose • To begin to use transitions and animations between frames on a video • To know how to trim and cut videos • To add music or sound track to a video • To begin to add simple subtitles • To confidently use the camera function correctly to take photos and videos To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) • To create a multiple choice questionnaire • To accurately search a database to answer questions • To collect data and identify when data could be inaccurate • To collect data for a specific purpose and present data using an appropriate way • To use a range of charts and graphs to present data • To accurately edit the scale on charts and graphs	<u>Creating Digital Content</u> • To confidently use technology to create, organise and present my work using text, images and videos for a range of specific purpose and audience • To effectively use appropriate and accurate information, I have found on the internet and check its reliability • To confidently save, export, store and retrieve work on an online platform or school network • To modify an appropriate template and confidently use a range of tools to create a piece of work for a range of specific purpose • To organise and reorganise my digital work appropriately for a range of specific purposes • To confidently use appropriate and clear media effectively that I have collected and from the internet in my work To critically evaluate the effectiveness and appropriateness of my work and refine digital work appropriately <u>Typing and Editing text</u> • To confidently and consistently know and use keyboard commands already learned quickly and fluently • To confidently and consistently use both hands to type quickly and efficiently • To accurately and effectively use spellchecker to review my work • To confidently and consistently demonstrate how to undo and redo by pressing or clicking an appropriate button • To confidently use bullet points effectively organise and reorganise digital work • To confidently align text appropriately to organise and reorganise my work (left, centre, right, square) <u>Presentation and Document creation</u> • To confidently change the appearance of text to increase its effectiveness for a range of specific purposes • To confidently add and appropriately edit the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes • To use appropriate transitions and animations when creating presentations • To know how to format digital work • To confidently understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes • To appropriately sequence relevant images and videos to create a video for a specific purpose • To use transitions and animations between frames on a video • To know how to accurately trim and cut videos • To add appropriate music or sound track to a video • To add simple subtitles • To confidently use the camera function correctly to take photos and videos for a range of different purposes To effectively enhance digital photos by using different effects appropriately (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To confidently describe and explain different ways data can be organised digitally for different purposes and explain why a specific chart or graph has been used (charts/graphs) • To create a multiple choice questionnaire using a range of questions (choose from a multiple of different answer, true or false questions or rating questions 1-5)

				- To accurately search a database to answer questions and use evidence to explain my answer - To collect data and identify when data could be inaccurate using evidence to support their understanding - To confidently collect data for a specific purpose and clearly present data using an appropriate way - To use a range of charts and graphs to present data for a range of different purposes - To accurately and appropriately edit the scale on charts and graphs
	Technology in our Lives	<u>Computer Network</u> - To understand what a computer network is - To describe the functions of the different parts of a network <u>Using search engines and keywords</u> - To use search engines to find appropriate websites using keywords <u>Evaluating online images for work</u> - To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> - To explain ways to communicate with others online - To understand what a computer network is and describe the functions of the different parts of a network - To talk about the different parts of a computer and how they work - To choose which digital application to use to meet a purpose - To choose an appropriate online platform to collaborate with others - To know what a hyperlink to a website is - To create a hyperlink to a website on the World Wide Web - To understand the services on the internet are located across the world - To understand the difference between the internet and the World Wide Web (WWW) - To understand how webpages are viewed across the internet <u>Using search engines and evaluating online images</u> - To use search engines safely to find appropriate websites using specific keywords - To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> - To explain ways to communicate with others online and understand the most appropriate way to communicate online - To understand what a computer network is and describe the functions of the different parts of a network and how the different parts are connected to together - To confidently talk about the different parts of a computer and how they work - To choose which digital application to use to meet a purpose and why you have chosen a specific digital application - To choose an appropriate online platform to collaborate with others and explain why it is appropriate - To know what a hyperlink to a website is and explain how it works - To create a hyperlink to a website on the World Wide Web and present it appropriately within digital content - To understand the services on the internet are located across the world and explain how they are connected - To understand the difference between the internet and the World Wide Web (WWW) and why people can sometimes think they are the same thing - To understand how webpages are viewed across the internet and explain why they are viewed that way <u>Using search engines and evaluating online images</u> - To confidently use search engines safely to find appropriate websites using specific keywords to find appropriate information - To critically evaluate if an image from online is appropriate for a range of specific purposes
	Online Safety and Appropriate Use	<u>Self-Image and Identify</u> - To explain what is meant by the term ‘identity’ and how people present themselves online - To explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why. <u>Health, Well-being and Lifestyle</u> - To explain why spending too much time using technology can sometimes have a negative impact on anyone, (e.g. mood, sleep, body, relationships) - To describe both positive and negative activities where it is easy to spend a lot of time engaged (e.g. doing homework, games, films, videos). - To explain why some online activities have age restrictions and why it is important to follow them - To explain who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).	<u>Summer (Self Image and Identify)</u> - To explain how my online identity can be different to my offline identity. - To describe positive ways for someone to interact with others online and the perception this will create - To explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how using technology can be a distraction from other things, in both a positive and negative way. - To identify situations when someone may need to limit the amount of time they use technology (e.g. I can suggest strategies to help with limiting this time.) - To explain why some online activities have age restrictions and why it is important to follow them To explain who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).	<u>Summer (Self Image and Identify)</u> - To explain how my online identity can be different to my offline identity and explain why it may be different. - To describe positive ways for someone to interact with others online and the perception this will create and understand how negative interactions can have negative perceptions. - To explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this as well as understand what to do if you are unsure about someone’s online identity. <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how using technology can be a distraction from other things, in both a positive and negative way and explain why - To identify situations when someone may need to limit the amount of time they use technology and why it is important to do so (e.g. I can suggest strategies to help with limiting this time.) - To explain why some online activities have age restrictions and why it is important to follow them. Explore the reasons for certain age restrictions online (social media, gaming, etc.) - To explain who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites). Explain why I should never be pressured into anything online.

YEAR 4

AUTUMN UNIT	Computing Strand	Unit specific learning objectives	Lower KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
The Ancient Greeks	Coding and Programming	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and preserve until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use abstraction to decompose an open-ended problem into smaller parts - To use algorithms to solve complex problems - To explain what the input is and how it affects the output to program a hardware/software	- To confidently use a range of programming software and hardware to solve open-ended problems in a range of situations - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem and why they have chosen the software and hardware - To accurately use abstraction to precisely decompose an open-ended problem into smaller parts - To confidently use algorithms to solve complex problems using a range of hardware and software

		To use abstraction to decompose an open-ended problem into smaller parts	- To use logical reasoning to simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and persevere until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable	- To explain what the input is and how it affects the output to program a hardware/software and how changing an input will change the output - To consistently use logical reasoning to precisely simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program and demonstrate using a range of hardware and software e.g. repeat command - To accurately detect and confidently debug errors, by explaining why debugging is necessary, in an algorithm and persevere until it achieves a specific goal - To critically evaluate the effectiveness of a program and why a program is suitable or unsuitable
	Creating Digital Content	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos specific purpose and audience - To effectively use information, I have found on the internet and check its reliability - To save, export, store and retrieve work on an online platform or school network - To modify a template and use a range of tools to create a piece of work for a specific purpose - To organise my digital work appropriately for a specific purpose - To use appropriate and clear media effectively that I have collected and from the internet in my work - To critically evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> - To know and use keyboard commands already learned quickly and fluently - To confidently use both hands to type quickly and efficiently - To accurately use spellchecker to review my work - To confidently know how to undo and redo by pressing or clicking an appropriate button - To use bullet points effectively - To align text appropriately to organise my work (left, centre, right, square) <u>Presentation and Document Creation</u> - To change the appearance of text to increase its effectiveness for a specific purpose - To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose - To use transitions and animations when creating presentations - To begin to know how to format digital work - To understand how to group digital things together - To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose - To sequence images and videos to create a video for a specific purpose - To begin to use transitions and animations between frames on a video - To know how to trim and cut videos - To add music or sound track to a video - To begin to add simple subtitles - To confidently use the camera function correctly to take photos and videos - To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> - To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) - To create a multiple choice questionnaire - To accurately search a database to answer questions - To can collect data and identify when data could be inaccurate - To collect data for a specific purpose and present data using an appropriate way - To use a range of charts and graphs to present data - To accurately edit the scale on charts and graphs <u>Animation</u> - To create an animation for a specific purpose - To create animations of faces to speak in role with more life-like realistic outcomes. - To improve stop motion animation clips with techniques like onion skinning. - To use animation tools in presenting software to create simple animations	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos specific purpose and audience - To effectively use information, I have found on the internet and check its reliability - To save, export, store and retrieve work on an online platform or school network - To modify template and use a range of tools to create a piece of work for a specific purpose - To organise my digital work appropriately for - To use appropriate and clear media effectively that I have collected and from the internet in my work - To critically evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> - To know and use keyboard commands already learned quickly and fluently - To confidently use both hands to type quickly and efficiently - To accurately use spellchecker to review my work - To confidently know how to undo and redo by pressing or clicking an appropriate button - To use bullet points effectively - To align text appropriately to organise my work (left, centre, right, square) <u>Presentation and Document creation</u> - To change the appearance of text to increase its effectiveness for a specific purpose - To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose - To use transitions and animations when creating presentations - To begin to know how to format digital work - To understand how to group digital things together - To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose - To sequence images and videos to create a video for a specific purpose - To begin to use transitions and animations between frames on a video - To know how to trim and cut videos - To add music or sound track to a video - To begin to add simple subtitles - To confidently use the camera function correctly to take photos and videos - To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> - To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) - To create a multiple choice questionnaire - To accurately search a database to answer questions - To collect data and identify when data could be inaccurate - To collect data for a specific purpose and present data using an appropriate way - To use a range of charts and graphs to present data - To accurately edit the scale on charts and graphs <u>Animations</u> - To create an animation for a specific purpose - To create animations of faces to speak in role with more life-like realistic outcomes. - To improve stop motion animation clips with techniques like onion skinning. - To use animation tools in presenting software to create simple animations.	<u>Creating Digital Content</u> - To confidently use technology to create, organise and present my work using text, images and videos for a range of specific purpose and audience - To effectively use appropriate and accurate information, I have found on the internet and check its reliability - To confidently save, export, store and retrieve work on an online platform or school network - To modify an appropriate template and confidently use a range of tools to create a piece of work for a range of specific purpose - To organise and reorganise my digital work appropriately for a range of specific purposes - To confidently use appropriate and clear media effectively that I have collected and from the internet in my work To critically evaluate the effectiveness and appropriateness of my work and refine digital work appropriately <u>Typing and Editing text</u> - To confidently and consistently know and use keyboard commands already learned quickly and fluently - To confidently and consistently use both hands to type quickly and efficiently - To accurately and effectively use spellchecker to review my work - To confidently and consistently demonstrate how to undo and redo by pressing or clicking an appropriate button - To confidently use bullet points effectively organise and reorganise digital work - To confidently align text appropriately to organise and reorganise my work (left, centre, right, square) <u>Presentation and Document creation</u> - To confidently change the appearance of text to increase its effectiveness for a range of specific purposes - To confidently add and appropriately edit the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes - To use appropriate transitions and animations when creating presentations - To know how to format digital work - To confidently understand how to group digital things together - To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes - To appropriately sequence relevant images and videos to create a video for a specific purpose - To use transitions and animations between frames on a video - To know how to accurately trim and cut videos - To add appropriate music or sound track to a video - To add simple subtitles - To confidently use the camera function correctly to take photos and videos for a range of different purposes - To effectively enhance digital photos by using different effects appropriately (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> - To confidently describe and explain different ways data can be organised digitally for different purposes and explain why a specific chart or graph has been used (charts/graphs) - To create a multiple choice questionnaire using a range of questions (choose from a multiple of different answer, true or false questions or rating questions 1-5) - To accurately search a database to answer questions and use evidence to explain my answer - To collect data and identify when data could be inaccurate using evidence to support their understanding - To confidently collect data for a specific purpose and clearly present data using an appropriate way - To use a range of charts and graphs to present data for a range of different purposes - To accurately and appropriately edit the scale on charts and graphs

