Etwall Primary School – Computing Curriculum Overview

Our End Goal

What will our children be able to do when they leave Etwall Primary School?

By the end of their time at Etwall, our Y6 computer techies will be responsible, competent, creative and independent users of information technology. The children will be equipped with the transferable skills that will enable them to confidently choose the best tool to fulfil whatever task or challenge is expected of them. They will use computing terminology and vocabulary effectively and accurately. Computing learning opportunities at Etwall Primary School Pupils will inspire our children's love of the digital world and see its place in their future. Our children will use technology safely, respectfully and responsibly. They will recognise acceptable and unacceptable behaviour online and identify a range of ways to report concerns about content and contact.

Curriculum Coverage (National Curriculum)

What are the basic requirements from the National Curriculum?

EYFS	Year 1/2A	Year 1/2B	Year 3/4A	Year 3/4B	Year 5/6A	Year 5/6B
Despite computing not being explicitly mentioned within the Early Years Foundation Stage statutory framework, Etwall Primary School provides many opportunities for young children to use technology to solve problems, produce creative outcomes and use computational thinking effectively.	Basic Skills Multimedia (Animation, Text and Images) Online Safety Programming (Unplugged) Programming Music and Sound	Basic Skills Programming (Unplugged) Online Safety Programming Computer Art Multimedia (Animation, Text and Images)	Basic Skills Multimedia (Animation, Text, Images and Sound) Online Safety Music and Sound Programming	Basic Skills The Internet/Networks and Data Representation Handling Data Online Safety Programming Web Design	Basic Skills Music and Sound Online Safety Multimedia (Animation, Text, Images, Sound and Video) Programming Multimedia – Film Making	Basic Skills Web Design Online Safety Data and Spreadsheets Network and Data Representation Programming

Basic Skills including The Internet, Networks and Data Representation						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Our role play area contains a range of technology, both functioning and model/broken devices, e.g. electronic toys, walkie-talkies, digital cameras and interactive pets, as part of continuous provision. This provides children with the opportunity to tinker, or play, with a device, in order to discover how it functions. **Children are given opportunities to become familiar with a range of input devices in order to develop their fine motor skills.**	Parts of a computer Mouse Skills Keyboard Skills - Caps, space, delete Camera skills -Use technology purposefully to create, organise, store, manipulate and retrieve digital content. -Recognise common uses of information technology beyond school. -Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	Keyboard Skills - Shift key, shortcut keys for editing Word Processing - Font Style, Colour + Size Typing – 5 words per minute - Use technology purposefully to create, organise, store, manipulate and retrieve digital content -Recognise common uses of information technology beyond school -Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	Folder skills Word Processing - Font size/colour, Hyperlinks, layout Keyboard Skills - touch typing – 10 words per minute -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	Typing- 15 words per minute Word Processing - Insert a hyperlink independently. Change the page colour independently (Design – Page Colour). Bold, italicise and underline text using keyboard shortcuts. Save As and retrieve -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	Order key events in the history of computers with support. identify at least 3 causes of data corruption. Typing- 20 words per minute Word Processing - increased competency and independence when using a word processing package. -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	Order key events in the history of computers independently. identify at least 5 causes of data corruption. Typing- 25 words per minute Word Processing - be competent and independent users of word processing packages. -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

