

**MTP created 2021-22 (Cycle A)

2022-23 (Cycle B)

2-year rolling programme

Curriculum plan- Computing

E-Safety lesson to begin each half term and to be taught ongoing throughout the year

Year 1 & 2 Cycle A	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
Digital Literacy	<p>https://www.common sense.org/education/digital-citizenship/curriculum https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS Education for a Connected World .pdf</p>		
	<p>Media balance is important How do we find a happy balance between our online and offline activities? Progression of skills: <i>-Pupils know that the internet is accessed all over the world</i> <i>-Know devices enable communication between people through images and text</i> <i>-Know that they should always ask a responsible adult if they want to use a device</i> <i>-Know that they should tell a trusted adult if they are upset or worried about anything on a device – and to know they have a right to be safe (Article 19)</i> <i>-With support from an adult, they can access information – and to know this is their right! (Article 17)</i> <i>-With support, be able to use a safe search engine</i> <i>-Know what personal information is and that they should never share this with anyone they don't know – and relate this to the right to privacy (Article 16)</i></p>	<p>Pause for people How do you say goodbye to technology when you don't want to? Progression of skills: <i>-Pupils know that the internet is accessed all over the world</i> <i>-Know devices enable communication between people through images and text</i> <i>-Know that they should always ask a responsible adult if they want to use a device</i> <i>-Know that they should tell a trusted adult if they are upset or worried about anything on a device – and to know they have a right to be safe (Article 19)</i> <i>-With support from an adult, they can access information – and to know this is their right! (Article 17)</i> <i>-With support, be able to use a safe search engine</i> <i>-Know what personal information is and that they should never share this with anyone they don't know – and relate this to the right to privacy (Article 16)</i> Skills from NC: <i>-use technology safely and respectfully, keeping personal information private; identify where to go for help and</i></p>	<p>Safety in my online neighbourhood How do you go places safely online? Progression of skills: <i>-Pupils know that the internet is accessed all over the world</i> <i>-Know devices enable communication between people through images and text</i> <i>-Know that they should always ask a responsible adult if they want to use a device – and to know they have a right to be safe (Article 19)</i> <i>-Know that they should tell a trusted adult if they are upset or worried about anything on a device</i> <i>-With support from an adult, they can access information – and to know this is their right! (Article 17)</i> <i>-With support, be able to use a safe search engine</i> <i>-Know what personal information is and that they should never share this with anyone they don't know – and relate this to the right to privacy (Article 16)</i> Skills from NC:</p>

	<p>Skills from NC:</p> <ul style="list-style-type: none"> -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. 	<p>support when they have concerns about content on the internet or other online technologies</p>	<ul style="list-style-type: none"> -use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content on the internet or other online technologies
Computer science	<p>(Programming, must be taught in sequence - concepts and skills rely on prior knowledge and experiences) - Y2 children to support Y1 or to be taken in separate groups</p> <p>https://www.barefootcomputing.org/primary-computing-resources</p>		
	<p>**Teach Computing: Yr1 Programming A – Moving a robot (Bee-bots)</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils will know which button on a device represents which action -Know how to program a robot to follow simple sequence of instructions (1-2 turns) -Make a simple sequence of instructions/algorithm -Be able to make simple predictions about an algorithm and a program -Be able to change (debug) the program to improve the route <p>**Teach Computing: Yr2 Programming A – Robot algorithms (Bee-bots)</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils develop understanding of instructions in sequences and the use of logical reasoning to predict outcomes -They know how to program a robot to achieve a set goal (sequence 6-7 instructions) -They will use given commands in different orders to investigate how the order affects the outcome -They will develop artwork and test it for use in program -They will design algorithms and then test them as programs and debug them <p>Skills from NC:</p> <ul style="list-style-type: none"> -understand what algorithms are; how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions 	<p>Teach Computing: Yr1 Programming B – Introduction to animation (Scratch Jr)</p> <p>*Other Apps (Daisy the Dino, Bee-bot App, Kodable)</p> <p>Progression of skills</p> <ul style="list-style-type: none"> -Pupils will explore sprites and backgrounds -They will use programming blocks to use, modify and create programs -They will be introduced to algorithms <p>Teach Computing: Yr2 Programming B – Introduction to quizzes (Scratch Jr)</p> <p>*Other Apps (Daisy the Dino, Bee-bot App, Kodable)</p> <p>Progression of Skills</p> <ul style="list-style-type: none"> -Pupils will begin to understand that sequences of commands have an outcome -They make predictions based on their learning -They use and modify designs to create their own quiz questions, and realise these designs using blocks of code (in Scratch Jr) -They evaluate their work and make improvements to their programming projects <p>Skills from NC:</p> <ul style="list-style-type: none"> -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 	<p>Binary numbers- unplugged activities</p> <p>https://csunplugged.org/en/topics/binary-numbers/unit-plan/</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils will learn that computers today use digits to represent information - that's why they're called digital systems. -They will learn that the simplest and most common way to represent digits is the binary number system, with just two digits (usually written as 0 and 1). It is called binary because there are only two different digits used, or two states. -They will learn binary numbers as an introduction to computational thinking that introduces them to <u>algorithms and decomposition</u>, as they learn to break down the problems of calculating binary numbers <p>Skills from NC:</p> <ul style="list-style-type: none"> -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

	<p>-create and debug simple programs</p> <p>-use logical reasoning to predict the behaviour of simple programs</p>		
ICT	<p>Teach Computing: Yr1 Computing Systems and Networks – Technology around us</p> <p>Progression of Skills:</p> <p><i>- Pupils will learn how technology will help them in everyday lives</i></p> <p><i>-They will begin to become familiar with components of a computer</i></p> <p><i>-They will learn to use technology responsibly</i></p> <p>Skills from NC:</p> <p>-use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>-recognise common uses of information technology beyond school</p> <p>-use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content on the internet or other online technologies</p>	<p>Teach Computing: Yr1 Creating Media – Digital Painting</p> <p>*PuppetPals</p> <p>Progression of Skills:</p> <p><i>- Pupils know how to switch their device on – username/password</i></p> <p><i>- Be able to navigate around the screen with a mouse or touchpad</i></p> <p>-Pupils learn to create a simple digital painting</p> <p>-Be inspired by other artists</p> <p>-Talk about preferences of painting, with or without, digital devices</p> <p>Skills from NC:</p> <p>-use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>-recognise common uses of information technology beyond school</p>	<p>Teach Computing: Yr2 Creating Media – Digital Photography</p> <p>*Video- iMovie - <i>Buddy link with KS2</i></p> <p>*Photography- Chatterkids/MOLDIV</p> <p>Progression of Skills:</p> <p><i>- Pupils begin to learn how photos can be captured on different devices and can be manipulated for a purpose</i></p> <p><i>- Be able to independently find and use an app on a tablet for instance to take and view a video or photographs</i></p> <p><i>-Be able to add and create simple images</i></p> <p><i>-Be able to combine simple text and graphics, for instance create a poster for a purpose</i></p> <p>Skills from NC:</p> <p>-use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>-recognise common uses of information technology beyond school</p>
Maths Link	<p>Teach Computing: Yr1 Data and Information – Grouping Data</p> <p>Progression of skills</p> <p><i>-Pupils will learn that labelling, grouping and searching are important aspect of data and information</i></p> <p><i>- They will assign data (images) with different labels in order to demonstrate how computers are able to group and present data</i></p> <p><i>-Be able to save, retrieve and print work</i></p> <p>Skills from NC:</p> <p>-use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>-recognise common uses of information technology beyond school</p>		