				Animations - To create an appropriate animation for a specific purpose - To confidently create animations of faces to speak in role with more life-like realistic outcomes. - To improve stop motion animation clips with techniques like onion skinning and explain why this technique can enhance the quality of an animation - To confidently use animation tools in presenting software to create simple animations.
	Technology in our Lives	<u>Choosing Digital Applications</u> - To choose which digital application to use to meet a purpose <u>Choosing Online platform to Collaborate</u> - To choose an appropriate online platform to collaborate with others <u>Using search engines</u> - To use search engines safely to find appropriate websites using specific keywords <u>Evaluating online images</u> - To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> - To explain ways to communicate with others online - To understand what a computer network is and describe the functions of the different parts of a network - To talk about the different parts of a computer and how they work - To choose which digital application to use to meet a purpose - To choose an appropriate online platform to collaborate with others - To know what a hyperlink to a website is - To create a hyperlink to a website on the World Wide Web - To understand the services on the internet are located across the world - To understand the difference between the internet and the World Wide Web (WWW) - To understand how webpages are viewed across the internet <u>Using search engines and evaluating online images</u> - To use search engines safely to find appropriate websites using specific keywords - To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> - To explain ways to communicate with others online and understand the most appropriate way to communicate online - To understand what a computer network is and describe the functions of the different parts of a network and how the different parts are connected to together - To confidently talk about the different parts of a computer and how they work - To choose which digital application to use to meet a purpose and why you have chosen a specific digital application - To choose an appropriate online platform to collaborate with others and explain why it is appropriate - To know what a hyperlink to a website is and explain how it works - To create a hyperlink to a website on the World Wide Web and present it appropriately within digital content - To understand the services on the internet are located across the world and explain how they are connected - To understand the difference between the internet and the World Wide Web (WWW) and why people can sometimes think they are the same thing - To understand how webpages are viewed across the internet and explain why they are viewed that way <u>Using search engines and evaluating online images</u> - To confidently use search engines safely to find appropriate websites using specific keywords to find appropriate information - To critically evaluate if an image from online is appropriate for a range of specific purposes
	Online Safety and Appropriate Use	<u>Managing Online Information</u> - To understand why it is important to make my own decisions regarding content and that my decisions are respected by others. - To describe and identify some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) - To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true. - To explain that technology can be designed to act like or impersonate living things and describe the benefit and risks (e.g. bots) - To explain what is meant by fake news (e.g. why some people will create stories or alter photographs and put them online to) <u>Copyright and Ownership</u> - To explain why I need to consider who owns digital content and whether I have the right to reuse it. - To understand what types of content which I must not use without permission from the owner, e.g. videos, music, images.	<u>Autumn (Managing Online Information)</u> - To understand why it is important to make my own decisions regarding content and that my decisions are respected by others. - To describe and identify some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) - To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true - To explain how technology can act like or impersonate living things - To explain what is meant by fake news (e.g. why some people will create stories or alter photographs and put them online to) <u>Autumn (Copyright and Ownership)</u> - To explain why I need to consider who owns digital content, whether I have the right to reuse it or to ask permission for using it.	<u>Autumn (Managing Online Information)</u> - To understand why it is important to make my own decisions regarding content and that my decisions are respected by others. Understand what to do if my decision is not respected. - To describe and identify some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and how they may present online - To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true and how to prove whether something is not true. - To explain how technology can act like or impersonate living things and give example of this. - To explain what is meant by fake news (e.g. why some people will create stories or alter photographs and put them online to) and why people may post this online <u>Autumn (Copyright and Ownership)</u> - To explain why I need to consider who owns digital content, whether I have the right to reuse it or to ask permission for using it and explain what happens if I do not ask for permission.
SPRING UNIT	Computing Strand	Unit specific learning objectives	Lower KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
What did the Roman’s do for us?	Coding and Programming	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and preserve until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable - To explain the what the input is and how it affects the output to program a hardware/software - To use logical reasoning to simplify a program using appropriate instructions in an algorithm	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use abstraction to decompose an open-ended problem into smaller parts - To use algorithms to solve complex problems - To explain what the input is and how it affects the output to program a hardware/software - To use logical reasoning to simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and persevere until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable	- To confidently use a range of programming software and hardware to solve open-ended problems in a range of situations - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem and why they have chosen the software and hardware - To accurately use abstraction to precisely decompose an open-ended problem into smaller parts - To confidently use algorithms to solve complex problems using a range of hardware and software - To explain what the input is and how it affects the output to program a hardware/software and how changing an input will change the output - To consistently use logical reasoning to precisely simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program and demonstrate using a range of hardware and software e.g. repeat command - To accurately detect and confidently debug errors, by explaining why debugging is necessary, in an algorithm and persevere until it achieves a specific goal

				To critically evaluate the effectiveness of a program and why a program is suitable or unsuitable
	Creating Digital Content	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos specific purpose and audience - To effectively use information, I have found on the internet and check its reliability - To save, export, store and retrieve work on an online platform or school network - To modify a template and use a range of tools to create a piece of work for a specific purpose - To organise my digital work appropriately for a specific purpose - To use appropriate and clear media effectively that I have collected and from the internet in my work - To critically evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> - To know and use keyboard commands already learned quickly and fluently - To confidently use both hands to type quickly and efficiently - To accurately use spellchecker to review my work - To confidently know how to undo and redo by pressing or clicking an appropriate button - To use bullet points effectively - To align text appropriately to organise my work (left, centre, right, square) <u>Presentation and Document Creation</u> - To change the appearance of text to increase its effectiveness for a specific purpose - To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose - To use transitions and animations when creating presentations - To begin to know how to format digital work - To understand how to group digital things together - To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose - To sequence images and videos to create a video for a specific purpose - To begin to use transitions and animations between frames on a video - To know how to trim and cut videos - To add music or sound track to a video - To begin to add simple subtitles - To confidently use the camera function correctly to take photos and videos - To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> - To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) - To create a multiple choice questionnaire - To accurately search a database to answer questions - To can collect data and identify when data could be inaccurate - To collect data for a specific purpose and present data using an appropriate way - To use a range of charts and graphs to present data - To accurately edit the scale on charts and graphs <u>Animation</u> - To create an animation for a specific purpose - To create animations of faces to speak in role with more life-like realistic outcomes. - To improve stop motion animation clips with techniques like onion skinning. - To use animation tools in presenting software to create simple animations	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos specific purpose and audience - To effectively use information, I have found on the internet and check its reliability - To save, export, store and retrieve work on an online platform or school network - To modify template and use a range of tools to create a piece of work for a specific purpose - To organise my digital work appropriately for - To use appropriate and clear media effectively that I have collected and from the internet in my work - To critically evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> - To know and use keyboard commands already learned quickly and fluently - To confidently use both hands to type quickly and efficiently - To accurately use spellchecker to review my work - To confidently know how to undo and redo by pressing or clicking an appropriate button - To use bullet points effectively - To align text appropriately to organise my work (left, centre, right, square) <u>Presentation and Document creation</u> - To change the appearance of text to increase its effectiveness for a specific purpose - To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose - To use transitions and animations when creating presentations - To begin to know how to format digital work - To understand how to group digital things together - To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose - To sequence images and videos to create a video for a specific purpose - To begin to use transitions and animations between frames on a video - To know how to trim and cut videos - To add music or sound track to a video - To begin to add simple subtitles - To confidently use the camera function correctly to take photos and videos - To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> - To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) - To create a multiple choice questionnaire - To accurately search a database to answer questions - To collect data and identify when data could be inaccurate - To collect data for a specific purpose and present data using an appropriate way - To use a range of charts and graphs to present data - To accurately edit the scale on charts and graphs <u>Animations</u> - To create an animation for a specific purpose - To create animations of faces to speak in role with more life-like realistic outcomes. - To improve stop motion animation clips with techniques like onion skinning. - To use animation tools in presenting software to create simple animations.	<u>Creating Digital Content</u> - To confidently use technology to create, organise and present my work using text, images and videos for a range of specific purpose and audience - To effectively use appropriate and accurate information, I have found on the internet and check its reliability - To confidently save, export, store and retrieve work on an online platform or school network - To modify an appropriate template and confidently use a range of tools to create a piece of work for a range of specific purpose - To organise and reorganise my digital work appropriately for a range of specific purposes - To confidently use appropriate and clear media effectively that I have collected and from the internet in my work To critically evaluate the effectiveness and appropriateness of my work and refine digital work appropriately <u>Typing and Editing text</u> - To confidently and consistently know and use keyboard commands already learned quickly and fluently - To confidently and consistently use both hands to type quickly and efficiently - To accurately and effectively use spellchecker to review my work - To confidently and consistently demonstrate how to undo and redo by pressing or clicking an appropriate button - To confidently use bullet points effectively organise and reorganise digital work - To confidently align text appropriately to organise and reorganise my work (left, centre, right, square) <u>Presentation and Document creation</u> - To confidently change the appearance of text to increase its effectiveness for a range of specific purposes - To confidently add and appropriately edit the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes - To use appropriate transitions and animations when creating presentations - To know how to format digital work - To confidently understand how to group digital things together - To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes - To appropriately sequence relevant images and videos to create a video for a specific purpose - To use transitions and animations between frames on a video - To know how to accurately trim and cut videos - To add appropriate music or sound track to a video - To add simple subtitles - To confidently use the camera function correctly to take photos and videos for a range of different purposes - To effectively enhance digital photos by using different effects appropriately (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> - To confidently describe and explain different ways data can be organised digitally for different purposes and explain why a specific chart or graph has been used (charts/graphs) - To create a multiple choice questionnaire using a range of questions (choose from a multiple of different answer, true or false questions or rating questions 1-5) - To accurately search a database to answer questions and use evidence to explain my answer - To collect data and identify when data could be inaccurate using evidence to support their understanding - To confidently collect data for a specific purpose and clearly present data using an appropriate way - To use a range of charts and graphs to present data for a range of different purposes - To accurately and appropriately edit the scale on charts and graphs <u>Animations</u> - To create an appropriate animation for a specific purpose - To confidently create animations of faces to speak in role with more life-like realistic outcomes. - To improve stop motion animation clips with techniques like onion skinning and explain why this technique can enhance the quality of an animation - To confidently use animation tools in presenting software to create simple animations.