Multimedia
Media and Creation
Film Making

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Children are exposed to examples of various multimedia content created by others so that they are familiar with multimedia elements before being asked to undertake tasks related to the key stage one computing curriculum, such as creating an animation.	**Animation** **Learn how to animate at least one image/character by making it spin. Making different characters move along custom paths with support.** **Learn how to use speech recognition with support.** -Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	**Animation** **Learn how to animate multiple images/characters by making them spin.** **Use other animation techniques, e.g. float in, swivel etc.** **Use other motion paths, including turns, shapes, loops etc.** **Make more than one character on each slide move.** **Learn how to insert text boxes and format the text by changing the size, colour and style of the font, as well as copying and pasting the text on different slides.** **Make the text boxes float in.** -Use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Multimedia** **Animate at least 3 images/text within a pre-made presentation.** **Record at least 3 audio files with support.** **Insert at least 3 blank slides with support.** **Insert at least 3 actions buttons to hyperlink to other slides within a PowerPoint presentation with support.** **Add at least 3 slide transitions with support.** **Find and save at least 3 copyright free images from the internet with support.** **Insert at least 3 text boxes and change the text with support.** **Insert at least 1 hyperlink to a website with support.** **Create a presentation from scratch using at least 3 examples of each of the 4 multimedia elements with support .** **Include a contents page with support.** -Select, use and combine a variety of software	**Multimedia** **Animate more than 3 images/text within a pre-made presentation.** **Record more than 3 audio files.** **Insert more than 3 blank slides.** **Insert more than 3 actions buttons to hyperlink to other slides within a PowerPoint presentation.** **Add more than 3 slide transitions.** **Find and save more than 3 copyright free images from the internet.** **Insert more than 3 text boxes and change the text.** **Insert more than 1 hyperlink to a website with support.** **Create a presentation from scratch using more than 3 examples of each of the 4 multimedia elements independently.** **Include a contents page independently.** -Select, use and combine a variety of software	**Multimedia** **Understand that images, sounds and text can be subject to copyright and abide by copyright rules when creating a presentation.** **Insert and animate at least 5 images/text within a pre-made presentation.** **Record at least 5 audio files with support and play it automatically when a slide appears and time the slides to fit the audio with support.** **Insert at least 5 slides (with different layouts) with support.** **Format backgrounds with support.** **Insert at least 5 actions buttons to hyperlink to other slides within a PowerPoint presentation to produce a non-linear presentation with support.** **Add at least 5 slide transitions with support.** **Find and save at least 5 copyright free images from the internet with support.**	**Multimedia** **Understand that images, sounds and text can be subject to copyright and abide by copyright rules when creating a presentation.** **Insert and animate more than 5 images/text within a pre-made presentation.** **Record more than 5 audio files play it automatically when a slide appears and time the slides to fit the audio independently.** **Insert more than 5 slides (with different layouts) independently.** **Format backgrounds independently.** **Insert more than 5 actions buttons to hyperlink to other slides within a PowerPoint presentation independently.** **Add at more than 5 slide transitions independently.** **Find and save more than 5 copyright free images from the internet independently.**

			(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.	(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	**Insert at least 5 text boxes and change the text with support.** **Insert at least 3 hyperlinks to a website with support.** **Record at least 1 example of video to be inserted into the presentation with support.** **Create a presentation from scratch using at least 3 examples of each of the 5 multimedia elements with support.** **Include a contents page with support.** **Create a new video project and name it with support.** **Place at least 5 photos (cards) in the storyboard.** **Rearrange the cards on the storyboard with support.** **Jump around the video by dragging the scrubber or selecting the appropriate card with support.** **Trim clips with support.** **Change the duration of how long a photo appears in the video with support.** **Add titles, captions and credits with support.** **Add 3D effects with support.** **Add music and narration with support.**	**Insert more than 5 text boxes and change the text independently.** **Insert more than 3 hyperlinks to a website independently.** **Record at least 1 example of video to be inserted into the presentation independently.** **Create a presentation from scratch using more than 3 examples of each of the 5 multimedia elements independently.** **Include a contents page independently.** **Create a new video project and name it independently.** **Place more than 5 photos (cards) in the storyboard.** **Rearrange the cards on the storyboard independently.** **Jump around the video by dragging the scrubber or selecting the appropriate card independently.** **Trim clips independently.** **Change the duration of how long a photo appears in the video independently.** **Add titles, captions and credits independently.** **Add 3D effects independently.**

					-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	**Add music and narration independently.** -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