Curriculum plan- Computing

E-Safety lesson to begin each half term and to be taught ongoing throughout the year

Year 1 & 2 Cycle B	Autumn	Spring	Summer
Digital Literacy	https://www.commonsense.org/education/digital-citizenship/curriculum https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS Education for a Connected World .pdf		
	<p>Pause and think online How can we be safe, responsible and respectful online? Progression of skills: <i>-Pupils know that the internet is accessed all over the world</i> <i>-Know devices enable communication between people through images and text</i> <i>-Know that they should always ask a responsible adult if they want to use a device</i> <i>-Know that they should tell a trusted adult if they are upset or worried about anything on a device – and to know they have a right to be safe (Article 19)</i> <i>-With support from an adult, they can access information – and to know this is their right! (Article 17)</i> <i>-With support, be able to use a safe search engine</i> <i>-Know what personal information is and that they should never share this with anyone they don't know – and relate this to the right to privacy (Article 16)</i> Skills from NC: -use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content on the internet or other online technologies</p>	<p>How technology makes you feel Why is it important to listen to your feelings when using technology? Progression of skills: <i>-Pupils know that the internet is accessed all over the world</i> <i>-Know devices enable communication between people through images and text</i> <i>-Know that they should always ask a responsible adult if they want to use a device</i> <i>-Know that they should tell a trusted adult if they are upset or worried about anything on a device – and to know they have a right to be safe (Article 19)</i> <i>-With support from an adult, they can access information – and to know this is their right! (Article 17)</i> <i>-With support, be able to use a safe search engine</i> <i>-Know what personal information is and that they should never share this with anyone they don't know – and relate this to the right to privacy (Article 16)</i> Skills from NC: -use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content on the internet or other online technologies</p>	<p>Internet traffic light How do you stay safe when visiting a website or an app? Progression of skills: <i>-Pupils know that the internet is accessed all over the world</i> <i>-Know devices enable communication between people through images and text</i> <i>-Know that they should always ask a responsible adult if they want to use a device</i> <i>-Know that they should tell a trusted adult if they are upset or worried about anything on a device – and to know they have a right to be safe (Article 19)</i> <i>-With support from an adult, they can access information – and to know this is their right! (Article 17)</i> <i>-With support, be able to use a safe search engine</i> <i>-Know what personal information is and that they should never share this with anyone they don't know – and relate this to the right to privacy (Article 16)</i> Skills from NC: -use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content on the internet or other online technologies</p>
	(Programming, must be taught in sequence - concepts and skills rely on prior knowledge and experiences) - Y2 children to support Y1 or to be taken in separate groups		

Computer science	<p>https://www.barefootcomputing.org/primary-computing-resources</p> <p>Teach Computing: Yr1 Programming A – Moving a robot (Bee-bots) Progression of Skills: <i>-Pupils will know which button on a device represents which action</i> <i>-Know how to program a robot to follow simple sequence of instructions (1-2 turns)</i> <i>-Make a simple sequence of instructions/algorithm</i> <i>-Be able to make simple predictions about an algorithm and a program</i> <i>-Be able to change (debug) the program to improve the route</i></p> <p>Teach Computing: Yr2 Programming A – Robot algorithms (Bee-bots) Progression of Skills: <i>-Pupils develop understanding of instructions in sequences and the use of logical reasoning to predict outcomes</i> <i>-They know how to program a robot to achieve a set goal (sequence 6-7 instructions)</i> <i>-They will use given commands in different orders to investigate how the order affects the outcome</i> <i>-They will develop artwork and test it for use in program</i> <i>-They will design algorithms and then test them as programs and debug them</i> Skills from NC: -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</p>	<p>**Teach Computing: Yr1 Programming B – Introduction to animation (Scratch Jr) *Other Apps (Daisy the Dino, Bee-bot App, Kodable) Progression of skills <i>-Pupils will explore sprites and backgrounds</i> <i>-They will use programming blocks to use, modify and create programs</i> <i>-They will be introduced to algorithms</i></p> <p>**Teach Computing: Yr2 Programming B – Introduction to quizzes (Scratch Jr) *Other Apps (Daisy the Dino, Bee-bot App, Kodable) Progression of Skills <i>-Pupils will begin to understand that sequences of commands have an outcome</i> <i>-They make predictions based on their learning</i> <i>-They use and modify designs to create their own quiz questions, and realise these designs using blocks of code (in Scratch Jr)</i> <i>-They evaluate their work and make improvements to their programming projects</i> Skills from NC: -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</p>	<p>Kidbots- unplugged activities https://csunplugged.org/en/topics/kidbots/unit-plan/ Progression of Skills: <i>-Pupils will learn about who designs programming languages for computers and design their own</i> <i>-They will write their own unplugged fitness app</i> <i>-They will learn that writing a computer program involves planning what you're going to do, "coding" the instructions, testing them, tracking down any bugs, and changing the program to that it works correctly.</i> <i>-They will explore a simple programming language by taking on separate roles to make these elements of programming explicit.</i> <i>Role 1: The Developer (who writes the program) - The teacher will model this initially.</i> <i>Role 2: The Tester (who instructs the Bot and looks for bugs).</i> <i>Role 3: The Bot (who runs the program).</i> Skills from NC: -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</p>
ICT	<p>Teach Computing: Yr2 Computing Systems and Networks – IT around us Progression of Skills <i>- Pupils know how to switch their device on – username/password</i></p>	<p>Teach Computing: Yr1 Creating Media – Digital Writing *PuppetPals Progression of Skills: <i>- Pupils know how to type text using the space bar for separating words to create something meaningful</i></p>	<p>Teach Computing: Yr2 Creating Media – Making Music *Music, Sound and Animation – sock puppets Progression of Skills: <i>-Pupils will use a computer to create music</i></p>

	<ul style="list-style-type: none"> - Be able to navigate around the screen with a mouse or touchpad -They will begin to develop an understanding of what (IT) is and identify some examples -They will discuss where they have seen IT in school and beyond -Investigate how IT improves our world -They will learn about the importance of using IT responsibly <p>Skills from NC:</p> <ul style="list-style-type: none"> -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 on the internet or other online technologies 	<ul style="list-style-type: none"> -Know how to type and format text inc basic punctuation and capital letters - Know how to enter and remove text - Consider how to change the look of their text and justify these changes - Consider the differences between writing on a computer and writing on paper, talking about preferences, and giving reasons for them <p>Skills from NC:</p> <ul style="list-style-type: none"> -use technology purposefully to create, organise, store, manipulate and retrieve digital content -recognise common uses of information technology beyond school 	<ul style="list-style-type: none"> - Consider how music can make them think and feel -Compare creating music digitally and non-digitally -Look at patterns and purposefully create music <p>Skills from NC:</p> <ul style="list-style-type: none"> -use technology purposefully to create, organise, store, manipulate and retrieve digital content -recognise common uses of information technology beyond school
<p>Maths Link</p>	<p>Teach Computing: Yr2 Data and Information – Pictograms</p> <p>Progression of skills</p> <ul style="list-style-type: none"> -Pupils will begin to understand what the term 'data' means and how data can be collected in the form of a tally chart -They will use the term 'attribute' and use this to help them to organise data -They will learn to present data in pictograms and block diagrams -They will use data to answer questions <p>Skills from NC:</p> <ul style="list-style-type: none"> -use technology purposefully to create, organise, store, manipulate and retrieve digital content -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. 		