	Technology in our Lives	<u>World Wide Web (WWW) and the internet</u> - To understand the difference between the internet and the World Wide Web (WWW) <u>Hyperlinks for websites</u> - To know what a hyperlink to a website is - To create a hyperlink to a website on the World Wide Web <u>Using search engines</u> - To use search engines safely to find appropriate websites using specific keywords <u>Evaluating online images</u> - To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> - To explain ways to communicate with others online - To understand what a computer network is and describe the functions of the different parts of a network - To talk about the different parts of a computer and how they work - To choose which digital application to use to meet a purpose - To choose an appropriate online platform to collaborate with others - To know what a hyperlink to a website is - To create a hyperlink to a website on the World Wide Web - To understand the services on the internet are located across the world - To understand the difference between the internet and the World Wide Web (WWW) - To understand how webpages are viewed across the internet <u>Using search engines and evaluating online images</u> - To use search engines safely to find appropriate websites using specific keywords - To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> - To explain ways to communicate with others online and understand the most appropriate way to communicate online - To understand what a computer network is and describe the functions of the different parts of a network and how the different parts are connected to together - To confidently talk about the different parts of a computer and how they work - To choose which digital application to use to meet a purpose and why you have chosen a specific digital application - To choose an appropriate online platform to collaborate with others and explain why it is appropriate - To know what a hyperlink to a website is and explain how it works - To create a hyperlink to a website on the World Wide Web and present it appropriately within digital content - To understand the services on the internet are located across the world and explain how they are connected - To understand the difference between the internet and the World Wide Web (WWW) and why people can sometimes think they are the same thing - To understand how webpages are viewed across the internet and explain why they are viewed that way <u>Using search engines and evaluating online images</u> - To confidently use search engines safely to find appropriate websites using specific keywords to find appropriate information - To critically evaluate if an image from online is appropriate for a range of specific purposes
	Online Safety and Appropriate Use	<u>Online Reputation</u> To describe and explain ways that some of the information about anyone online could have been created, copied or shared by others.	<u>Spring (Online Reputation)</u> - To describe and explain ways that some of the information about anyone online could have been created, copied or shared by others. - To explain the need to be careful before sharing anything personal and who to ask if they are unsure about putting something online	<u>Spring (Online Reputation)</u> - To describe and explain ways that some of the information about anyone online could have been created, copied or shared by others. Explain why it is important to only share information that is not private. - To explain the need to be careful before sharing anything personal and who to ask if they are unsure about putting something online. Explain the consequences of sharing personal information online.
SUMMER UNIT	Computing Strand	Unit specific learning objectives	Lower KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
What I believe: Everyone and everything has the right to be alive. Life in the rainforest.	Coding and Programming	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and preserve until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable - To explain the what the input is and how it affects the output to program a hardware/software	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem - To use abstraction to decompose an open-ended problem into smaller parts - To use algorithms to solve complex problems - To explain what the input is and how it affects the output to program a hardware/software - To use logical reasoning to simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program e.g. repeat command - To detect and debug errors in an algorithm and persevere until it achieves a specific goal - To evaluate the effectiveness of a program and why a program is suitable	- To confidently use a range of programming software and hardware to solve open-ended problems in a range of situations - To use logical reasoning to understand and explain what software or hardware is appropriate to use to solve a problem and why they have chosen the software and hardware - To accurately use abstraction to precisely decompose an open-ended problem into smaller parts - To confidently use algorithms to solve complex problems using a range of hardware and software - To explain what the input is and how it affects the output to program a hardware/software and how changing an input will change the output - To consistently use logical reasoning to precisely simplify a program using appropriate instructions in an algorithm - To use a variety of commands to create a precise program and demonstrate using a range of hardware and software e.g. repeat command - To accurately detect and confidently debug errors, by explaining why debugging is necessary, in an algorithm and persevere until it achieves a specific goal - To critically evaluate the effectiveness of a program and why a program is suitable or unsuitable
	Creating Digital Content	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos specific purpose and audience - To effectively use information, I have found on the internet and check its reliability - To save, export, store and retrieve work on an online platform or school network - To modify a template and use a range of tools to create a piece of work for a specific purpose - To organise my digital work appropriately for a specific purpose - To use appropriate and clear media effectively that I have collected and from the internet in my work - To critically evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> - To know and use keyboard commands already learned quickly and fluently	<u>Creating Digital Content</u> - To use technology to create, organise and present my work using text, images and videos specific purpose and audience - To effectively use information, I have found on the internet and check its reliability - To save, export, store and retrieve work on an online platform or school network - To modify template and use a range of tools to create a piece of work for a specific purpose - To organise my digital work appropriately for - To use appropriate and clear media effectively that I have collected and from the internet in my work - To critically evaluate the effectiveness and appropriateness of my work <u>Typing and Editing text</u> - To know and use keyboard commands already learned quickly and fluently - To confidently use both hands to type quickly and efficiently	<u>Creating Digital Content</u> - To confidently use technology to create, organise and present my work using text, images and videos for a range of specific purpose and audience - To effectively use appropriate and accurate information, I have found on the internet and check its reliability - To confidently save, export, store and retrieve work on an online platform or school network - To modify an appropriate template and confidently use a range of tools to create a piece of work for a range of specific purpose - To organise and reorganise my digital work appropriately for a range of specific purposes - To confidently use appropriate and clear media effectively that I have collected and from the internet in my work To critically evaluate the effectiveness and appropriateness of my work and refine digital work appropriately <u>Typing and Editing text</u>

	• To confidently use both hands to type quickly and efficiently • To accurately use spellchecker to review my work • To confidently know how to undo and redo by pressing or clicking an appropriate button • To use bullet points effectively • To align text appropriately to organise my work (left, centre, right, square) <u>Presentation and Document Creation</u> • To change the appearance of text to increase its effectiveness for a specific purpose • To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose • To use transitions and animations when creating presentations • To begin to know how to format digital work • To understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose • To sequence images and videos to create a video for a specific purpose • To begin to use transitions and animations between frames on a video • To know how to trim and cut videos • To add music or sound track to a video • To begin to add simple subtitles • To confidently use the camera function correctly to take photos and videos • To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) • To create a multiple choice questionnaire • To accurately search a database to answer questions • To can collect data and identify when data could be inaccurate • To collect data for a specific purpose and present data using an appropriate way • To use a range of charts and graphs to present data • To accurately edit the scale on charts and graphs <u>Animation</u> • To create an animation for a specific purpose • To create animations of faces to speak in role with more life-like realistic outcomes. • To improve stop motion animation clips with techniques like onion skinning. • To use animation tools in presenting software to create simple animations	• To accurately use spellchecker to review my work • To confidently know how to undo and redo by pressing or clicking an appropriate button • To use bullet points effectively • To align text appropriately to organise my work (left, centre, right, square) <u>Presentation and Document creation</u> • To change the appearance of text to increase its effectiveness for a specific purpose • To add and edit the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose • To use transitions and animations when creating presentations • To begin to know how to format digital work • To understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose • To sequence images and videos to create a video for a specific purpose • To begin to use transitions and animations between frames on a video • To know how to trim and cut videos • To add music or sound track to a video • To begin to add simple subtitles • To confidently use the camera function correctly to take photos and videos • To enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To describe and explain different ways data can be organised digitally for different purposes (charts/graphs) • To create a multiple choice questionnaire • To accurately search a database to answer questions • To collect data and identify when data could be inaccurate • To collect data for a specific purpose and present data using an appropriate way • To use a range of charts and graphs to present data • To accurately edit the scale on charts and graphs <u>Animations</u> • To create an animation for a specific purpose • To create animations of faces to speak in role with more life-like realistic outcomes. • To improve stop motion animation clips with techniques like onion skinning. • To use animation tools in presenting software to create simple animations.	• To confidently and consistently know and use keyboard commands already learned quickly and fluently • To confidently and consistently use both hands to type quickly and efficiently • To accurately and effectively use spellchecker to review my work • To confidently and consistently demonstrate how to undo and redo by pressing or clicking an appropriate button • To confidently use bullet points effectively organise and reorganise digital work • To confidently align text appropriately to organise and reorganise my work (left, centre, right, square) <u>Presentation and Document creation</u> • To confidently change the appearance of text to increase its effectiveness for a range of specific purposes • To confidently add and appropriately edit the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes • To use appropriate transitions and animations when creating presentations • To know how to format digital work • To confidently understand how to group digital things together • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes • To appropriately sequence relevant images and videos to create a video for a specific purpose • To use transitions and animations between frames on a video • To know how to accurately trim and cut videos • To add appropriate music or sound track to a video • To add simple subtitles • To confidently use the camera function correctly to take photos and videos for a range of different purposes • To effectively enhance digital photos by using different effects appropriately (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To confidently describe and explain different ways data can be organised digitally for different purposes and explain why a specific chart or graph has been used (charts/graphs) • To create a multiple choice questionnaire using a range of questions (choose from a multiple of different answer, true or false questions or rating questions 1-5) • To accurately search a database to answer questions and use evidence to explain my answer • To collect data and identify when data could be inaccurate using evidence to support their understanding • To confidently collect data for a specific purpose and clearly present data using an appropriate way • To use a range of charts and graphs to present data for a range of different purposes • To accurately and appropriately edit the scale on charts and graphs <u>Animations</u> • To create an appropriate animation for a specific purpose • To confidently create animations of faces to speak in role with more life-like realistic outcomes. • To improve stop motion animation clips with techniques like onion skinning and explain why this technique can enhance the quality of an animation • To confidently use animation tools in presenting software to create simple animations.
Technology in our Lives	<u>How are webpages views</u> • To understand how webpages are viewed across the internet <u>Where internet services are located across the world</u> • To understand the services on the internet are located across the world <u>Using search engines</u> • To use search engines safely to find appropriate websites using specific keywords <u>Evaluating online images</u> • To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> • To explain ways to communicate with others online • To understand what a computer network is and describe the functions of the different parts of a network • To talk about the different parts of a computer and how they work • To choose which digital application to use to meet a purpose • To choose an appropriate online platform to collaborate with others • To know what a hyperlink to a website is • To create a hyperlink to a website on the World Wide Web • To understand the services on the internet are located across the world • To understand the difference between the internet and the World Wide Web (WWW) • To understand how webpages are viewed across the internet <u>Using search engines and evaluating online images</u> • To use search engines safely to find appropriate websites using specific keywords • To evaluate if an image from online is appropriate for a specific purpose	<u>Computer Networks, World Wide Web (WWW), the Internet and Online Communication and Collaboration</u> • To explain ways to communicate with others online and understand the most appropriate way to communicate online • To understand what a computer network is and describe the functions of the different parts of a network and how the different parts are connected to together • To confidently talk about the different parts of a computer and how they work • To choose which digital application to use to meet a purpose and why you have chosen a specific digital application • To choose an appropriate online platform to collaborate with others and explain why it is appropriate • To know what a hyperlink to a website is and explain how it works • To create a hyperlink to a website on the World Wide Web and present it appropriately within digital content • To understand the services on the internet are located across the world and explain how they are connected