Music and Sound						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Sing the pitch of a tone sung by another person ('pitch match'). Sing the melodic shape (moving melody, such as up and down, down and up) of familiar songs. Create their own songs, or improvise a song around one they know. Play instruments with increasing control to express their feelings and ideas.	**Know that computers are used to record sound.** **Know that a microphone and headphones/speakers are needed to record and listen to sound.** **Use the record, stop and play button to record reading a page from the current reading book with support.** **Learn at least one page from a story suitable for EYFS children (preferably a book which lends itself to using expression and sound effects) and record it onto PowerPoint with support.** **Select a short story and record it onto PowerPoint using expression and sound effects with support. Y1 children could work together on this so that they can share the pages between them.** **Save each media file with support.** **Upload the files on an online voice recorder with support.** -Use technology to purposefully to create, organise, store, manipulate and retrieve digital content. -Recognise common uses of information technology beyond school.	**Know that computers, tablets, mobile phones, talking tins etc are used to record sound.** **Know that the input needed to record sound with a computer is a microphone and the outputs needed are either speakers or headphones.** **Use the record, stop and play button to record reading a page from the current reading book independently.** **Learn a story suitable for EYFS children (preferably a book which lends itself to using expression and sound effects) and record it onto PowerPoint independently, remembering to record each page as a separate media file.** **Select a longer story and record it onto PowerPoint using expression and sound effects independently.** **Save each media file independently.** **upload the files to an online voice recorder independently.** -Use technology purposefully to create, organise, store,	**Be able to name at least 3 devices that can record sound.** **Work in mixed ability pairs to experiment recording, playing, deleting and saving voice tracks. Suggest saying, 'Testing 1, 2, 3. Welcome to my demo recording'," when recording.** **Read a poem, one stanza at a time and add at least 3 sound effects. 'The Sound Keeeper' poem could be used.** **Annotate a short poem, indicating what 3 sound effects (at least) are going to be used and where they are going to be inserted.** **Record the poem with support.** -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	**Be able to name more than 3 devices that can record sound.** **Use pause, echo effect, background effects and be able to edit sections of tracks.** **Read a poem, one stanza at a time and add more than 3 sound effects. 'The Sound Keeeper' poem could be used.** **Annotate a longer poem, indicating what sound effects (more than 3) are going to be used and where they are going to be inserted.** **Record the poem independently.** **If time, type up the longer poem so that it can be included in the anthology. If not, a photocopy of the poem can be used.** -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	**Be able to name at least 5 devices that can record sound.** **Edit a pre-recorded track with support.** **Read a poem, one stanza at a time and add at least 5 sound effects.** **Annotate 'Peace at Last', indicating what 5 sound effects (at least) are going to be used and where they are going to be inserted.** **Record the story with support.** **Add intro and outro music with support.** -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	**Be able to name more than 5 devices that can record sound.** **Edit a pre-recorded track independently.** **Read a poem, one stanza at a time and add more than 5 sound effects.** **Annotate 'Peace at Last', indicating more than 5 sound effects (at least) are going to be used and where they are going to be inserted.** **Record the story independently.** **Add intro and outro music independently**. -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

		manipulate and retrieve digital content -Recognise common uses of information technology beyond school.		presenting data and information		