** Computer Science – Visit from ‘Techytots’ to ensure physical programming

Curriculum plan- Computing

E-Safety lesson to begin each half term and to be taught ongoing throughout the year

RR: Article 16: I have the right to privacy

RR: Article 17: I have the right to access information

RR: Article 19: I have the right to be safe

Year 3 & 4 Cycle A	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
Digital Literacy	<p>https://www.common sense.org/education/digital-citizenship/curriculum https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS_Education_for_a_Connected_World_.pdf</p>		
	<p>Device free moments Why is it important that we have device free moments in our lives?</p> <p>Your rings of responsibility How do digital citizens take responsibility for themselves, their community and world?</p> <p>Progression of skills: <i>-Pupils know which websites are useful and understand all might not be trustworthy</i> <i>-They know that concerns about what they see on-line should be reported to a trusted adult</i> <i>-They can use a search engine to find information from given key words</i> <i>-They know which websites are useful and begin to understand all might not be trustworthy</i> <i>-They can create and use a simple password</i> <i>-They can login and out of websites used at school</i> <i>-They know that having a balance of online and offline activities is important</i> <i>-They know what to do if they are exposed to unpleasant materials on a device</i> <i>-They know what the key word are to enter into a search engine to find wanted information</i></p>	<p>That’s private! What kinds of information should I keep to myself when I use the internet?</p> <p>Password Power-up How can a strong password help with security?</p> <p>Progression of Skills: <i>-Pupils know which websites are useful and understand all might not be trustworthy</i> <i>-They know that concerns about what they see on-line should be reported to a trusted adult</i> <i>-They can use a search engine to find information from given key words</i> <i>-They know which websites are useful and begin to understand all might not be trustworthy</i> <i>-They can create and use a simple password</i> <i>-They can login and out of websites used at school</i> <i>-They know that having a balance of online and offline activities is important</i> <i>-They know what to do if they are exposed to unpleasant materials on a device</i> <i>-They know what the key word are to enter into a search engine to find wanted information</i> <i>-They can select useful websites from the results of a search</i></p>	<p>This is me How does what I post online affect my identity?</p> <p>Our online tracks How does our online activity affect the digital footprints of ourselves and others?</p> <p>Progression of Skills: <i>-Pupils know which websites are useful and understand all might not be trustworthy</i> <i>-They know that concerns about what they see on-line should be reported to a trusted adult</i> <i>-They can use a search engine to find information from given key words</i> <i>-They know which websites are useful and begin to understand all might not be trustworthy</i> <i>-They can create and use a simple password</i> <i>-They can login and out of websites used at school</i> <i>-They know that having a balance of online and offline activities is important</i> <i>-They know what to do if they are exposed to unpleasant materials on a device</i> <i>-They know what the key word are to enter into a search engine to find wanted information</i></p>

	<p><i>-They can select useful websites from the results of a search</i></p> <p><i>-They know that pictures and text shared online can end up with strangers</i></p> <p><i>-They can reliably use a more complex password to access resources</i></p> <p>Skills from NC:</p> <p>- Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p><i>-They know that pictures and text shared online can end up with strangers</i></p> <p><i>-They can reliably use a more complex password to access resources</i></p> <p>Skills from NC:</p> <p>- Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p><i>-They can select useful websites from the results of a search</i></p> <p><i>-They know that pictures and text shared online can end up with strangers</i></p> <p><i>-They can reliably use a more complex password to access resources</i></p> <p>Skills from NC:</p> <p>- Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>
Computer science	<p>(Programming, must be taught in sequence - concepts and skills rely on prior knowledge and experiences)</p> <p>- Y4 children to support Y3 or to be taken in separate groups</p>		
	<p>Cover Yr3 if unable to teach year groups separately</p> <p>Teach Computing Yr3: Programming A – Sequence in music (Scratch)</p> <p>Progression of Skills:</p> <p><i>-Pupils will be introduced to a programming environment</i></p> <p><i>-They will use motion, sound and event blocks, which they will use to create their own programs, featuring sequences</i></p> <p><i>-They will make a representation of a piano</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p> <p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>Teach Computing Yr4: Programming A – Repetition in shapes (Logo)</p> <p>*Other Apps (Lightbot, A.L.E.X, Cargo-bot)</p> <p>Progression of Skills:</p> <p><i>-Pupils will create programs by planning, modifying and testing commands to create shapes and patterns</i></p> <p><i>-They will look at repetition and loops within programming</i></p> <p>Skills from NC:</p>	<p>Cover Yr3 if unable to teach year groups separately</p> <p>Teach Computing Yr3: Programming B – Events and Actions (Scratch)</p> <p>Progression of Skills:</p> <p><i>-Pupils explore links between events and actions</i></p> <p><i>-They will move a sprite in 4 directions</i></p> <p><i>-They explore movement within a maze, using design to choose an appropriately sized sprite</i></p> <p><i>-They will be introduced to pen blocks</i></p> <p><i>-They will draw lines with sprites and change the size and colour of the lines</i></p> <p><i>-They will design and code their own maze-tracing program</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p> <p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>Teach Computing Yr4: Programming B – Repetition in games (Scratch)</p> <p>Progression of Skills:</p> <p><i>-Pupils will explore repetition in programming</i></p> <p><i>-They will look at the difference between count-controlled and infinite loops, and use their knowledge to modify existing animations and games using repetition</i></p> <p><i>-They will design and create a game which uses repetition, applying stages of programming design throughout</i></p>	<p>PuppetPals/Kodu/Swift Playground</p> <p>*Apps (Lightbot, A.L.E.X, Cargo-bot, Hour of Code)</p> <p>Progression of Skills:</p> <p><i>-Pupils design a simple game in e.g., Kodu using rule-based algorithms describing how it will be played.</i></p> <p><i>-They then create the Kodu world, implement their algorithms as code, and play and evaluate each other's games.</i></p> <p><i>-Pupils will input sets of instructions according to programming, language and environment</i></p> <p><i>-They will independently be able to debug basic mistakes</i></p> <p><i>-They will begin to use conditionals</i></p> <p><i>-They will be able to explain how their program works</i></p> <p><i>-They will modify their program and be able to predict the effect of changes</i></p> <p><i>-They will know how to break sets of instructions into short steps to achieve a goal</i></p> <p>Skills from NC:</p> <p>-design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving problems by decomposing them into smaller parts</p> <p>-use sequence, selection and repetition in programs; work with variables and various forms of input and output</p>