				- To understand the difference between the internet and the World Wide Web (WWW) and why people can sometimes think they are the same thing - To understand how webpages are viewed across the internet and explain why they are viewed that way <u>Using search engines and evaluating online images</u> - To confidently use search engines safely to find appropriate websites using specific keywords to find appropriate information - To critically evaluate if an image from online is appropriate for a range of specific purposes
	Online Safety and Appropriate Use	<u>Self-Image and Identify</u> - To explain how my online identity can be different to my offline identity. - To describe positive ways for someone to interact with others online and the perception this will create - To explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this <u>Health, Well-being and Lifestyle</u> - To explain how using technology can be a distraction from other things, in both a positive and negative way. - To identify situations when someone may need to limit the amount of time they use technology (e.g. I can suggest strategies to help with limiting this time.)	<u>Summer (Self Image and Identify)</u> - To explain how my online identity can be different to my offline identity. - To describe positive ways for someone to interact with others online and the perception this will create - To explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how using technology can be a distraction from other things, in both a positive and negative way. - To identify situations when someone may need to limit the amount of time they use technology (e.g. I can suggest strategies to help with limiting this time.) - To explain why some online activities have age restrictions and why it is important to follow them - To explain who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).	<u>Summer (Self Image and Identify)</u> - To explain how my online identity can be different to my offline identity and explain why it may be different. - To describe positive ways for someone to interact with others online and the perception this will create and understand how negative interactions can have negative perceptions. - To explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this as well as understand what to do if you are unsure about someone's online identity. <u>Summer (Health, Well-being and Lifestyle)</u> - To explain how using technology can be a distraction from other things, in both a positive and negative way and explain why - To identify situations when someone may need to limit the amount of time they use technology and why it is important to do so (e.g. I can suggest strategies to help with limiting this time.) - To explain why some online activities have age restrictions and why it is important to follow them. Explore the reasons for certain age restrictions online (social media, gaming, etc.) - To explain who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites). Explain why I should never be pressured into anything online.

YEAR 5

AUTUMN UNIT	Computing Strand	Unit specific learning objectives	Upper KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
Settlers and Settlements Anglo-Saxon, Vikings and Scots	Coding and Programming	- To use a range of programming software/hardware to solve open-ended problems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve a problem - To solve open-ended problems using logical reasoning, decomposition and abstraction - To detect and debug errors using decomposition in an algorithm and preserve until it achieves a specific goal - To evaluate the effectiveness and efficiency of programs and explain how it is efficient - To select appropriate commands for an algorithm to create a specific program - To change the input of a program to achieve a different output	- To be proficient in using a range of programming software and hardware to solve open-ended problems - To effectively use programs to control and simulate physical systems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To use a range of instructions to simplify and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To recognise the use of a variable to achieve a specific outcome - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program	- To be confident and proficient in using a range of programming software and hardware to solve open-ended problems in a range of situations - To effectively use programs to control and simulate physical systems as well as evaluating the effectiveness of the program for the physical system - To confidently use logical reasoning and critically evaluate to understand what software or hardware is appropriate and not to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction by demonstrating them in a range of situations - To confidently design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction using a range of hardware and software - To consistently use logical reasoning to accurately detect and confidently debug errors and use decomposition and abstraction to accurately correct errors in a program - To confidently use a range of instructions to simplify and refine programs and explain why a program needs simplifying and refining, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To accurately recognise the use of a variable to achieve a specific outcome - To critically evaluate the effectiveness and efficiency of my algorithm whole continually testing the program
	Creating Digital Content	<u>Creating Digital Content</u> - To use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability - To save, export, store and retrieve work on an appropriate online platform or school network - To modify an appropriate template and use a range of tools to create a piece of work for a specific purpose - To effectively organise my digital work appropriately for a specific purpose and audience	<u>Creating Digital Content</u> - To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work	<u>Creating Digital Content</u> - To confidently and effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos for a range of specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility for a range of digital work - To confidently save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate and relevant template to modify to effectively meet a range of purposes - To effectively, appropriately and clearly organise my digital work for a range of specific purposes and audiences - To confidently use a range of appropriate, clear and relevant media effectively that I have collected and from the internet in my work

		• To use a range of appropriate and clear media effectively that I have collected and from the internet in my work • To use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> • To use a range of keyboard commands already learned quickly and with increasing fluency • To confidently use both hands to type quickly and efficiently • To know how to add and use a hyperlink in digital work • To use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) To organise and reorganise text to meet a specific purpose <u>Presentation and Document Creation</u> • To choose appropriate effects to edit the appearance of text to meet a specific purpose • To add and edit effectively the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience • To use cutaway and spilt screen tools on digital software (iMovie) • To accurately edit a video by trimming and cutting videos • To add music, sound track and voice overs for a specific purpose • To add simple subtitles • To add and edit voice overs and sound effects (volume, pitch, fade) • To confidently use the camera function correctly to take photos and videos in a range of contexts • To appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To use spreadsheets and databases to collect, record and analyse data • To create a questionnaire using a range of question types and analyse the responses • To choose an appropriate way to present data and explain why (spreadsheet, graphs or charts) • To search a database using different operators to refine my search • To edit data to amend inaccuracies • To begin input a range of formulas to create data (adding) using ‘=sum’ • To edit the format of a cell on a database (decimal places, currency, percentage, etc.) <u>Animation</u> • To create a GIF • To create, edit and evaluate an animation for a specific purpose • To record animations and edit them together to create an interview • To take multiple animations I have created and edit them together for a longer video.	• To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> • To effectively organise and reorganise text to meet a specific purpose and audience • To effectively use a range of keyboard commands already learned quickly and , with increasing fluency • To effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a specific purpose <u>Presentation and Document creation</u> • To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a specific purpose • To add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose and audience • To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience • To use transitions and animations between frames • To confidently and accurately edit a video by trimming and cutting videos • To add appropriate music, sound track and voice overs for a specific purpose • To add subtitles to a video • To add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) • To confidently and effectively use the camera function correctly to take photos and videos in a range of context • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs • To create an online quiz/questionnaire using a range of media (text, images, animations, videos) • To accurately search a database using different operators to refine my search • To input a range of formulas to create data (adding, averages) using appropriate formulas • To appropriately edit the format of a cell on a database for different purposes • To check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> • To mix animations and videos recordings of myself to create video interviews. • To plan, script and create an animation to explain a concept or tell a story. • To choose and create different types of animations to best explain my learning.	• To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work by refining digital work appropriately <u>Typing and Editing text</u> • To confidently, consistently and effectively organise and reorganise text to meet a range of specific purposes and audiences • To confidently, consistently and effectively use a range of keyboard commands already learned quickly and , with increasing fluency • To confidently, consistently and effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a range of specific purposes <u>Presentation and Document creation</u> • To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a range of specific purposes • To confidently add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes and audiences • To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes and audiences • To confidently use transitions and animations between frames ensuring the speed of the transition or animation is appropriate • To confidently and accurately edit a video by trimming and cutting videos a range of specific purposes and audiences • To confidently add appropriate music, sound track and voice overs for a specific purpose • To add subtitles to a video and explain why subtitle are important • To confidently add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) • To confidently and effectively use the camera function correctly to take photos and videos in a range of context by ensuring the quality of the photo or video is appropriate • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) for a range of specific purposes and audiences <u>Data Handling</u> • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs for a range of purposes • To create an online quiz/questionnaire using a range of media (text, images, animations, videos) for a range of purposes • To confidently and accurately search a database using different operators to refine my search to ensure I get accurate information • To confidently input a range of formulas to create data (adding, averages) using appropriate formulas • To confidently and appropriately edit the format of a cell on a database for different purposes • To critically check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> • To mix animations and videos recordings of myself to create video interviews for a specific purpose • To confidently plan, script and create an animation to explain a concept or tell a story. • To choose and create different types of appropriate animations to best explain my learning by using a range of different animation skills.
	Technology in our Lives	<u>Appropriate online and offline tools to collaborate</u> • To choose an appropriate online or offline tool to share and create ideas <u>Online communication tools for different purposes</u> • To understand how to use different online communication tools for different purposes <u>Using search engines</u> • To use keywords in a search engine to find appropriate information <u>Being digitally critical</u> • To be digitally critical when searching for information online by checking its reliability	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> • To understand how webpages are ranked in a search engine • To understand what a ‘data packet’ is and how they are transported on the internet • To understand what an IP address is and how they look and work • To understand why the internet is important • To understand different types of tools used online for collaboration and communication for different purposes and situations • To understand what a ‘search index’ is and how it works • To understand what HTML is and recognise HTML tags • To know a range of HTML tags and can remix HTML tags in a webpage <u>Using search engines and being digitally critical</u> • To use keywords to make effective internet searches and evaluate rankings of websites and digital content • To be digitally critical when searching for information online by checking its reliability and plausibility • To evaluate the reliability of websites • To explain how website are ranked and selected based on how they are searched	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> • To understand how webpages are ranked in a search engine and explain why they are ranked in a certain way • To understand what a ‘data packet’ is, how they are transported on the internet and why they are important • To understand what an IP address is and how they look and work and explain why IP addressed are important • To understand why the internet is important for different people • To understand different types of tools used online for collaboration and communication for different purposes and situations and evaluate which is the most appropriate • To understand what a ‘search index’ is and how it works and explore how it relates to the way they use technology • To understand and explain what HTML is and recognise HTML tags in a range of scenarios • To know a range of HTML tags and can remix HTML tags in a webpage to improve the quality of the webpage <u>Using search engines and being digitally critical</u> • To use specific keywords to make effective and accurate internet searches and critically evaluate rankings of websites and digital content • To be digitally critical when searching for information online by consistently checking its reliability and plausibility for a range of purposes