Programming Cycle A						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Children in EYFS are able to participate in a variety of tasks with digital devices, such as moving a Bee Bot around a classroom. This ensures that they are familiar with the device before being asked to undertake tasks related to the key stage one computing curriculum, such as writing and testing a simple program. **Children are given the opportunity to develop their understanding of technology through unplugged activities. Children are asked to give precise instructions verbally, such as giving instructions to a friend so that they can complete an obstacle course. Children are encouraged to think about the importance of using the correct vocabulary, along with speaking clearly and precisely.**	**Program a Bee-Bot to accomplish a specific goal** **Independently explore the different blocks in Scratch Junior.** **Predict the behaviour of simple programs using logical reasoning with support.** -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	**Predict the route of a Bee-Bot, try it out and explain what happened.** **Navigate a Bee-bot from A to B while missing out C.** **Articulate what debugging is and debug instructions if/when they go wrong independently.** **Create a maths quiz using Scratch Junior.** -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	**Understand the basics of Scratch.** **Create sequences by clicking blocks together.** **Understand how sound blocks work.** **Plan and create a rock band with 5 instruments.** **Duplicate code.** **Use repetition and 'pen down.'** **Design and create a simple maze-based challenge.** **Create a drawing program (Etch a Sketch).** **Build and program a Lego robot to accomplish a specific goal.** -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output- -Use logical reasoning to explain how some	**Understand the basics of Scratch.** **Understand how motion blocks work.** **Understand how sound blocks work.** **Create sequences by clicking blocks together.** **Plan and create a rock band with more than 5 instruments.** **Duplicate code.** **Use repetition and 'pen down.'** **Design and create a simple maze-based challenge.** **Create a drawing program (Etch a Sketch).** **Build and program a Lego robot to accomplish a specific goal.** -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts --Use sequence, selection, and repetition in programs;	**Use selection in an infinite loop to check a condition.** **Identify the condition and outcomes in an 'if… then… else…' statement.** **Design the flow of a program which contains 'if… then… else…'** **Use a design format to outline my project.** **Identify the outcome of user input in an algorithm.** **Implement my algorithm to create the first section of my program.** **Test my program.** **Identify ways the program could be improved.** -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -Use logical reasoning to explain how some	**Use selection in an infinite loop to check a condition.** **Identify the condition and outcomes in an 'if… then… else…' statement.** **Design the flow of a program which contains 'if… then… else…'** **Use a design format to outline my project.** **Identify the outcome of user input in an algorithm.** **Implement my algorithm to create the first section of my program.** **Test my program.** **Identify ways the program could be improved.** **Extend a program further.** **Use variables within a program.** -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs;

			simple algorithms work and to detect and correct errors in algorithms and 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	simple algorithms work and to detect and correct errors in algorithms and 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

Programming Cycle B						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Children in EYFS are able to participate in a variety of tasks with digital devices, such as moving a Bee Bot around a classroom. This ensures that they are familiar with the device before being asked to undertake tasks related to the key stage one computing curriculum, such as writing and testing a simple program. **Children are given the opportunity to develop their understanding of technology through unplugged activities. Children are asked to give precise instructions verbally, such as giving instructions to a friend so that they can complete an obstacle course. Children are encouraged to think about the importance of using the correct vocabulary, along with speaking clearly and precisely.**	**Create an algorithm for a familiar activity by sequencing up to 5 pictures (i.e. brushing teeth).** **Create, follow and debug an algorithm from a set 5 pictorial instructions.** **Independently explore the different blocks in Scratch Junior.** **Predict the behaviour of simple programs using logical reasoning with support.** -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.	**Create an algorithm for brushing your teeth by sequencing more than 5 pictures (i.e. brushing teeth).** **Create, follow and debug an algorithm from a set of more than 5 pictorial instructions.** **Articulate what debugging is and debug instructions if/when they go wrong independently.** **Create an animation using Scratch Junior.** -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.	**Build a robot that can drive and turn, and then program it to move on a surface using WeDo Lego 2.0 with support; using sequence and repetition.** -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	**Build a robot that can drive and turn, and then program it to move on a surface using WeDo Lego 2.0 independently; using sequence and repetition.** -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	**Recall how conditions are used in selection.** **Identify and modify conditions in a program.** **Create a program with different outcomes using selection.** **Explain that program flow can branch according to a condition.** **Use selection in an infinite loop to check a condition.** **Identify the condition and outcomes in an 'if… then… else…' statement.** **Design the flow of a program which contains 'if… then… else…'** **Use a design format to outline my project.** **Identify the outcome of user input in an algorithm.** **Implement my algorithm to create the first section of my program.** **Test my program.** **Identify ways the program could be improved.** -Design, write and debug programs that	**Share my program with others.** **Identify ways the program could be improved.** **Identify the setup code I need in my program.** **Extend my program further.** **Use selection in an infinite loop to check a condition.** **Identify the condition and outcomes in an 'if… then… else…' statement.** **Design the flow of a program which contains 'if… then… else…'** **Use a design format to outline my project.** **Identify the outcome of user input in an algorithm.** **Implement my algorithm to create the first section of my program.** **Test my program.** **Identify ways the program could be improved.** **Extend a program further.** **Use variables within a program.**

					accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	-Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