	<ul style="list-style-type: none"> - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - 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 	<p>Skills from NC:</p> <ul style="list-style-type: none"> - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - 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 	<ul style="list-style-type: none"> -use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
ICT	<p>Teach Computing Yr3: Creating Media – Desktop Publisher (Yr3 children create own folders)</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> <i>-Pupils will become familiar with the term's 'text' and 'images' and understand they are used to communicate messages</i> <i>-They will make careful choices of font size, colour and type to edit and improve premade documents</i> <i>-They will be introduced to the terms 'templates', 'orientation' and 'placeholders' and begin to understand how these can support them in making their own template for a MAGAZINE front cover</i> <i>-They will add text and images to create their own pieces of work using desktop software</i> <i>-They will look at page layouts thinking carefully about purpose and evaluate how and why desk top publishing is used in the real world</i> <p>Skills from NC:</p> <ul style="list-style-type: none"> -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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 	<p>Teach Computing Yr3: Computer Systems and Networks – Connecting Computers</p> <p>Progression of skills:</p> <ul style="list-style-type: none"> <i>-Pupils will develop an understanding of inputs, processes and outputs</i> <i>-They will compare digital and non-digital devices</i> <i>-They will be introduced to computer networks, including devices that make up an infrastructure, such as wireless access points and switches</i> <i>-They will discover the benefits of connecting devices in a network</i> <p>Skills from NC:</p> <ul style="list-style-type: none"> -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 sequence, selection, and repetition in programs; work with variables and various forms of input and output 	<p>Internet research and communication - Present a Power Point</p> <p>*Puppet pals</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> <i>- Pupils learn to write and deliver a presentation on a given subject</i> <i>- Pupils learn how to develop a storyboard and then create a simple animation using for instance 'Puppet Pals' or 'Stop Motions' Animation'</i> <i>- Pupils learn how to develop a storyboard and then create a simple animation using for instance 'Puppet Pals' or 'Stop Motions' Animation'</i> <p>Skills from NC:</p> <ul style="list-style-type: none"> -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 sequence, selection, and repetition in programs; work with variables and various forms of input and output

Science Link	<p>Teach Computing Yr3: Data & Information – Branching databases</p> <p>Progression of skills:</p> <ul style="list-style-type: none">-Pupils will develop an understanding of what a branching database is and how to create one-They will use yes/no questions to gain understanding of what attributes are and how to use them to sort groups of objects-They will create physical and on-screen branching databases-They will create an identification tool, which they will test by using it-They will consider real-world applications for branching databases <p>Skills from NC:</p> <ul style="list-style-type: none">-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
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**** Computer Science – Visit from ‘Techytots’ to ensure physical programming**

Curriculum plan- Computing

E-Safety lesson to begin each half term and to be taught ongoing throughout the year

RR: Article 16: I have the right to privacy

RR: Article 17: I have the right to access information

RR: Article 19: I have the right to be safe

Year 3 & 4 Cycle B	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
Digital Literacy	<p>https://www.commonsense.org/education/digital-citizenship/curriculum https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS_Education_for_a_Connected_World_.pdf</p>		
	<p>Our digital citizenship pledges What makes a strong online community? Keeping games fun and friendly How can I be positive and have fun while playing games online, and help others do the same? Progression of Skills: <i>-Pupils know which websites are useful and understand all might not be trustworthy</i> <i>-They know that concerns about what they see on-line should be reported to a trusted adult</i> <i>-They can use a search engine to find information from given key words</i> <i>-They know which websites are useful and begin to understand all might not be trustworthy</i> <i>-They can create and use a simple password</i> <i>-They can login and out of websites used at school</i> <i>-They know that having a balance of online and offline activities is important</i> <i>-They know what to do if they are exposed to unpleasant materials on a device</i> <i>-They know what the key word are to enter into a search engine to find wanted information</i></p>	<p>The power of words What should you do when someone uses mean or hurtful language on the internet? Be a super digital citizen How can we be upstanders when we see cyberbullying? Progression of Skills: <i>-Pupils know which websites are useful and understand all might not be trustworthy</i> <i>-They know that concerns about what they see on-line should be reported to a trusted adult</i> <i>-They can use a search engine to find information from given key words</i> <i>-They know which websites are useful and begin to understand all might not be trustworthy</i> <i>-They can create and use a simple password</i> <i>-They can login and out of websites used at school</i> <i>-They know that having a balance of online and offline activities is important</i> <i>-They know what to do if they are exposed to unpleasant materials on a device</i> <i>-They know what the key word are to enter into a search engine to find wanted information</i> <i>-They can select useful websites from the results of a search</i></p>	<p>Is seeing believing? Why do people alter digital photos and videos? A creator’s rights and responsibilities What rights and responsibilities do you have as a creator? Progression of Skills: <i>-Pupils know which websites are useful and understand all might not be trustworthy</i> <i>-They know that concerns about what they see on-line should be reported to a trusted adult</i> <i>-They can use a search engine to find information from given key words</i> <i>-They know which websites are useful and begin to understand all might not be trustworthy</i> <i>-They can create and use a simple password</i> <i>-They can login and out of websites used at school</i> <i>-They know that having a balance of online and offline activities is important</i> <i>-They know what to do if they are exposed to unpleasant materials on a device</i> <i>-They know what the key word are to enter into a search engine to find wanted information</i></p>

	<p><i>-They can select useful websites from the results of a search</i></p> <p><i>-They know that pictures and text shared online can end up with strangers</i></p> <p><i>-They can reliably use a more complex password to access resources</i></p> <p>Skills from NC:</p> <p>- Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p><i>-They know that pictures and text shared online can end up with strangers</i></p> <p><i>-They can reliably use a more complex password to access resources</i></p> <p>Skills from NC:</p> <p>- Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p><i>-They can select useful websites from the results of a search</i></p> <p><i>-They know that pictures and text shared online can end up with strangers</i></p> <p><i>-They can reliably use a more complex password to access resources</i></p> <p>Skills from NC:</p> <p>- Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>
Computer science	<p>(Programming, must be taught in sequence - concepts and skills rely on prior knowledge and experiences)</p> <p>- Y4 children to support Y3 or to be taken in separate groups</p>		
	<p>Tynker- Dragon Blast</p> <p>https://www.tynker.com/dashboard/student/#/home</p> <p>*Other Hour of Code games/resources</p> <p>Progression of Skills:</p> <p><i>-Pupils will use logical skills and computational thinking to manipulate code.</i></p> <p><i>-They will complete puzzles using concepts: algorithms, debugging, loops, decomposition and abstraction</i></p> <p><i>-Pupils will input sets of instructions according to programming, language and environment</i></p> <p><i>-They will independently be able to debug basic mistakes</i></p> <p><i>-They will begin to use conditionals</i></p> <p><i>-They will be able to explain how their program works</i></p> <p><i>-They will modify their program and be able to predict the effect of changes</i></p> <p><i>-They will know how to break sets of instructions into short steps to achieve a goal</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p>	<p>Cover Yr4 if unable to teach year groups separately</p> <p>Teach Computing Yr3: Programming A – Sequence in music (Scratch)</p> <p>Progression of Skills:</p> <p><i>-Pupils will be introduced to a programming environment</i></p> <p><i>-They will use motion, sound and event blocks, which they will use to create their own programs, featuring sequences</i></p> <p><i>-They will make a representation of a piano</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p> <p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>Teach Computing Yr4: Programming A – Repetition in shapes (Logo)</p> <p>*Other Apps (Lightbot, A.L.E.X, Cargo-bot)</p> <p>Progression of Skills:</p> <p><i>-Pupils will create programs by planning, modifying and testing commands to create shapes and patterns</i></p> <p><i>-They will look at repetition and loops within programming</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p>	<p>Cover Yr4 if unable to teach year groups separately</p> <p>Teach Computing Yr3: Programming B – Events and Actions (Scratch)</p> <p>Progression of Skills:</p> <p><i>-Pupils explore links between events and actions</i></p> <p><i>-They will move a sprite in 4 directions</i></p> <p><i>-They explore movement within a maze, using design to choose an appropriately sized sprite</i></p> <p><i>-They will be introduced to pen blocks</i></p> <p><i>-They will draw lines with sprites and change the size and colour of the lines</i></p> <p><i>-They will design and code their own maze-tracing program</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p> <p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>Teach Computing Yr4: Programming B – Repetition in games (Scratch)</p> <p>Progression of Skills:</p> <p><i>-Pupils will explore repetition in programming</i></p> <p><i>-They will look at the difference between count-controlled and infinite loops, and use their</i></p>