				- To critically evaluate the reliability of websites - To confidently explain how website are ranked and selected based on how they are searched
	Online Safety and Appropriate Use	<u>Managing Online Information</u> - To explain the benefits and limitations of using different types of search technologies (e.g. voice-activation search engine.) - To explain what is meant by 'being sceptical' online and how and when to be sceptical. - To describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, influencers). - To explain what is meant by the term 'stereotype' and they are amplified and reinforced online - To describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful. - To explain what is meant by a 'hoax' and explain why someone would need to think carefully before they share. <u>Copyright and Ownership</u> - To assess and justify when it is acceptable to use the work of others. - To give examples of content that is permitted to be reused and know how this content can be found online.	<u>Autumn (Managing Online Information)</u> - To describe and explain how some online information can be an opinion and may present opinions as facts - To explain why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. - To understand the terms 'influence', 'manipulation' and 'persuasion' online and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). - To understand the concept of persuasive design and how it can be used to influences peoples' choices. - To explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this. - To describe the difference between online misinformation and dis-information. - To explain why information that is on a large number of sites may still be inaccurate or untrue and be the result of misinformation and disinformation - To identify, flag and report inappropriate content. <u>Autumn (Copyright and Ownership)</u> - To demonstrate how to make references to and acknowledge sources I have used from the internet.	<u>Autumn (Managing Online Information)</u> - To describe and explain how some online information can be an opinion and may present opinions as facts, explaining how to be skeptical about online information. - To explain why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. Give example of how this may present in their lives. - To understand the terms 'influence', 'manipulation' and 'persuasion' online and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). explain how they could present in similar or different ways online. - To understand the concept of persuasive design and how and why it can be used to influences peoples' choices. - To explain how companies and news providers target people with online news stories they are more likely to engage with, explain why they do this and how to recognise this. - To describe the difference between online misinformation and dis-information. Giving example of how this may present online. - To explain why information that is on a large number of sites may still be inaccurate or untrue and be the result of misinformation and disinformation and explain why it is important to be sceptical about information - To identify, flag and report inappropriate content and how to do this on a range of apps and websites <u>Autumn (Copyright and Ownership)</u> - To demonstrate how to make references to and acknowledge sources I have used from the internet. Explain why it is important to acknowledge sources from the internet.
SPRING UNIT	Computing Strand	Unit specific learning objectives	Upper KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
What happened after 1066? Tudors and Stuarts	Coding and Programming	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve a problem - To detect and debug errors using decomposition in an algorithm and preserve until it achieves a specific goal - To evaluate the effectiveness and efficiency of programs and explain how it is efficient - To select appropriate commands for an algorithm to create a specific program - To use 'if' and 'when' command in an algorithm - To refine and design a program using repeat commands effectively	- To be proficient in using a range of programming software and hardware to solve open-ended problems - To effectively use programs to control and simulate physical systems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To use a range of instructions to simplify and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To recognise the use of a variable to achieve a specific outcome - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program	- To be confident and proficient in using a range of programming software and hardware to solve open-ended problems in a range of situations - To effectively use programs to control and simulate physical systems as well as evaluating the effectiveness of the program for the physical system - To confidently use logical reasoning and critically evaluate to understand what software or hardware is appropriate and not to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction by demonstrating them in a range of situations - To confidently design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction using a range of hardware and software - To consistently use logical reasoning to accurately detect and confidently debug errors and use decomposition and abstraction to accurately correct errors in a program - To confidently use a range of instructions to simplify and refine programs and explain why a program needs simplifying and refining, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To accurately recognise the use of a variable to achieve a specific outcome - To critically evaluate the effectiveness and efficiency of my algorithm whole continually testing the program
	Creating Digital Content	<u>Creating Digital Content</u> - To use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability - To save, export, store and retrieve work on an appropriate online platform or school network - To modify an appropriate template and use a range of tools to create a piece of work for a specific purpose - To effectively organise my digital work appropriately for a specific purpose and audience - To use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To use a range of keyboard commands already learned quickly and with increasing fluency - To confidently use both hands to type quickly and efficiently	<u>Creating Digital Content</u> - To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To effectively organise and reorganise text to meet a specific purpose and audience - To effectively use a range of keyboard commands already learned quickly and , with increasing fluency	<u>Creating Digital Content</u> - To confidently and effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos for a range of specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility for a range of digital work - To confidently save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate and relevant template to modify to effectively meet a range of purposes - To effectively, appropriately and clearly organise my digital work for a range of specific purposes and audiences - To confidently use a range of appropriate, clear and relevant media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work by refining digital work appropriately <u>Typing and Editing text</u> - To confidently, consistently and effectively organise and reorganise text to meet a range of specific purposes and audiences

		• To know how to add and use a hyperlink in digital work • To use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) To organise and reorganise text to meet a specific purpose <u>Presentation and Document Creation</u> • To choose appropriate effects to edit the appearance of text to meet a specific purpose • To add and edit effectively the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose • To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience • To use cutaway and spilt screen tools on digital software (iMovie) • To accurately edit a video by trimming and cutting videos • To add music, sound track and voice overs for a specific purpose • To add simple subtitles • To add and edit voice overs and sound effects (volume, pitch, fade) • To confidently use the camera function correctly to take photos and videos in a range of contexts • To appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To use spreadsheets and databases to collect, record and analyse data • To create a questionnaire using a range of question types and analyse the responses • To choose an appropriate way to present data and explain why (spreadsheet, graphs or charts) • To search a database using different operators to refine my search • To edit data to amend inaccuracies • To begin input a range of formulas to create data (adding) using ‘=sum’ • To edit the format of a cell on a database (decimal places, currency, percentage, etc.) <u>Animation</u> • To create a GIF • To create, edit and evaluate an animation for a specific purpose • To record animations and edit them together to create an interview • To take multiple animations I have created and edit them together for a longer video.	• To effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a specific purpose <u>Presentation and Document creation</u> • To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a specific purpose • To add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose and audience • To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience • To use transitions and animations between frames • To confidently and accurately edit a video by trimming and cutting videos • To add appropriate music, sound track and voice overs for a specific purpose • To add subtitles to a video • To add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) • To confidently and effectively use the camera function correctly to take photos and videos in a range of context • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs • To create an online quiz/questionnaire using a range of media (text, images, animations, videos) • To accurately search a database using different operators to refine my search • To input a range of formulas to create data (adding, averages) using appropriate formulas • To appropriately edit the format of a cell on a database for different purposes • To check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> • To mix animations and videos recordings of myself to create video interviews. • To plan, script and create an animation to explain a concept or tell a story. • To choose and create different types of animations to best explain my learning.	• To confidently, consistently and effectively use a range of keyboard commands already learned quickly and , with increasing fluency • To confidently, consistently and effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a range of specific purposes <u>Presentation and Document creation</u> • To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a range of specific purposes • To confidently add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes and audiences • To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes and audiences • To confidently use transitions and animations between frames ensuring the speed of the transition or animation is appropriate • To confidently and accurately edit a video by trimming and cutting videos a range of specific purposes and audiences • To confidently add appropriate music, sound track and voice overs for a specific purpose • To add subtitles to a video and explain why subtitle are important • To confidently add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) • To confidently and effectively use the camera function correctly to take photos and videos in a range of context by ensuring the quality of the photo or video is appropriate • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) for a range of specific purposes and audiences <u>Data Handling</u> • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs for a range of purposes • To create an online quiz/questionnaire using a range of media (text, images, animations, videos) for a range of purposes • To confidently and accurately search a database using different operators to refine my search to ensure I get accurate information • To confidently input a range of formulas to create data (adding, averages) using appropriate formulas • To confidently and appropriately edit the format of a cell on a database for different purposes • To critically check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> • To mix animations and videos recordings of myself to create video interviews for a specific purpose • To confidently plan, script and create an animation to explain a concept or tell a story. • To choose and create different types of appropriate animations to best explain my learning by using a range of different animation skills.
	Technology in our Lives	<u>Importance of the Internet</u> • To understand why the internet is important <u>Webpage rankings</u> • To understand how webpages are ranked in a search engine <u>Using search engines</u> • To use keywords in a search engine to find appropriate information <u>Being digitally critically</u> • To be digitally critical when searching for information online by checking its reliability	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> • To understand how webpages are ranked in a search engine • To understand what a ‘data packet’ is and how they are transported on the internet • To understand what an IP address is and how they look and work • To understand why the internet is important • To understand different types of tools used online for collaboration and communication for different purposes and situations • To understand what a ‘search index’ is and how it works • To understand what HTML is and recognise HTML tags • To know a range of HTML tags and can remix HTML tags in a webpage <u>Using search engines and being digitally critical</u> • To use keywords to make effective internet searches and evaluate rankings of websites and digital content • To be digitally critical when searching for information online by checking its reliability and plausibility • To evaluate the reliability of websites • To explain how website are ranked and selected based on how they are searched	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> • To understand how webpages are ranked in a search engine and explain why they are ranked in a certain way • To understand what a ‘data packet’ is, how they are transported on the internet and why they are important • To understand what an IP address is and how they look and work and explain why IP addressed are important • To understand why the internet is important for different people • To understand different types of tools used online for collaboration and communication for different purposes and situations and evaluate which is the most appropriate • To understand what a ‘search index’ is and how it works and explore how it relates to the way they use technology • To understand and explain what HTML is and recognise HTML tags in a range of scenarios • To know a range of HTML tags and can remix HTML tags in a webpage to improve the quality of the webpage <u>Using search engines and being digitally critical</u> • To use specific keywords to make effective and accurate internet searches and critically evaluate rankings of websites and digital content • To be digitally critical when searching for information online by consistently checking its reliability and plausibility for a range of purposes • To critically evaluate the reliability of websites • To confidently explain how website are ranked and selected based on how they are searched