Handling Data						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Sorting and categorising physical objects. **Explaining how items have been sorted and categorised.** **Sorting themselves into groups based upon given categories before undertaking this activity independently.**	**Introduced to data handling (mini-beast hunt) with the class on the IWB.** - Use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Introduced to data handling (mini-beast hunt) with the class on the IWB.** - Use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Design and make a DIY weather station.** **Understand what data is and why we collect it.** **Know what the function of a database is.** **Create a 'Class Database,' containing information about the**	**Design and make a DIY weather station.** **Understand what data is and why we collect it.** **Know what the function of a database is.** **Create a 'Class Database,' containing information about the**	**Know what a spreadsheet is.** **Create a spreadsheet showing how far certain UK attractions are from school and how long it will take to get there by selecting the most appropriate data format for each column.**	**Know what a spreadsheet is.** **Create a spreadsheet showing how far certain UK attractions are from school and how long it will take to get there by selecting the most appropriate data format for each column.**

Children respond to yes/no questions as an introduction to branching databases. **Children learn branching databases through physical sorting and categorising.**						

			children in the class (paper-based and then electronic). **Design a questionnaire (using Google Forms) to store information about the weather and fill it in.** **Use the database to answer a list of questions, e.g What day was the highest temperature? How much rain was there on Tuesday? Etc.** **Pose own questions for a friend to answer.** **Explore presenting the data in different ways.** -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	**children in the class (paper-based and then electronic).** **Design a questionnaire (using Google Forms) to store information about the weather and fill it in.** **Use the database to answer a list of questions, e.g What day was the highest temperature? How much rain was there on Tuesday? Etc.** **Pose own questions for a friend to answer.** **Explore presenting the data in different ways.** -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	**Know what formula is and how it can be used to produce calculated data.** **Create a spreadsheet showing a group of children's times table scores over a six-week period.** **Create a spreadsheet planning a celebratory event for the class. Begin by creating a budget.** **Choose suitable ways to present data.** -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	**Know what formula is and how it can be used to produce calculated data.** **Create a spreadsheet showing a group of children's times table scores over a six-week period.** **Create a spreadsheet planning a celebratory event for the class. Begin by creating a budget.** **Choose suitable ways to present data.** -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

Online Safety – Cycle A and B (Project Evolve)						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
A range of age-appropriate books are used for the children to examine online safety, such as Digi Duck and Smartie the Penguin. Children are very much encouraged o speak to a trusted adult if something upsets them online.	**Recognise that there may be people online who could make someone feel sad, embarrassed or upset.** **Give examples of when and how to speak to an adult they can trust and how they can help.** **Give examples of when they should ask permission to do something online and explain why this is important.** **Use the internet with adult support to communicate with people they know (e.g. video call apps or services).** **Explain why it is important to be considerate and kind to people online and to respect their choices.** **Explain why things one person finds funny or sad online may not always be seen in the same way by others.**	**Explain how other people may look and act differently online and offline.** **Give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened and give examples of how they might get help.** **Give examples of how someone might use technology to communicate with others they don't also know offline and explain why this might be risky. (e.g. email, online gaming, a pen-pal in another school / country).** **Explain who they should ask before sharing things about themselves or others online.**	**Explain what is meant by the term 'identity'.** **Explain how people can represent themselves in different ways online.** **Explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why.** **Describe ways people who have similar likes and interests can get together online.** **Explain what it means to 'know someone' online and why this might be different from knowing someone offline.** **Explain what is meant by 'trusting someone**	**Explain how their online identity can be different to their offline identity.** **Describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.** **Explain that others online can pretend to be someone else, including their friends, and can suggest reasons why they might do this.** **Describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms).** **Give examples of how to be respectful to**	**Explain how identity online can be copied, modified or altered.** **Demonstrate how to make responsible choices about having an online identity, depending on context.** **Give examples of technology-specific forms of communication (e.g. emojis, memes and GIFs).** **Explain that there are some people they communicate with online who may want to do them or their friends harm.** **Recognise that this is not their fault.** **Describe some of the ways people may be**	**Identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online.** **Describe issues online that could make anyone feel sad, worried, uncomfortable or frightened.** **Know and give examples of how to get help, both on and offline.** **Explain the importance of asking until they get the help needed.** **Explain how sharing something online may**