	<ul style="list-style-type: none"> - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - 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 	<ul style="list-style-type: none"> - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - 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 	<p><i>knowledge to modify existing animations and games using repetition</i></p> <p><i>-They will design and create a game which uses repetition, applying stages of programming design throughout</i></p> <p>Skills from NC:</p> <ul style="list-style-type: none"> - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - 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
ICT	<p>Teach Computing Yr3: Creating Media – Desktop Publisher (Yr3 children create own folders)</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> <i>-Pupils will become familiar with the terms ‘text’ and ‘images’ and understand they are used to communicate messages</i> <i>-They will make careful choices of font size, colour and type to edit and improve premade documents</i> <i>-They will be introduced to the terms ‘templates’, ‘orientation’ and ‘placeholders’ and begin to understand how these can support them in making their own template for a NEWSLETTER</i> <i>-They will add text and images to create their own pieces of work using desktop software</i> <i>-They will look at page layouts thinking carefully about purpose and evaluate how and why desktop publishing is used in the real world</i> <p>Skills from NC:</p> <ul style="list-style-type: none"> - 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, 	<p>Teach Computing Yr3: Creating Media – Animation</p> <p>*PuppetPals/IPads – iMotion</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> <i>-Pupils will use a range of techniques to create a stop-frame animation</i> <i>-They will create a story-based animation</i> <i>-They will add other types of media to their animation, such as music and text</i> <p>Skills from NC:</p> <ul style="list-style-type: none"> - 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 	<p>Data Handling and Modelling (Spreadsheets, graphs and charts- MS Excel)</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> <i>- Pupils learn to search, sort and graph information</i> <p>Skills from NC:</p> <ul style="list-style-type: none"> - 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

	<p>systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <ul style="list-style-type: none"> -use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 		
<p>Science Link</p>	<p>Teach Computing Yr4: Data Logging</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -<i>Pupils will consider how and why data is collected over time</i> -<i>They will consider how computers can use special input devices called sensors to monitor the environment</i> -<i>They will collect data and access data captured over long periods of time</i> -<i>They will look at data points, data sets, and logging intervals</i> -<i>They will use a computer to review and analyse data</i> -<i>They will pose questions and then use data loggers to automatically collect the data needed to answer those questions</i> <p>Skills from NC:</p> <ul style="list-style-type: none"> - 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 sequence, selection, and repetition in programs; work with variables and various forms of input and output 		

Curriculum plan- Computing

E-Safety lesson to begin each half term and to be taught ongoing throughout the year

RR: Article 16: I have the right to privacy

RR: Article 17: I have the right to access information

RR: Article 19: I have the right to be safe

Year 4 & 5 Cycle A	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
Digital Literacy	https://www.commonsense.org/education/digital-citizenship/curriculum https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS_Education_for_a_Connected_World_.pdf		
	<p>You won't believe this! What is clickbait and how can you avoid it? Is it cyberbullying? What is cyberbullying and what can you do to stop it?</p>	<p>Reading news online What are the important parts of an online news article? Beyond gender stereotypes How do gender stereotypes shape our experience online?</p>	<p>Digital friendships How do you keep online friendships safe? Our online tracks How does our online activity affect the digital footprints of ourselves and others?</p>
Computer science	(Programming, must be taught in sequence - concepts and skills rely on prior knowledge and experiences) - Y5 children to support Y4 or to be taken in separate groups		
	<p>Cover Yr4 if unable to teach year groups separately Teach Computing Yr4: Programming A – Repetition in shapes (Logo) *Other Apps (Lightbot, A.L.E.X, Cargo-bot) Progression of Skills: <i>-Pupils will create programs by planning, modifying and testing commands to create shapes and patterns</i> <i>-They will look at repetition and loops within programming</i> Skills from NC: - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>	<p>Cover Yr4 if unable to teach year groups separately Teach Computing Yr4: Programming B – Repetition in games (Scratch) Progression of Skills: <i>-Pupils will explore repetition in programming</i> <i>-They will look at the difference between count-controlled and infinite loops, and use their knowledge to modify existing animations and games using repetition</i> <i>-They will design and create a game which uses repetition, applying stages of programming design throughout</i> Skills from NC: - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>	<p>Micro-bits (What are they?) *Teach Computing Yr6: Programming B – Sensing *Barefoot Computing Progression of Skills: <i>-Pupils will be able to use a program to sequence, use conditionals and use a variety of inputs and outputs (Scratch – steer an object by using keys/Micro bits – show an image when shaken</i> <i>-They will explain how their program works for instance by annotating a printout</i> <i>-They will modify their program and be able to predict the effects of any changes</i> <i>-They will know how to break sets of instructions into short steps to achieve a goal for instance drawing repeated squares to make a pattern</i> Skills from NC:</p>

	<p>- 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</p> <p>Teach Computing Yr5: Selection in Physical Computing (crumbles)</p> <p>Progression of Skills:</p> <p><i>-Pupils will explore the concept of selection in programming through the use of the Crumble programming environment</i></p> <p><i>-They will be introduced to a crumble controller and learn how to connect and program it to control components (inc LEDs and motors)</i></p> <p><i>-They will be introduced to conditions as a means of controlling the flow of actions in a program</i></p> <p><i>-They will be introduced to the concept of selection and write algorithms and programs that utilise this concept</i></p> <p><i>-They will design and make a working model of a fairground carousel that will show thy understand how crumble controller and its components are connected, and how selection can be used to control the operation of the model</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p> <p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>- 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</p>	<p>- 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</p> <p>Teach Computing Yr5: Selection in quizzes (scratch)</p> <p>Progression of Skills:</p> <p><i>-Pupils will develop their knowledge of selection by revisiting how conditions can be used and then learning how the if, then, else structure can be used to select different outcomes depending on whether a condition is true/false</i></p> <p><i>-They represent understanding in algorithms and then by constructing programs in Scratch</i></p> <p><i>-They learn how to write programs that ask questions and use selection to control the outcomes based on the answers given</i></p> <p><i>-They design a quiz in response to a given task and implement it as a program</i></p> <p><i>-They evaluate by identifying how it meets the requirements, the ways they have improved it, and further ways it could be improved</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p> <p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>	<p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p> <p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>
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ICT	<p>Teach Computing Yr4: Creating Media – Audio Editing Progression of Skills: <i>-Pupils will identify the input device (microphone) and output devices (speaker or headphones) required to work with sound digitally</i> <i>-They will discuss the ownership of digital audio and copyright implications of duplicating the work of others</i> <i>- They will produce a podcast, which will include editing their work, adding multiple tracks, and opening and saving audio files</i> <i>They will evaluate their work and give feedback to their peers</i></p> <p>Skills from NC: -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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content -use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p>Teach Computing Yr4: Computer Systems and Networks – The Internet Progression of Skills: <i>-Pupils will appreciate the internet as a network of networks which need to be kept secure</i> <i>-They will learn that the WWW is part of the internet</i> <i>-They will explore the WWW to learn about who owns content and what they can access, add and create</i> <i>-They will evaluate online content to decide how honest, accurate, or reliable it is, and understand the consequences of false information</i></p> <p>Skills from NC: -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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content -use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact -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</p>	<p>Teach Computing Yr4: Creating Media – Photo Editing Progression of Skills: <i>-Pupils will develop their understanding of how digital images can be changed and edited, and how they can be resaved and reused</i> <i>-They will consider the impact that editing images can have, and evaluate the effectiveness of their choices</i></p> <p>Skills from NC: -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 -use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>
Science Link	<p>Teach Computing Yr5: Data and Information – Flat-file databases Progression of Skills: <i>-Pupils will look at how a flat-file database can be used to organise data in records</i> <i>-They will use tools within a database to order and answer questions about data</i> <i>-They will create graphs and charts from their data to help solve problems</i> <i>-They will use a real-life database to answer a question, and present their work to others</i></p> <p>Skills from NC: - 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</p>		