	Online Safety and Appropriate Use	Online Reputation - To search for information about an individual online and summarise the information found. - To describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect.	Spring (Online Reputation) - To explain the ways in which anyone can develop a positive online reputation. - To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity.	Spring (Online Reputation) - To explain the ways in which anyone can develop a positive online reputation and why it is important to develop a positive inline reputation - To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity and why it is important to protect themselves online.
SUMMER UNIT	Computing Strand	Unit specific learning objectives	Upper KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
What I believe: No one is allowed to punish you in a cruel or harmful way. Exploring crime and punishment.	Coding and Programming	- To use a range of programming software and hardware to solve open-ended problems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve a problem - To detect and debug errors using decomposition in an algorithm and preserve until it achieves a specific goal - To evaluate the effectiveness and efficiency of programs and explain how it is efficient - To use programs to control and simulate physical systems - To change the input of a program to achieve a different output - To use sensors within a program - To use a variable within a program - To use 'if' and 'when' command in an algorithm - To refine and design a program using repeat commands effectively	- To be proficient in using a range of programming software and hardware to solve open-ended problems - To effectively use programs to control and simulate physical systems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To use a range of instructions to simplify and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To recognise the use of a variable to achieve a specific outcome - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program	- To be confident and proficient in using a range of programming software and hardware to solve open-ended problems in a range of situations - To effectively use programs to control and simulate physical systems as well as evaluating the effectiveness of the program for the physical system - To confidently use logical reasoning and critically evaluate to understand what software or hardware is appropriate and not to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction by demonstrating them in a range of situations - To confidently design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction using a range of hardware and software - To consistently use logical reasoning to accurately detect and confidently debug errors and use decomposition and abstraction to accurately correct errors in a program - To confidently use a range of instructions to simplify and refine programs and explain why a program needs simplifying and refining, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To accurately recognise the use of a variable to achieve a specific outcome - To critically evaluate the effectiveness and efficiency of my algorithm whole continually testing the program
	Creating Digital Content	<u>Creating Digital Content</u> - To use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability - To save, export, store and retrieve work on an appropriate online platform or school network - To modify an appropriate template and use a range of tools to create a piece of work for a specific purpose - To effectively organise my digital work appropriately for a specific purpose and audience - To use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To use a range of keyboard commands already learned quickly and with increasing fluency - To confidently use both hands to type quickly and efficiently - To know how to add and use a hyperlink in digital work - To use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) To organise and reorganise text to meet a specific purpose <u>Presentation and Document Creation</u> - To choose appropriate effects to edit the appearance of text to meet a specific purpose - To add and edit effectively the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose - To edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience - To use cutaway and spilt screen tools on digital software (iMovie) - To accurately edit a video by trimming and cutting videos - To add music, sound track and voice overs for a specific purpose - To add simple subtitles - To add and edit voice overs and sound effects (volume, pitch, fade) - To confidently use the camera function correctly to take photos and videos in a range of contexts - To appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u>	<u>Creating Digital Content</u> - To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To effectively organise and reorganise text to meet a specific purpose and audience - To effectively use a range of keyboard commands already learned quickly and , with increasing fluency - To effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a specific purpose <u>Presentation and Document creation</u> - To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a specific purpose - To add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose and audience - To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience - To use transitions and animations between frames - To confidently and accurately edit a video by trimming and cutting videos - To add appropriate music, sound track and voice overs for a specific purpose - To add subtitles to a video - To add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) - To confidently and effectively use the camera function correctly to take photos and videos in a range of context	<u>Creating Digital Content</u> - To confidently and effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos for a range of specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility for a range of digital work - To confidently save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate and relevant template to modify to effectively meet a range of purposes - To effectively, appropriately and clearly organise my digital work for a range of specific purposes and audiences - To confidently use a range of appropriate, clear and relevant media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work by refining digital work appropriately <u>Typing and Editing text</u> - To confidently, consistently and effectively organise and reorganise text to meet a range of specific purposes and audiences - To confidently, consistently and effectively use a range of keyboard commands already learned quickly and , with increasing fluency - To confidently, consistently and effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a range of specific purposes <u>Presentation and Document creation</u> - To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a range of specific purposes - To confidently add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes and audiences - To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes and audiences - To confidently use transitions and animations between frames ensuring the speed of the transition or animation is appropriate - To confidently and accurately edit a video by trimming and cutting videos a range of specific purposes and audiences - To confidently add appropriate music, sound track and voice overs for a specific purpose - To add subtitles to a video and explain why subtitle are important - To confidently add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade)

		• To use spreadsheets and databases to collect, record and analyse data • To create a questionnaire using a range of question types and analyse the responses • To choose an appropriate way to present data and explain why (spreadsheet, graphs or charts) • To search a database using different operators to refine my search • To edit data to amend inaccuracies • To begin input a range of formulas to create data (adding) using ‘=sum’ • To edit the format of a cell on a database (decimal places, currency, percentage, etc.) <u>Animation</u> • To create a GIF • To create, edit and evaluate an animation for a specific purpose • To record animations and edit them together to create an interview • To take multiple animations I have created and edit them together for a longer video.	• To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs • To create an online quiz/questionnaire using a range of media (text, images, animations, videos) • To accurately search a database using different operators to refine my search • To input a range of formulas to create data (adding, averages) using appropriate formulas • To appropriately edit the format of a cell on a database for different purposes • To check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> • To mix animations and videos recordings of myself to create video interviews. • To plan, script and create an animation to explain a concept or tell a story. • To choose and create different types of animations to best explain my learning.	• To confidently and effectively use the camera function correctly to take photos and videos in a range of context by ensuring the quality of the photo or video is appropriate • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) for a range of specific purposes and audiences <u>Data Handling</u> • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs for a range of purposes • To create an online quiz/questionnaire using a range of media (text, images, animations, videos) for a range of purposes • To confidently and accurately search a database using different operators to refine my search to ensure I get accurate information • To confidently input a range of formulas to create data (adding, averages) using appropriate formulas • To confidently and appropriately edit the format of a cell on a database for different purposes • To critically check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> • To mix animations and videos recordings of myself to create video interviews for a specific purpose • To confidently plan, script and create an animation to explain a concept or tell a story. • To choose and create different types of appropriate animations to best explain my learning by using a range of different animation skills.
	Technology in our Lives	<u>'Data packet'</u> • To understand what a 'data packet' is and how they are transported on the internet <u>IP addresses</u> • To understand what an IP address is and how they look and work <u>Using search engines</u> • To use keywords in a search engine to find appropriate information <u>Being digitally critically</u> • To be digitally critical when searching for information online by checking its reliability	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> • To understand how webpages are ranked in a search engine • To understand what a 'data packet' is and how they are transported on the internet • To understand what an IP address is and how they look and work • To understand why the internet is important • To understand different types of tools used online for collaboration and communication for different purposes and situations • To understand what a 'search index' is and how it works • To understand what HTML is and recognise HTML tags • To know a range of HTML tags and can remix HTML tags in a webpage <u>Using search engines and being digitally critical</u> • To use keywords to make effective internet searches and evaluate rankings of websites and digital content • To be digitally critical when searching for information online by checking its reliability and plausibility • To evaluate the reliability of websites • To explain how website are ranked and selected based on how they are searched	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> • To understand how webpages are ranked in a search engine and explain why they are ranked in a certain way • To understand what a 'data packet' is, how they are transported on the internet and why they are important • To understand what an IP address is and how they look and work and explain why IP addressed are important • To understand why the internet is important for different people • To understand different types of tools used online for collaboration and communication for different purposes and situations and evaluate which is the most appropriate • To understand what a 'search index' is and how it works and explore how it relates to the way they use technology • To understand and explain what HTML is and recognise HTML tags in a range of scenarios • To know a range of HTML tags and can remix HTML tags in a webpage to improve the quality of the webpage <u>Using search engines and being digitally critical</u> • To use specific keywords to make effective and accurate internet searches and critically evaluate rankings of websites and digital content • To be digitally critical when searching for information online by consistently checking its reliability and plausibility for a range of purposes • To critically evaluate the reliability of websites • To confidently explain how website are ranked and selected based on how they are searched
	Online Safety and Appropriate Use	<u>Self-Image and Identify</u> • To explain how identity online can be copied, modified or altered. • To explain how to make responsible choices about having an online identity, depending on context. <u>Health, Well-being and Lifestyle</u> • To describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively. • To describe some strategies, tips or advice to promote health and wellbeing with regards to technology. • To recognise the benefits and risks of accessing information about health and well-being online • To explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing.	<u>Summer (Self Image and Identify)</u> • To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups • To explain why it is important to challenge and reject inappropriate representations online. • To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. • To explain how to get help, both on and offline and the importance of asking until I get the help needed. <u>Summer Term- (Health, Well-being and Lifestyle)</u> • To describe common systems that regulate age-related content and describe their purpose. (e.g. PEGI, BBFC, parental warnings) • To recognise and explain how and when they could manage pressures that technology place on someone. • To recognise features of persuasive design and how they are used to keep users engaged (current and future use). • To assess and explain different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).	<u>Summer (Self Image and Identify)</u> • To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups and show an understanding of how this could present online. • To explain why it is important to challenge and reject inappropriate representations online. Explain how to do this in a positive way. • To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened and explain how and why issues could make people feel this way • To explain how to get help, both on and offline and the importance of asking until I get the help needed. Understand the consequences if someone does not ask for help <u>Summer Term- (Health, Well-being and Lifestyle)</u> • To describe common systems that regulate age-related content and describe their purpose and explain why these systems are important (e.g. PEGI, BBFC, parental warnings) • To recognise and explain how and when they could manage pressures that technology place on someone and how to overcome these pressures. • To recognise features of persuasive design and how they are used to keep users engaged (current and future use). Explain how persuasive design can look differently depending on the context.

				To assess and explain different strategies to limit the impact of technology on health and understand the positive outcomes they can have(e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).
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YEAR 6

AUTUMN UNIT	Computing Strand	Unit specific learning objectives	Upper KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
Children in WWII in Sunderland	Coding and Programming	- To be proficient is using a range of programming software and hardware to solve open-ended problems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program - To effectively use programs to control and simulate physical systems - To use a range of instructions to simply and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands	- To be proficient in using a range of programming software and hardware to solve open-ended problems - To effectively use programs to control and simulate physical systems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To use a range of instructions to simplify and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To recognise the use of a variable to achieve a specific outcome - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program	- To be confident and proficient in using a range of programming software and hardware to solve open-ended problems in a range of situations - To effectively use programs to control and simulate physical systems as well as evaluating the effectiveness of the program for the physical system - To confidently use logical reasoning and critically evaluate to understand what software or hardware is appropriate and not to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction by demonstrating them in a range of situations - To confidently design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction using a range of hardware and software - To consistently use logical reasoning to accurately detect and confidently debug errors and use decomposition and abstraction to accurately correct errors in a program - To confidently use a range of instructions to simplify and refine programs and explain why a program needs simplifying and refining, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To accurately recognise the use of a variable to achieve a specific outcome - To critically evaluate the effectiveness and efficiency of my algorithm whole continually testing the program
	Creating Digital Content	<u>Creating Digital Content</u> - To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To effectively organise and reorganise text to meet a specific purpose and audience - To effectively use a range of keyboard commands already learned quickly and , with increasing fluency - To effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a specific purpose <u>Presentation and Document Creation</u> - To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a specific purpose - To add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose and audience - To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience - To use transitions and animations between frames - To confidently and accurately edit a video by trimming and cutting videos - To add appropriate music, sound track and voice overs for a specific purpose - To add subtitles to a video - To add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade)	<u>Creating Digital Content</u> - To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To effectively organise and reorganise text to meet a specific purpose and audience - To effectively use a range of keyboard commands already learned quickly and , with increasing fluency - To effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a specific purpose <u>Presentation and Document creation</u> - To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a specific purpose - To add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose and audience - To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience - To use transitions and animations between frames - To confidently and accurately edit a video by trimming and cutting videos - To add appropriate music, sound track and voice overs for a specific purpose - To add subtitles to a video - To add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade)	<u>Creating Digital Content</u> - To confidently and effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos for a range of specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility for a range of digital work - To confidently save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate and relevant template to modify to effectively meet a range of purposes - To effectively, appropriately and clearly organise my digital work for a range of specific purposes and audiences - To confidently use a range of appropriate, clear and relevant media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work by refining digital work appropriately <u>Typing and Editing text</u> - To confidently, consistently and effectively organise and reorganise text to meet a range of specific purposes and audiences - To confidently, consistently and effectively use a range of keyboard commands already learned quickly and , with increasing fluency - To confidently, consistently and effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a range of specific purposes <u>Presentation and Document creation</u> - To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a range of specific purposes - To confidently add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes and audiences - To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes and audiences - To confidently use transitions and animations between frames ensuring the speed of the transition or animation is appropriate - To confidently and accurately edit a video by trimming and cutting videos a range of specific purposes and audiences - To confidently add appropriate music, sound track and voice overs for a specific purpose - To add subtitles to a video and explain why subtitle are important