	Recognise that information can stay online and could be copied. Describe what information they should not put online without asking a trusted adult first. Describe how to behave online in ways that do not upset others and can give examples. Give simple examples of how to find information using digital technologies, e.g. search engines, voice activated searching. Know / understand that we can encounter a range of things online including things we like and don't like as well as things which are real or make believe / a joke. Know how to get help from a trusted adult if they see content that makes them feel sad, uncomfortable, worried or frightened. Explain rules to keep themselves safe when using technology both in and beyond the home. Explain that passwords are used to protect information, accounts and devices. Recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names). Explain why it is important to always ask a trusted adult before sharing any personal information	Describe different ways to ask for, give, or deny their permission online and can identify who can help them if they are not sure. Explain why they have a right to say 'no' or 'I will have to ask someone'. Explain who can help them if they feel under pressure to agree to something they are unsure about or don't want to do. Identify who can help them if something happens online without their consent. Explain how it may make others feel if they do not ask their permission or ignore their answers before sharing something about them online. Explain why they should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online Explain how information put online about someone can last for a long time. Describe how anyone's online information could be seen by others.	online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with. Explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried. Explain how someone's feelings can be hurt by what is said or written online. Explain the importance of giving and gaining permission before sharing things online; how the principles of sharing online is the same as sharing offline e.g. sharing images and videos. Explain how to search for information about others online. Give examples of what anyone may or may not be willing to share about themselves online. Explain the need to be careful before sharing anything personal.	others online and describe how to recognise healthy and unhealthy online behaviours. Explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs. Describe how to find out information about others by searching online. Explain ways that some of the information about anyone online could have been created, copied or shared by others. Recognise when someone is upset, hurt or angry online. Describe ways people can be bullied through a range of media (e.g. image, video, text, chat). Explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation). Analyse information to make a judgement	involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups). Explain how someone can get help if they are having problems and identify when to tell a trusted adult. Demonstrate how to support others (including those who are having difficulties) online. Search for information about an individual online and summarise the information found. Describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect. Recognise online bullying can be different to bullying in the physical world and can describe some of those differences. Describe how what one person perceives as playful joking and teasing (including	have an impact either positively or negatively. Describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not. Describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs. Explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this. Explain the ways in which anyone can develop a positive online reputation. Explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity. Describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to

	online, belonging to themselves or others. **Explain why work they create using technology belongs to them.** **Say why it belongs to them (e.g. 'I designed it' or 'I filmed it'').** **Save work under a suitable title or name so that others know it belongs to them (e.g. filename, name on content).** **Understand that work created by others does not belong to them even if they save a copy.** -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.	**Know who to talk to if something has been put online without consent or if it is incorrect.** **Explain what bullying is, how people may bully others and how bullying can make someone feel.** **Explain why anyone who experiences bullying is not to blame.** **Talk about how anyone experiencing bullying can get help.** **Use simple keywords in search engines.** **Demonstrate how to navigate a simple webpage to get to information they need (e.g. home, forward, back buttons; links, tabs and sections).** **Explain what voice activated searching is and how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri).** **Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'** **Explain why some information they find**	**Explain who someone can ask if they are unsure about putting something online.** **Describe appropriate ways to behave towards other people online and why this is important.** **Give examples of how bullying behaviour could appear online and how someone can get support.** **Demonstrate how to use key phrases in search engines to gather accurate information online.** **Explain how the internet can be used to sell and buy things.** **Explain the difference between a 'belief', an 'opinion' and a 'fact. and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc.** **Explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed).** **Describe and demonstrate how they can get help from a trusted adult if they see content that makes them feel sad,**	**about probable accuracy and they understand why it is important to make their own decisions regarding content and that their decisions are respected by others.** **Describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).** **Describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online.** **Explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.** **Explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be.** **Explain what is meant by fake news e.g. why some people will create stories or alter**	**'banter') might be experienced by others as bullying.** **Explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult.** **Identify a range of ways to report concerns and access support both in school and at home about online bullying.** **Explain how to block abusive users.** **Describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline or The Mix).** **Explain the benefits and limitations of using different types of search technologies e.g. voice-activation search engine.** **Explain how some technology can limit the information they are presented with.** **Explain what is meant by 'being sceptical' and give examples of when and why it is important to be 'sceptical'.** **Evaluate digital content and explain how to make choices about**	**share with others who can help them.** **Explain how someone would report online bullying in different contexts.** **Explain how search engines work and how results are selected and ranked.** **Explain how to use search technologies effectively.** **Describe how some online information can be opinion and can offer examples.** **Explain how and why some people may present 'opinions' as 'facts'; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal.** **Define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news).** **Understand the concept of persuasive design and how it can be used to influences peoples' choices.**