Curriculum plan- Computing

E-Safety lesson to begin each half term and to be taught ongoing throughout the year

RR: Article 16: I have the right to privacy

RR: Article 17: I have the right to access information

RR: Article 19: I have the right to be safe

Year 4 & 5 Cycle B	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
Digital Literacy	https://www.commonsense.org/education/digital-citizenship/curriculum https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS Education for a Connected World .pdf		
	Private and Personal Information What information about you is ok to share online? Finding my media balance What does media balance mean for me?	Be a super digital citizen How can we be upstanders when we see cyberbullying? Keeping games fun and friendly How can I be positive and have fun while playing games online, and help others do the same?	A creator's rights and responsibilities What rights and responsibilities do you have as a creator? My media choices What makes a healthy media choice?
Computer science	(Programming, must be taught in sequence - concepts and skills rely on prior knowledge and experiences) - Y5 children to support Y4 or to be taken in separate groups		
	Pencil Code (Chapters 1-6) https://pencilcode.net/ *Coffee script, Java script, HTML *David Bau Progression of Skills: <i>-Pupils will be introduced to the environment of Pencil code</i> <i>-They will be introduced to straight-line programs that use turtle graphics to create visual output.</i> <i>-They will learn how to plan, create, and debug a sequence.</i> <i>-They will explore output of images, text, speech, and music, and they will explore input of mouse clicks, buttons, text, voice, and keypresses.</i> <i>-They will learn repetition is a fundamental programming tool.</i> <i>-They will be introduced to three types of loops, which are the basic code building blocks used to repeat actions in a program.</i> <i>-They will learn to reason about the number of repetitions and terminating conditions of a loop</i>	Cover Yr5 if unable to teach year groups separately Teach Computing Yr4: Programming A – Repetition in shapes (Turtle Academy) *Other Apps (Lightbot, A.L.E.X, Cargo-bot) Progression of Skills: <i>-Pupils will create programs by planning, modifying and testing commands to create shapes and patterns</i> <i>-They will look at repetition and loops within programming</i> Skills from NC: - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - 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	Cover Yr5 if unable to teach year groups separately Teach Computing Yr4: Programming B – Repetition in games (Scratch) Progression of Skills: <i>-Pupils will explore repetition in programming</i> <i>-They will look at the difference between count-controlled and infinite loops, and use their knowledge to modify existing animations and games using repetition</i> <i>-They will design and create a game which uses repetition, applying stages of programming design throughout</i> Skills from NC: - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs

	<p><i>-They will learn to apply for, while, and forever loops in their programs.</i></p> <p><i>-They will learn functions are the most important concept in programming because they allow programmers to break down programs into smaller subprograms.</i></p> <p><i>-They will learn functions also allow programmers to set off code to be run later, and then control when precisely when that code runs.</i></p> <p><i>-They will learn to apply the “DRY” principle, using functions to abstract common sequences of code by creating their own commands.</i></p> <p><i>-They will find out about, and learn to understand, conditional statements (also known as selection, or decision statements)</i></p> <p><i>-They will be able to apply conditionals, creating Boolean expressions with comparisons, and they should be able to reason correctly about the use of the Boolean operators “and” “or” and “not.”</i></p> <p>Skills from NC:</p> <p>-design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving problems by decomposing them into smaller parts</p> <p>-use sequence, selection and repetition in programs; work with variables and various forms of input and output</p> <p>-use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>	<p>accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>Teach Computing Yr5: Selection in Physical Computing (crumbles)</p> <p>Progression of Skills:</p> <p><i>-Pupils will explore the concept of selection in programming through the use of the Crumble programming environment</i></p> <p><i>-They will be introduced to a crumble controller and learn how to connect and program it to control components (inc LEDs and motors)</i></p> <p><i>-They will be introduced to conditions as a means of controlling the flow of actions in a program</i></p> <p><i>-They will be introduced to the concept of selection and write algorithms and programs that utilise this concept</i></p> <p><i>-They will design and make a working model of a fairground carousel that will show thy understand how crumble controller and its components are connected, and how selection can be used to control the operation of the model</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p> <p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>-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</p>	<p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>- 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</p> <p>Teach Computing Yr5: Selection in quizzes (scratch)</p> <p>Progression of Skills:</p> <p><i>-Pupils will develop their knowledge of selection by revisiting how conditions can be used and then learning how the if, then, else structure can be used to select different outcomes depending on whether a condition is true/false</i></p> <p><i>-They represent understanding in algorithms and then by constructing programs in Scratch</i></p> <p><i>-They learn how to write programs that ask questions and use selection to control the outcomes based on the answers given</i></p> <p><i>-They design a quiz in response to a given task and implement it as a program</i></p> <p><i>-They evaluate by identifying how it meets the requirements, the ways they have improved it, and further ways it could be improved</i></p> <p>Skills from NC:</p> <p>- design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts</p> <p>-use sequence, selection and repetition in programs</p> <p>- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>
ICT	<p>Teach Computing Yr5: Computer Systems and Networks – Sharing Information</p> <p>Progression of Skills:</p>	<p>Teach Computing Yr5: Vector Drawings (Google Drawings)</p> <p>Progression of Skills:</p> <p><i>-Pupils start to create vector drawings</i></p> <p><i>-They learn how to use drawing tools to create images</i></p>	<p>Teach Computing Yr5: Video Editing</p> <p>Progression of Skills:</p> <p><i>-Pupils will learn how to create short videos</i></p> <p><i>-They will develop skills of capturing, editing, and manipulating a video</i></p>

	<p><i>-Pupils will develop understanding of computer systems and how information is transferred between systems and devices</i></p> <p><i>-They will consider small-scale systems as well as large-scale</i></p> <p><i>-They explain the input, output, and process aspects of range of real-world systems</i></p> <p><i>-They discover how information is found on the WWW, through learning how search engines work and what influences searching, and through comparing different search engines</i></p> <p>Skills from NC:</p> <p>-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</p> <p>-use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>	<p><i>-They recognise images are created using shapes and lines, and each individual element in the drawing is called an object</i></p> <p><i>-They layer their object and begin grouping and duplicating them to support the creation of more complex pieces of work</i></p> <p>Skills from NC:</p> <p>-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</p>	<p><i>-They will reflect on and assess their progress in creating a video</i></p> <p>Skills from NC:</p> <p>-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</p> <p>-use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>
Science Link	<p>Teach Computing Yr4: Data Logging</p> <p>Progression of Skills:</p> <p><i>-Pupils will consider how and why data is collected over time</i></p> <p><i>-They will consider how computers can use special input devices called sensors to monitor the environment</i></p> <p><i>-They will collect data and access data captured over long periods of time</i></p> <p><i>-They will look at data points, data sets, and logging intervals</i></p> <p><i>-They will use a computer to review and analyse data</i></p> <p><i>-They will pose questions and then use data loggers to automatically collect the data needed to answer those questions</i></p> <p>Skills from NC:</p> <p>- 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</p> <p>-use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p>		