		• To confidently and effectively use the camera function correctly to take photos and videos in a range of context • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs • To create an online quiz/questionnaire using a range of media (text, images, animations, videos) • To accurately search a database using different operators to refine my search • To input a range of formulas to create data (adding, averages) using appropriate formulas • To appropriately edit the format of a cell on a database for different purposes • To check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animation</u> • To mix animations and videos recordings of myself to create video interviews. • To plan, script and create an animation to explain a concept or tell a story. • To choose and create different types of animations to best explain my learning.	• To confidently and effectively use the camera function correctly to take photos and videos in a range of context • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs • To create an online quiz/questionnaire using a range of media (text, images, animations, videos) • To accurately search a database using different operators to refine my search • To input a range of formulas to create data (adding, averages) using appropriate formulas • To appropriately edit the format of a cell on a database for different purposes • To check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> • To mix animations and videos recordings of myself to create video interviews. • To plan, script and create an animation to explain a concept or tell a story. • To choose and create different types of animations to best explain my learning.	• To confidently add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) • To confidently and effectively use the camera function correctly to take photos and videos in a range of context by ensuring the quality of the photo or video is appropriate • To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) for a range of specific purposes and audiences <u>Data Handling</u> • To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs for a range of purposes • To create an online quiz/questionnaire using a range of media (text, images, animations, videos) for a range of purposes • To confidently and accurately search a database using different operators to refine my search to ensure I get accurate information • To confidently input a range of formulas to create data (adding, averages) using appropriate formulas • To confidently and appropriately edit the format of a cell on a database for different purposes • To critically check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> • To mix animations and videos recordings of myself to create video interviews for a specific purpose • To confidently plan, script and create an animation to explain a concept or tell a story. • To choose and create different types of appropriate animations to best explain my learning by using a range of different animation skills.
	Technology in our Lives	<u>Online tools for communicating and collaboration</u> • To understand different types of tools used online for collaboration and communication for different purposes and situations <u>Using search engines</u> • To use keywords to make effective internet searches and evaluate rankings of websites and digital content <u>Being digitally critical</u> • To be digitally critical when searching for information online by checking its reliability and plausibility • To understand how website are ranked and selected based on how they are searched <u>Evaluating reliability of websites</u> • To evaluate the reliability of websites	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> • To understand how webpages are ranked in a search engine • To understand what a 'data packet' is and how they are transported on the internet • To understand what an IP address is and how they look and work • To understand why the internet is important • To understand different types of tools used online for collaboration and communication for different purposes and situations • To understand what a 'search index' is and how it works • To understand what HTML is and recognise HTML tags • To know a range of HTML tags and can remix HTML tags in a webpage <u>Using search engines and being digitally critical</u> • To use keywords to make effective internet searches and evaluate rankings of websites and digital content • To be digitally critical when searching for information online by checking its reliability and plausibility • To evaluate the reliability of websites • To explain how website are ranked and selected based on how they are searched	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> • To understand how webpages are ranked in a search engine and explain why they are ranked in a certain way • To understand what a 'data packet' is, how they are transported on the internet and why they are important • To understand what an IP address is and how they look and work and explain why IP addressed are important • To understand why the internet is important for different people • To understand different types of tools used online for collaboration and communication for different purposes and situations and evaluate which is the most appropriate • To understand what a 'search index' is and how it works and explore how it relates to the way they use technology • To understand and explain what HTML is and recognise HTML tags in a range of scenarios • To know a range of HTML tags and can remix HTML tags in a webpage to improve the quality of the webpage <u>Using search engines and being digitally critical</u> • To use specific keywords to make effective and accurate internet searches and critically evaluate rankings of websites and digital content • To be digitally critical when searching for information online by consistently checking its reliability and plausibility for a range of purposes • To critically evaluate the reliability of websites • To confidently explain how website are ranked and selected based on how they are searched
	Online Safety and Appropriate Use	<u>Managing Online Information</u> • To describe and explain how some online information can be an opinion and may present opinions as facts • To explain why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. • To understand the terms 'influence', 'manipulation' and 'persuasion' online and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). • To understand the concept of persuasive design and how it can be used to influences peoples' choices. • To explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this. • To describe the difference between online misinformation and dis-information. • To explain why information that is on a large number of sites may still be inaccurate or untrue and be the result of misinformation and disinformation • To identify, flag and report inappropriate content. <u>Copyright and Ownership</u>	<u>Autumn (Managing Online Information)</u> • To describe and explain how some online information can be an opinion and may present opinions as facts • To explain why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. • To understand the terms 'influence', 'manipulation' and 'persuasion' online and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). • To understand the concept of persuasive design and how it can be used to influences peoples' choices. • To explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this. • To describe the difference between online misinformation and dis-information. • To explain why information that is on a large number of sites may still be inaccurate or untrue and be the result of misinformation and disinformation • To identify, flag and report inappropriate content. <u>Autumn (Copyright and Ownership)</u>	<u>Autumn (Managing Online Information)</u> • To describe and explain how some online information can be an opinion and may present opinions as facts, explaining how to be skeptical about online information. • To explain why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. Give example of how this may present in their lives. • To understand the terms 'influence', 'manipulation' and 'persuasion' online and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). explain how they could present in similar or different ways online. • To understand the concept of persuasive design and how and why it can be used to influences peoples' choices. • To explain how companies and news providers target people with online news stories they are more likely to engage with, explain why they do this and how to recognise this. • To describe the difference between online misinformation and dis-information. Giving example of how this may present online. • To explain why information that is on a large number of sites may still be inaccurate or untrue and be the result of misinformation and disinformation and explain why it is important to be sceptical about information

		To demonstrate how to make references to and acknowledge sources I have used from the internet.	To demonstrate how to make references to and acknowledge sources I have used from the internet.	- To identify, flag and report inappropriate content and how to do this on a range of apps and websites <u>Autumn (Copyright and Ownership)</u> - To demonstrate how to make references to and acknowledge sources I have used from the internet. Explain why it is important to acknowledge sources from the internet.
SPRING UNIT	Computing Strand	Unit specific learning objectives	Upper KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
Sunderland's Heritage: Coalmining	Coding and Programming	- To be proficient is using a range of programming software and hardware to solve open-ended problems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program - To use a range of instructions to simply and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands	- To be proficient in using a range of programming software and hardware to solve open-ended problems - To effectively use programs to control and simulate physical systems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To use a range of instructions to simplify and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To recognise the use of a variable to achieve a specific outcome - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program	- To be confident and proficient in using a range of programming software and hardware to solve open-ended problems in a range of situations - To effectively use programs to control and simulate physical systems as well as evaluating the effectiveness of the program for the physical system - To confidently use logical reasoning and critically evaluate to understand what software or hardware is appropriate and not to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction by demonstrating them in a range of situations - To confidently design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction using a range of hardware and software - To consistently use logical reasoning to accurately detect and confidently debug errors and use decomposition and abstraction to accurately correct errors in a program - To confidently use a range of instructions to simplify and refine programs and explain why a program needs simplifying and refining, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To accurately recognise the use of a variable to achieve a specific outcome - To critically evaluate the effectiveness and efficiency of my algorithm whole continually testing the program
	Creating Digital Content	<u>Creating Digital Content</u> - To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To effectively organise and reorganise text to meet a specific purpose and audience - To effectively use a range of keyboard commands already learned quickly and , with increasing fluency - To effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a specific purpose <u>Presentation and Document Creation</u> - To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a specific purpose - To add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose and audience - To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience - To use transitions and animations between frames - To confidently and accurately edit a video by trimming and cutting videos - To add appropriate music, sound track and voice overs for a specific purpose - To add subtitles to a video - To add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) - To confidently and effectively use the camera function correctly to take photos and videos in a range of context	<u>Creating Digital Content</u> - To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To effectively organise and reorganise text to meet a specific purpose and audience - To effectively use a range of keyboard commands already learned quickly and , with increasing fluency - 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To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.)	<u>Creating Digital Content</u> - To confidently and effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos for a range of specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility for a range of digital work - To confidently save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate and relevant template to modify to effectively meet a range of purposes - To effectively, appropriately and clearly organise my digital work for a range of specific purposes and audiences - To confidently use a range of appropriate, clear and relevant media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work by refining digital work appropriately <u>Typing and Editing text</u> - To confidently, consistently and effectively organise and reorganise text to meet a range of specific purposes and audiences - To confidently, consistently and effectively use a range of keyboard commands already learned quickly and , with increasing fluency - To confidently, consistently and effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a range of specific purposes <u>Presentation and Document creation</u> - To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a range of specific purposes - To confidently add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a range of specific purposes and audiences - To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a range of specific purposes and audiences - To confidently use transitions and animations between frames ensuring the speed of the transition or animation is appropriate - To confidently and accurately edit a video by trimming and cutting videos a range of specific purposes and audiences - To confidently add appropriate music, sound track and voice overs for a specific purpose - To add subtitles to a video and explain why subtitle are important - To confidently add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade)