		online may not be real or true. Explain simple guidance for using technology in different environments and settings e.g. accessing online technologies in public places and the home environment. Say how those rules / guides can help anyone accessing online technologies. Explain how passwords can be used to protect information, accounts and devices. Explain and give examples of what is meant by 'private' and 'keeping things private'. Describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords). Explain how some people may have devices in their homes connected to the internet and give examples (e.g. lights, fridges, toys, televisions). Recognise that content on the internet may belong to other people.	uncomfortable, worried or frightened. Explain why spending too much time using technology can sometimes have a negative impact on anyone and give some examples of both positive and negative activities where it is easy to spend a lot of time engaged. Explain why some online activities have age restrictions, why it is important to follow them and know who they can talk to if others pressure them to watch or do something online that makes them feel uncomfortable (e.g. age restricted gaming or web sites). Describe simple strategies for creating and keeping passwords private. Give reasons why someone should only share information with people they choose to and can trust. Explain that if they are not sure or feel pressured then they should tell a trusted adult. Describe how connected devices can collect and share	photographs and put them online to pretend something is true when it isn't. Explain how using technology can be a distraction from other things, in both a positive and negative way. Identify times or situations when someone may need to limit the amount of time they use technology e.g. Suggest strategies to help with limiting this time. Describe strategies for keeping personal information private, depending on context. Explain that internet use is never fully private and is monitored, e.g. adult supervision. Describe how some online services may seek consent to store information about them and know how to respond appropriately and who they can ask if they are not sure. Know what the digital age of consent is and the impact this has on online services asking for consent.	what is trustworthy e.g. differentiating between adverts and search results. Explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence. Identify ways the internet can draw us to information for different agendas, e.g. website notifications, pop-ups, targeted ads. Describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, influencers). Explain what is meant by the term 'stereotype', how 'stereotypes' are amplified and reinforced online, and why accepting 'stereotypes' may influence how people think about others. Describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful. Explain what is meant by a 'hoax'.	Demonstrate how to analyse and evaluate the validity of 'facts' and information and explain why using these strategies are important. Explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this. Describe the difference between online misinformation and dis-information. Explain why information that is on a large number of sites may still be inaccurate or untrue and assess how this might happen (e.g. the sharing of misinformation or disinformation). Identify, flag and report inappropriate content. Describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. Recognise and discuss the pressures that technology can place on someone and how /

		Describe why other people's work belongs to them. -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.	**anyone's information with others.** **Explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause.** -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	**When searching on the internet for content to use, they can explain why they need to consider who owns it and whether they have the right to reuse it.** **Give some simple examples of content which they must not use without permission from the owner, e.g. videos, music, images.** -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	**Explain why someone would need to think carefully before they share.** **Describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively.** **Describe some strategies, tips or advice to promote health and wellbeing with regards to technology.** **Recognise the benefits and risks of accessing information about health and well-being online and how we should balance this with talking to trusted adults and professionals.** **Explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing.** **Explain what a strong password is and demonstrate how to create one.** **Explain how many free apps or services may**	**when they could manage this.** **Recognise features of persuasive design and how they are used to keep users engaged (current and future use).** **Assess and action different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).** **Describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser).** **Explain what to do if a password is shared, lost or stolen.** **Describe how and why people should keep their software and apps up to date, e.g. auto updates.** **Describe simple ways to increase privacy on apps and services that provide privacy settings.** **Describe ways in which some online content targets people to gain money or information illegally and describe strategies to help them**