Curriculum plan- Computing

E-Safety lesson to begin each half term and to be taught ongoing throughout the year

Year 5 & 6 Cycle A	Autumn	Spring	Summer
Digital Literacy	<p>https://www.common sense.org/education/digital-citizenship/curriculum https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS Education for a Connected World .pdf</p>		
	<p>You won't believe this! What is clickbait and how can you avoid it? Don't feed the phish How can you protect yourself from phishing? Progression of skills: - Pupils learn to create secure passwords for their accounts, learn about spam and how to deal with it, and decode website privacy policies, understanding the implications for the info that they share online - Pupils begin to explore the nature of online audiences and permanency of information online. They begin to understand the significance of published information and personal information - Pupils develop skills for evaluating websites, online information and advertising by rating the trustworthiness and usefulness of websites, and learning to identify the different types of online advertising Skills from NC: - use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact - use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content</p>	<p>Beyond gender stereotypes How do gender stereotypes shape our experience online? Who are you online? What are the benefits and drawback of presenting yourself in different ways online? Progression of skills: - Pupils explore their roles as digital citizens in an online community, where they reflect on their responsibilities and learn that good digital citizens are responsible and respectful in the digital world - Pupils begin to explore the nature of online audiences and permanency of information online. They begin to understand the significance of published information and personal information - Pupils begin to consider the impact of their online presence on their own self- image and the way others see them and explore how to construct a positive online profile Skills from NC: - use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p>Is it cyberbullying? What is cyberbullying and what can you do to stop it? Digital Drama unplugged How can you deescalate digital drama so it doesn't go too far? Progression of skills: - Pupils learn that the internet is a great place where online relationships can be developed. They compare and contrast online friends and real life, face to face friends and learn how to respond if an online friend asks them a personal question - Pupils explore their roles as digital citizens in an online community, where they reflect on their responsibilities and learn that good digital citizens are responsible and respectful in the digital world - Pupils understand what it means to be a good digital citizen as they interact with others online by understanding how to prevent and respond to cyberbullying. They also learn how to communicate effectively to prevent miscommunication in order to be a responsible member of a connected culture Skills from NC: - use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>
Computer science	<p>Teach Computing Yr5: Selection in Physical Computing (crumbles) Progression of Skills:</p>	<p>Teach Computing Yr5: Selection in quizzes (scratch) Progression of Skills: <i>-Pupils will develop their knowledge of selection by revisiting how conditions can be used and then learning how the if, then, else structure can be used to select</i></p>	<p>Kodu *Apps (Lightbot, A.L.E.X, Cargo-bot, Hour of Code, Swift Playground) Progression of Skills:</p>

	<p><i>-Pupils will explore the concept of selection in programming through the use of the Crumble programming environment</i></p> <p><i>-They will be introduced to a crumble controller and learn how to connect and program it to control components (inc LEDs and motors)</i></p> <p><i>-They will be introduced to conditions as a means of controlling the flow of actions in a program</i></p> <p><i>-They will be introduced to the concept of selection and write algorithms and programs that utilise this concept</i></p> <p><i>-They will design and make a working model of a fairground carousel that will show thy understand how crumble controller and its components are connected, and how selection can be used to control the operation of the model</i></p> <p>Skills from NC:</p> <ul style="list-style-type: none"> - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - 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 	<p><i>different outcomes depending on whether a condition is true/false</i></p> <p><i>-They represent understanding in algorithms and then by constructing programs in Scratch</i></p> <p><i>-They learn how to write programs that ask questions and use selection to control the outcomes based on the answers given</i></p> <p><i>-They design a quiz in response to a given task and implement it as a program</i></p> <p><i>-They evaluate by identifying how it meets the requirements, the ways they have improved it, and further ways it could be improved</i></p> <p>Skills from NC:</p> <ul style="list-style-type: none"> - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	<p><i>-Pupils design a simple game in Kodu using rule-based algorithms describing how it will be played.</i></p> <p><i>-They then create the Kodu world, implement their algorithms as code, and play and evaluate each other's games.</i></p> <p><i>-Pupils will use customisation to change a working program to change its effect for instance</i></p> <p><i>-They will use loops to achieve goals</i></p> <p><i>They will use variables, conditional sentences, external triggers and loops to achieve set goals</i></p> <p><i>-They will use conditional sentences to program objects</i></p> <p><i>-They will use mathematical expressions when constructing conditionals</i></p> <p><i>-They will explain what a program will do and accurately predict the effect of changes</i></p> <p><i>-They will modify existing algorithms and code to change the effect a program</i></p> <p><i>-They will be able to make an efficient program by using alternative algorithms and techniques such as loops and procedures</i></p> <p>Skills from NC:</p> <ul style="list-style-type: none"> - design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving 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
ICT	<p>Teaching Computing Yr6: Web Page Creation</p> <p>*PuppetPals/Stop Motions Animation</p> <p>Progression of Skills:</p> <p><i>-Pupils will create websites for a chosen purpose</i></p> <p><i>-They will identify what makes a good web page and use this information to design and evaluate their own websites</i></p>	<p>Teaching Computing Yr6: Computer Systems and Networks – Communication</p> <p>Progression of Skills:</p> <p><i>-Pupils will learn about the WWW as a communication tool</i></p> <p><i>-They will learn how we find info from the web, through learning how search engines work and what influences searching, and through comparing different search engines</i></p>	<p>Communication and Presentation (video- iMovie, clips)</p> <p>Possible buddy link with KS1</p> <p>*PuppetPals/iMotions</p> <p>Progression of Skills:</p> <p><i>-Pupils learn how to develop a storyboard and then create a simple animation using for instance ‘Puppet Pals’ or ‘Stop Motions’ Animation</i></p>

	<p><i>-They will pay attention to copyright and fair use of media, aesthetics and navigation paths</i></p> <p><i>-Skills from NC:</i></p> <ul style="list-style-type: none"> -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 search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content 	<p><i>-They will investigate different methods of communication, before focussing on internet-based communication</i></p> <p><i>-They will evaluate which methods of internet communication to use for particular purposes</i></p> <p><i>Skills from NC:</i></p> <ul style="list-style-type: none"> - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -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 	<p><i>-Pupils record and edit media to create a short sequence</i></p> <p><i>Skills from NC:</i></p> <ul style="list-style-type: none"> - 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
<p>Science Link</p>	<p>Teach Computing Yr5: Data and Information – Flat-file databases</p> <p><i>Progression of Skills:</i></p> <ul style="list-style-type: none"> <i>-Pupils will look at how a flat-file database can be used to organise data in records</i> <i>-They will use tools within a database to order and answer questions about data</i> <i>-They will create graphs and charts from their data to help solve problems</i> <i>-They will use a real-life database to answer a question, and present their work to others</i> <p><i>Skills from NC:</i></p> <ul style="list-style-type: none"> - 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 		