		- To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> - To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs - To create an online quiz/questionnaire using a range of media (text, images, animations, videos) - To accurately search a database using different operators to refine my search - To input a range of formulas to create data (adding, averages) using appropriate formulas - To appropriately edit the format of a cell on a database for different purposes - To check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animation</u> - To mix animations and videos recordings of myself to create video interviews. - To plan, script and create an animation to explain a concept or tell a story. To choose and create different types of animations to best explain my learning.	<u>Data Handling</u> - To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs - To create an online quiz/questionnaire using a range of media (text, images, animations, videos) - To accurately search a database using different operators to refine my search - To input a range of formulas to create data (adding, averages) using appropriate formulas - To appropriately edit the format of a cell on a database for different purposes - To check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> - To mix animations and videos recordings of myself to create video interviews. - To plan, script and create an animation to explain a concept or tell a story. - To choose and create different types of animations to best explain my learning.	- To confidently and effectively use the camera function correctly to take photos and videos in a range of context by ensuring the quality of the photo or video is appropriate - To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) for a range of specific purposes and audiences <u>Data Handling</u> - To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs for a range of purposes - To create an online quiz/questionnaire using a range of media (text, images, animations, videos) for a range of purposes - To confidently and accurately search a database using different operators to refine my search to ensure I get accurate information - To confidently input a range of formulas to create data (adding, averages) using appropriate formulas - To confidently and appropriately edit the format of a cell on a database for different purposes - To critically check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animations</u> - To mix animations and videos recordings of myself to create video interviews for a specific purpose - To confidently plan, script and create an animation to explain a concept or tell a story. - To choose and create different types of appropriate animations to best explain my learning by using a range of different animation skills.
	Technology in our Lives	<u>'Search Index'</u> - To understand what a 'search index' is and how it works <u>Using search engines</u> - To use keywords to make effective internet searches and evaluate rankings of websites and digital content <u>Being digitally critical</u> - To be digitally critical when searching for information online by checking its reliability and plausibility - To understand how website are ranked and selected based on how they are searched <u>Evaluating reliability of websites</u> - To evaluate the reliability of websites	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> - To understand how webpages are ranked in a search engine - To understand what a 'data packet' is and how they are transported on the internet - To understand what an IP address is and how they look and work - To understand why the internet is important - To understand different types of tools used online for collaboration and communication for different purposes and situations - To understand what a 'search index' is and how it works - To understand what HTML is and recognise HTML tags - To know a range of HTML tags and can remix HTML tags in a webpage <u>Using search engines and being digitally critical</u> - To use keywords to make effective internet searches and evaluate rankings of websites and digital content - To be digitally critical when searching for information online by checking its reliability and plausibility - To evaluate the reliability of websites - To explain how website are ranked and selected based on how they are searched	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> - To understand how webpages are ranked in a search engine and explain why they are ranked in a certain way - To understand what a 'data packet' is, how they are transported on the internet and why they are important - To understand what an IP address is and how they look and work and explain why IP addressed are important - To understand why the internet is important for different people - To understand different types of tools used online for collaboration and communication for different purposes and situations and evaluate which is the most appropriate - To understand what a 'search index' is and how it works and explore how it relates to the way they use technology - To understand and explain what HTML is and recognise HTML tags in a range of scenarios - To know a range of HTML tags and can remix HTML tags in a webpage to improve the quality of the webpage <u>Using search engines and being digitally critical</u> - To use specific keywords to make effective and accurate internet searches and critically evaluate rankings of websites and digital content - To be digitally critical when searching for information online by consistently checking its reliability and plausibility for a range of purposes - To critically evaluate the reliability of websites - To confidently explain how website are ranked and selected based on how they are searched
	Online Safety and Appropriate Use	<u>Online Reputation</u> - To explain the ways in which anyone can develop a positive online reputation. - To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity.	<u>Spring (Online Reputation)</u> - To explain the ways in which anyone can develop a positive online reputation. - To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity.	<u>Spring (Online Reputation)</u> - To explain the ways in which anyone can develop a positive online reputation and why it is important to develop a positive inline reputation - To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity and why it is important to protect themselves online.
SUMMER UNIT	Computing Strand	Unit specific learning objectives	Upper KS2 working at the EXPECTED STANDARD	Lower KS2 working ABOVE the expected standard
What I believe: I have the right to protection from any kind of exploitation.	Coding and Programming	- To be proficient is using a range of programming software and hardware to solve open-ended problems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program	- To be proficient in using a range of programming software and hardware to solve open-ended problems - To effectively use programs to control and simulate physical systems - To use logical reasoning and evaluation to understand what software or hardware is appropriate to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction - To design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction - To use logical reasoning to detect and debug errors and use decomposition and abstraction to correct errors in a program	- To be confident and proficient in using a range of programming software and hardware to solve open-ended problems in a range of situations - To effectively use programs to control and simulate physical systems as well as evaluating the effectiveness of the program for the physical system - To confidently use logical reasoning and critically evaluate to understand what software or hardware is appropriate and not to use to solve complex problems - To solve complex open-ended problem using logical reasoning, evaluation, decomposition, abstraction by demonstrating them in a range of situations - To confidently design, write and debug algorithms to create programs that achieve a specific goal using logical reasoning, decomposition and abstraction using a range of hardware and software

I have the right to give my opinion.		To use a range of instructions to simply and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands	- To use a range of instructions to simplify and refine programs, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To recognise the use of a variable to achieve a specific outcome - To evaluate the effectiveness and efficiency of my algorithm whole continually testing the program	- To consistently use logical reasoning to accurately detect and confidently debug errors and use decomposition and abstraction to accurately correct errors in a program - To confidently use a range of instructions to simplify and refine programs and explain why a program needs simplifying and refining, e.g. repeated commands, variable, sensors, 'if' and 'when' commands - To accurately recognise the use of a variable to achieve a specific outcome - To critically evaluate the effectiveness and efficiency of my algorithm whole continually testing the program
	Creating Digital Content	<u>Creating Digital Content</u> - To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To effectively organise and reorganise text to meet a specific purpose and audience - To effectively use a range of keyboard commands already learned quickly and , with increasing fluency - To effectively use a range of features to format the way text can look (font, colour, size, etc.) and be organised (bullet points, alignment, etc.) for a specific purpose <u>Presentation and Document Creation</u> - To be digitally critically when choosing appropriate tools to edit the appearance of text to meet a specific purpose - To add and edit effectively and appropriately the style of shapes (fill, border, shadow, reflection and opacity) for a specific purpose and audience - To effectively edit the style of images using a range of different effects (mask/crop, border, shadow, reflection, opacity) for a specific purpose and audience - To use transitions and animations between frames - To confidently and accurately edit a video by trimming and cutting videos - To add appropriate music, sound track and voice overs for a specific purpose - To add subtitles to a video - To add and edit voice overs and sound effects for a specific purpose and audience (volume, pitch, fade) - To confidently and effectively use the camera function correctly to take photos and videos in a range of context - To confidently and appropriately enhance digital photos by using different effects (crop, brightness, contrast, resize, etc.) <u>Data Handling</u> - To effectively create, critically analyse, confidently evaluate and appropriately present data using spreadsheets, databases and graphs - To create an online quiz/questionnaire using a range of media (text, images, animations, videos) - To accurately search a database using different operators to refine my search - To input a range of formulas to create data (adding, averages) using appropriate formulas - To appropriately edit the format of a cell on a database for different purposes - To check the plausibility and accuracy of data collected and how it can be interpreted in different ways <u>Animation</u> - To mix animations and videos recordings of myself to create video interviews. - To plan, script and create an animation to explain a concept or tell a story. To choose and create different types of animations to best explain my learning.	<u>Creating Digital Content</u> - To effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos to meet a specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility - To save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate template to modify to effectively meet a purpose - To effectively and appropriately organise my digital work for a specific purpose and audience - To confidently use a range of appropriate and clear media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work <u>Typing and Editing text</u> - To effectively organise and reorganise text to meet a specific purpose and audience - 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To choose and create different types of animations to best explain my learning.	<u>Creating Digital Content</u> - To confidently and effectively use technology to create, organise and present my work by adding appropriate text, images, sounds and videos for a range of specific purpose and audience - To be digitally critical when using information I have search for online and check its reliability and plausibility for a range of digital work - To confidently save, export, store and retrieve work on an appropriate online platform or school network - To use logical reasoning to choose an appropriate and relevant template to modify to effectively meet a range of purposes - To effectively, appropriately and clearly organise my digital work for a range of specific purposes and audiences - To confidently use a range of appropriate, clear and relevant media effectively that I have collected and from the internet in my work - To confidently use logical reasoning to critically evaluate the effectiveness appropriateness of my work by refining digital work appropriately <u>Typing and Editing text</u> - 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				To choose and create different types of appropriate animations to best explain my learning by using a range of different animation skills.
	Technology in our Lives	<u>HTML</u> - To understand what HTML is and recognise HTML tags - To know a range of HTML tags and can remix HTML tags in a webpage <u>Using search engines</u> To use keywords to make effective internet searches and evaluate rankings of websites and digital content <u>Being digitally critical</u> To be digitally critical when searching for information online by checking its reliability and plausibility To understand how website are ranked and selected based on how they are searched <u>Evaluating reliability of websites</u> To evaluate the reliability of websites	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> - To understand how webpages are ranked in a search engine - To understand what a 'data packet' is and how they are transported on the internet - To understand what an IP address is and how they look and work - To understand why the internet is important - To understand different types of tools used online for collaboration and communication for different purposes and situations - To understand what a 'search index' is and how it works - To understand what HTML is and recognise HTML tags - To know a range of HTML tags and can remix HTML tags in a webpage <u>Using search engines and being digitally critical</u> - To use keywords to make effective internet searches and evaluate rankings of websites and digital content - To be digitally critical when searching for information online by checking its reliability and plausibility - To evaluate the reliability of websites - To explain how website are ranked and selected based on how they are searched	<u>Webpages, IP Addresses, HTML and Communication and Collaboration</u> - To understand how webpages are ranked in a search engine and explain why they are ranked in a certain way - To understand what a 'data packet' is, how they are transported on the internet and why they are important - To understand what an IP address is and how they look and work and explain why IP addressed are important - To understand why the internet is important for different people - To understand different types of tools used online for collaboration and communication for different purposes and situations and evaluate which is the most appropriate - To understand what a 'search index' is and how it works and explore how it relates to the way they use technology - To understand and explain what HTML is and recognise HTML tags in a range of scenarios - To know a range of HTML tags and can remix HTML tags in a webpage to improve the quality of the webpage <u>Using search engines and being digitally critical</u> - To use specific keywords to make effective and accurate internet searches and critically evaluate rankings of websites and digital content - To be digitally critical when searching for information online by consistently checking its reliability and plausibility for a range of purposes - To critically evaluate the reliability of websites - To confidently explain how website are ranked and selected based on how they are searched
	Online Safety and Appropriate Use	<u>Self-Image and Identify</u> - To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups - To explain why it is important to challenge and reject inappropriate representations online. - To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. - To explain how to get help, both on and offline and the importance of asking until I get the help needed. <u>Health, Well-being and Lifestyle</u> - To describe common systems that regulate age-related content and describe their purpose. (e.g. PEGI, BBFC, parental warnings) - To recognise and explain how and when they could manage pressures that technology place on someone. - To recognise features of persuasive design and how they are used to keep users engaged (current and future use). - To assess and explain different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).	<u>Summer (Self Image and Identify)</u> - To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups - To explain why it is important to challenge and reject inappropriate representations online. - To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. - To explain how to get help, both on and offline and the importance of asking until I get the help needed. <u>Summer Term- (Health, Well-being and Lifestyle)</u> - To describe common systems that regulate age-related content and describe their purpose. (e.g. PEGI, BBFC, parental warnings) - To recognise and explain how and when they could manage pressures that technology place on someone. - To recognise features of persuasive design and how they are used to keep users engaged (current and future use). - To assess and explain different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).	<u>Summer (Self Image and Identify)</u> - To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups and show an understanding of how this could present online. - To explain why it is important to challenge and reject inappropriate representations online. Explain how to do this in a positive way. - To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened and explain how and why issues could make people feel this way - To explain how to get help, both on and offline and the importance of asking until I get the help needed. Understand the consequences if someone does not ask for help <u>Summer Term- (Health, Well-being and Lifestyle)</u> - To describe common systems that regulate age-related content and describe their purpose and explain why these systems are important (e.g. PEGI, BBFC, parental warnings) - To recognise and explain how and when they could manage pressures that technology place on someone and how to overcome these pressures. - To recognise features of persuasive design and how they are used to keep users engaged (current and future use). Explain how persuasive design can look differently depending on the context. - To assess and explain different strategies to limit the impact of technology on health and understand the positive outcomes they can have(e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).