					read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. Explain what app permissions are and can give some examples. Assess and justify when it is acceptable to use the work of others. Give examples of content that is permitted to be reused and know how this content can be found online. -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	identify such content (e.g. scams, phishing). Know that online services have terms and conditions that govern their use. Demonstrate the use of search tools to find and access online content which can be reused by others. Demonstrate how to make references to and acknowledge sources they have used from the internet. -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

Vocabulary – What key vocabulary will our children need? When will it be introduced?
Vocabulary will be re-visited throughout all year groups as it is so important to communicate concepts

EYFS	Year 1/2A	Year 1/2B	Year 3/4A	Year 3/4B	Year 5/6A	Year 5/6B
Key Computing Vocabulary:						
Keyboard, mouse, Bee Bot, sort, instructions.	**computer, laptop, tablet, device, hardware, software, input, output, keyboard, mouse, mouse mat, touchpad, monitor, printer, scanner, speakers, network point, interactive whiteboard, data projector, wireless internet connector, Central Processing Unit (CPU), microphone, 3D printer, headphones, tools, predict, explore, explain, drag, drop, resize, reposition, word processing, touch type, dictation, portrait, landscape.** **Animation, images, text, software, animate, PowerPoint, motion path, custom path, text box, preview** **animate, electronic book, PowerPoint, transition, audio, record, text box, search engine, spreadsheet** **device, input, output, audio, stop, play, record, media file, PowerPoint, sound effect, QR code, online voice recorder** **algorithm, decomposition, photograph, instruction, order, decomposition, debugging, clear, precise, unambiguous, written, verbal, pictorial, logical reasoning, precise, unambiguous, program, loops, blocks, repetition** **pixel, Pointillism, dots, Seurat, program, tool, size, colour, Mondrian, fill, straight lines, primary colours, red, yellow, blue, Picasso, Cubism, shapes, manipulate, rotate, shade**		**desktop, smart phone, motherboard, Random Access Memory (RAM), Read-Only Memory (ROM), save, save as, data corruption, touch typing, edit, insert, font style, font size, font colour, resize, modify, alignment, wrapping, copyright, Pixabay, Creative Commons, image, text, bold, italics, underline, hyperlink, keyboard shortcuts.** **transparent backgrounds, digital devices** **presentation, animation, images, text, entrance effects, exit effects, motion paths, insert, audio, blank slides, action buttons, hyperlink, copyright free images, slide transitions, multimedia elements** **devices, input, output, podcast, quick record, re-recording, tracks, editing, creating effects, Audacity, play, stop, record, pause, skip to start, skip to end, waveform, Audio Track, slider, QR code, online voice recorder.** **programming environments, Scratch environment, program, default sprite, backdrop, stage, motion blocks, sequence, animate, switching costumes, debugging, instructions, Blocks palette, Code area, repetition, cursor control keys (arrows), sprite, duplicate, repetition, pen down, selection, debug**		**External device, Malware, virus infection, shutdown, physical hardware issues, source, bibliography, citation.** **presentation, insert, animation, images, text, entrance effects, exit effects, motion paths, audio, hyperlinks, action buttons, non-linear, slide transitions, video, multimedia elements, structure, layout** **video, Microsoft Photos, recording, reproducing, broadcasting, moving visual images, project library, cards, storyboard, scrubber, titles, captions, credits, 3D effects, music, narration** **devices, input, output, podcast, quick record, re-recording, tracks, editing, creating effects, Audacity, play, stop, record, pause, skip to start, skip to end, waveform, Audio Track, slider** **Selection, conditional statement, condition, outcome/action, variable**	