Curriculum plan- Computing

E-Safety lesson to begin each half term and to be taught ongoing throughout the year

Year 5 & 6 Cycle B	Autumn	Spring	Summer
Digital Literacy	<p>https://www.common sense.org/education/digital-citizenship/curriculum https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS Education for a Connected World .pdf</p>		
	<p>Finding my media balance What does media balance mean for me? Finding balance in a digital world How do we balance digital media use in our life? Progression of skills: - Pupils explore their roles as digital citizens in an online community, where they reflect on their responsibilities and learn that good digital citizens are responsible and respectful in the digital world - Pupils begin to consider the impact of their online presence on their own self- image and the way others see them and explore how to construct a positive online profile Skills from NC: - use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p>Digital friendships How do you keep online friendships safe? Chatting safely online How do you chat safely with people online? Progression of skills: - Pupils learn that the internet is a great place where online relationships can be developed. They compare and contrast online friends and real life, face to face friends and learn how to respond if an online friend asks them a personal question - Pupils explore their roles as digital citizens in an online community, where they reflect on their responsibilities and learn that good digital citizens are responsible and respectful in the digital world - Pupils begin to explore the nature of online audiences and permanency of information online. They begin to understand the significance of published information and personal information - Pupils understand what it means to be a good digital citizen as they interact with others online by understanding how to prevent and respond to cyberbullying. They also learn how to communicate effectively to prevent miscommunication in order to be a responsible member of a connected culture - Pupils begin to consider the impact of their online presence on their own self- image and the way others see them and explore how to construct a positive online profile Skills from NC: - use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p>Reading news online What are the important parts of an online news article? Finding credible news How do we find credible information on the internet? Progression of skills: - Pupils learn to create secure passwords for their accounts, learn about spam and how to deal with it, and decode website privacy policies, understanding the implications for the info that they share online - Pupils begin to explore the nature of online audiences and permanency of information online. They begin to understand the significance of published information and personal information - Pupils learn the 'do's and don'ts' of copying and pasting information to avoid plagiarism. They learn how to avoid plagiarism by putting information in their own words, putting excerpted information into quotes, and providing citations. They learn to show respect for other people's creations by giving them credit - Pupils explore issues relating to online searching, including how to use effective keywords, using directories and subject categories, and how to analyse the usefulness and relevancy of the results. They learn to conduct searches that provide them with the most helpful and relevant information - Pupils develop skills for evaluating websites, online information and advertising by rating the trustworthiness and usefulness of websites, and</p>

			<p>learning to identify the different types of online advertising</p> <p>Skills from NC:</p> <ul style="list-style-type: none"> - use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact - use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content
Computer science	<p>Pencil code (Recap Chapters 1-6 then work through Chapters 7-12)</p> <p>*CoffeeScript, JavaScript, HTML</p> <p>*David Bau https://pencilcode.net/</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils will be exposed to a second programming language that allows them to understand that the programming concepts they learn as beginners are the same concepts used by professionals. -They will look at JavaScript, which is a very close cousin of CoffeeScript, and one of the most widely used languages used by professionals today. -They will use blocks to learn JavaScript syntax, and to see how the syntax of JavaScript and CoffeeScript have many similarities, and they will transition from blocks to programming directly in JavaScript text code. -They will understand one-dimensional arrays (also known as lists) are the fundamental data structure that allows a program to store many elements of data, using a linear arrangement. -They will learn how to create and traverse arrays, and how to add, remove, insert and search for elements in an array. -Using Pencil Code, they will explore building arrays using data loaded from the internet, and how to create visualizations using data in an array. -They will be introduced to the concept of nested loops and how to build them. -They will be introduced to the concept of a two-dimensional (2D) output grid. -They will learn what recursion is and how to read recursive code. -They will learn the key components of a recursive program and, importantly, they will learn that any 	<p>Teach Computing Yr6: Programming A – Variables in games (scratch)</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils will explore the concept of variables through games in Scratch -They will find out what variables are and relate them to real-world examples of values that can be set and changed -They will use variables to create a simulation of a scoreboard -They will experiment with variables in existing projects, then modify them, before designing and creating their own project -They will apply their knowledge of variables and design to improve their games in Scratch <p>Skills from NC:</p> <ul style="list-style-type: none"> - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - 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 	<p>Teach Computing Yr6: Programming B - Sensing (micro bits)</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils will bring together elements of all 4 programming constructs – sequence from Yr3, repetition from Yr4, selection from Yr5, and variables from Yr6 (A) -They will use all constructs in a different but familiar environment while also utilising a physical device (micro bit) -They will build in a program and test then transfer to micro bit -They will create code from a given design and create their own design -They will apply knowledge and use their design to create their own micro bit based step counter <p>Skills from NC:</p> <ul style="list-style-type: none"> - design write and debug programs that accomplish specific goals, solve problems by decomposing them in smaller parts -use sequence, selection and repetition in programs - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - 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

	<p><i>recursive program must have a means of exiting the function via a base case.</i></p> <ul style="list-style-type: none"> - They will be introduced to the structure of a simple HTML page. -They will create basic pages using block-mode and to transition to text-mode as their familiarity and knowledge increase. -They will be introduced to the basics of the jQuery library. -They will learn the concept of a jQuery selection, and use jQuery methods and events to create a simple interactive program. <p>Skills from NC:</p> <ul style="list-style-type: none"> - design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving 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 		
ICT	<p>Teaching Computing Yr6: 3D Modelling Link with Wellfield Community School *Sketch up</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils will use a computer to produce 3D models -They will become familiar with working in a 3D space, moving, resizing, and duplicating objects -They will create hollow objects using placeholders and combine multiple objects to create a model of a desk tidy -They will examine the benefits of grouping and ungrouping 3D objects, then go on to plan, develop and evaluate their own 3D model of a building <p>Skills from NC:</p> <ul style="list-style-type: none"> -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, 	<p>Teach Computing Yr5: Vector Drawings</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils start to create vector drawings -They learn how to use drawing tools to create images -They recognise images are created using shapes and lines, and each individual element in the drawing is called an object -They layer their object and begin grouping and duplicating them to support the creation of more complex pieces of work <p>Skills from NC:</p> <ul style="list-style-type: none"> -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 	<p>Teach Computing Yr5: Video Editing</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils will learn how to create short videos -They will develop skills of capturing, editing, and manipulating a video -They will reflect on and assess their progress in creating a video <p>Skills from NC:</p> <ul style="list-style-type: none"> -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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

	<p>including collecting, analysing, evaluating and presenting data and information</p> <ul style="list-style-type: none"> -use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 		
<p>Maths Link</p>	<p>Teaching Computing Yr6: Data and Information – Spreadsheets (Google slides/MS Excel)</p> <p>Progression of Skills:</p> <ul style="list-style-type: none"> -Pupils will be introduced to spreadsheets -They will organise data into columns and rows -They will learn about the importance of formatting data to support calculations -They will be introduced to formulas and begin to understand how they can be used to calculate data -They will be taught how to apply formulas that include a range of cells, and apply formulas to multiple cells by duplicating them -They will use spreadsheets to plan an event and answer questions -They will create charts, and evaluate their results in comparison to questions asked <p>Skills from NC:</p> <ul style="list-style-type: none"> -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 		