



National curriculum aims in Computing	
<p>The national curriculum for computing aims to ensure that all pupils:</p> <ul style="list-style-type: none"> • can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation • can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems • can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems • are responsible, competent, confident and creative users of information and communication technology 	
Computing Intent	
<p>At Hugglescote, we recognise that a high quality Computing education equips pupils to use computational thinking and creativity to understand and change the world. We recognise that Computing has deep links with Mathematics, Science and Design-Technology which prepares our pupils in being active participants in a digital world. We ensure that learning is exciting and purposeful. In order to achieve this, we focus on the three areas of Computing: Computer Science, IT and Digital Literacy. Our aim is for all children to be able to design and develop computer systems, use hardware and software confidently and express themselves through ICT. E-safety is actively taught and embedded throughout the curriculum to ensure the online safety of our pupils and staff.</p>	
Computing Implementation	
<p>A balanced curriculum that is sequenced appropriately across the three areas of computing with natural links to other curriculum areas. Planning demonstrates a substantive and disciplinary approach to teaching. Children develop fluency in using technology for a range of purposes. Staying safe online is integrated into all areas of the curriculum. It is taught specifically in computing and within PSHE. Computing lessons focus on collaboration and creativity by providing extended periods of time to work independently and with others to solve problems and develop the knowledge and skills required to be computational thinkers.</p>	
Disciplinary knowledge	Key vocabulary
<p>Children will develop their skills through:</p> <ul style="list-style-type: none"> • Tinkering: experimenting and playing • Creating: designing and making • Debugging: fixing and finding errors • Persevering: keeping going • Collaborating: working together 	<ul style="list-style-type: none"> • Logic: predicting and analysing • Algorithms: making steps and rules • Decomposition: breaking down into parts • Patterns: spotting and using similarities • Abstraction: removing unnecessary detail • Evaluation: making judgements • Debugging: fixing and finding errors

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Computing Vocabulary Progression						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Digital camera Ipad Tinker Function Images World wide web Touch screen Tablet Mouse Keyboard Mobile phone	algorithm bug computer debug input output program analogue digital font images multimedia safe search database table microphone speaker sprite virtual	algorithm bug code debug event input output program repetition Scratch Sprite pattern recognition crop filter pixel sensor Google mind map presentation search engine animation background character stage stop-motion	Algorithm Bug Code Debug Input Logical reasoning Output Program Repetition Scratch Sequence Sprite Variable Pixel Resolution Search engine Hyperlinks Hypertext mark-up language (HTML) Data Data protection Digital footprint Filter Survey	Algorithm Bug Debug Input Output Program Repetition Scratch Sequence Sprite Variable micro:bit Runtime Simulator Creative Commons Hyperlinks Hypertext mark-up language (HTML) Internet Locator (URL) Pixel	Algorithm Background Bug Code Debug Logical reasoning Program Scratch Sprite Cipher Codes Decrypt Encode Encrypt Computer-aided design (CAD) Creative Commons Hyperlinks Hypertext mark-up language (HTML) Hypertext transfer protocol (HTTP) Internet Internet Protocol (IP) addresses	Controller Decomposition Embedded system Input Interactive micro:bit Microprocessor Output Simulator System Algorithm Graph Linear search Search algorithm Creative Commons Desktop publishing (DTP) Folder Image Portable document format (PDF) Text Blog Fake news Hyperlink



		storyboard binary data database pixels tally charts			Pixel Safe search Augmented reality (AR) Global positioning system (GPS) QR code Virtual reality (VR)	Online bullying (cyberbullying) Social media Source Export Artificial intelligence Model

E-safety Vocabulary Progression



Enjoy, Learn, Achieve

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cyberbullying Worry Unhappy Online bully World Wide Web (www) YouTube Internet Search engine Childline	Child line Cyberbullying Domain name Emoji/emoticon Handheld device Internet network online bullying Search engines Twitter Skype URL (Uniform Resource Locator) Virus Web browser World Wide Web (www) YouTube	Child line Cyberbullying Domain name Emoji/emoticon Filters/filtering Handheld device Hashtag Internet network online bullying PEGI rating (Pan European Game Information) Search engines Twitter Skype URL (Uniform Resource Locator) Virus Web browser World Wide Web (www) YouTube	Child line Active digital footprint Anti-virus software Avatar Childnet Cyberbullying Digital footprint Domain name Emoji/emoticon Facebook Follower Friend list Gamertag Hacker Hacking Hashtag Instagram Internet Malware Netiquette Network Passive digital footprint peer pressure PEGI rating (Pan European Game Information) Phishing Search engine	Child line Active digital footprint Anti-virus software Avatar Childnet Cyberbullying Digital footprint Domain name Emoji/emoticon Facebook Follower Friend list Gamertag Hacker Hacking Hashtag Instagram Internet Internet/ Online identities IP address (Internet Protocol Address) Malware Netiquette Network Passive digital footprint peer pressure	Child line CEOP Blogger Bystander Childnet Copyright Device Digital footprint Endorsement Facebook Fair use Free to play Hacking In app purchases In game purchases Instagram Internet Keyword Cyberbullying Paymium PEGI rating (Pan European Game Information) Snapchat Twitter Virus Vlogging Vlogger Web browser YouTube	Child line CEOP Blogger Bystander Childnet Copyright Device Digital footprint Endorsement Facebook Fair use Free to play Hacking In app purchases In game purchases Instagram Internet Keyword Nude selfie Cyberbullying Paymium PEGI rating (Pan European Game Information) Sexting Snapchat Twitter Virus Vlogging Vlogger

Computing Content Progression



			<p>Twitter URL (Uniform Resource Locator) Virtual friends Virus Web browser YouTube</p>	<p>PEGI rating (Pan European Game Information) Phishing Search engine Spyware Trojan Twitter URL (Uniform Resource Locator) Virtual friends Virus Web browser YouTube</p>		<p>Web browser YouTube</p>

E-safety learning focused on during the Autumn term. This is then then embedded throughout the rest of the year during Computing, PSHE and other subjects where appropriate. Learning from Year to Year is built on in so children remember and can apply what they understand about E-safety.

Hugglescote Priority: Mental Health and Wellbeing

E-Safety						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> Developing an understanding of which adults they can trust. Naming the adults they can trust if they have a problem online. Being able to discuss and share how they are feeling when online or using technology Understanding that breaks from technology are needed to stay healthy. Knowing what to do when 	<p>Unit 1.1 – We are Year 1 rule writers</p> <ul style="list-style-type: none"> understand that rules help us stay safe, both in the real world and online. suggest strategies for staying safe in different online scenarios. help to develop a set of online safety rules that are easily understood and appropriate for Year 1. <p>Unit 1.2 – We are kind and thoughtful</p> <ul style="list-style-type: none"> understand that unkind behaviour online can 	<p>Unit 2.1 – We are Year 2 rule writers</p> <ul style="list-style-type: none"> consider online safety scenarios encountered in Year 1 (both at school and at home) and appreciate how these new experiences can be used to update their online safety rules. consider what strategies they might use if their usual trusted adult is not available review and edit their 	<p>Unit 3.1 – We are Year 3 rule writers</p> <ul style="list-style-type: none"> Consider online safety scenarios encountered in Year 2 (both at school and at home) and appreciate how these new experiences can be used to refine their online safety rules. Consider what new strategies they can apply to online safety scenarios, such as calling Childline. Review and edit their online safety guidelines. <p>Develop and edit their online safety rules so they are easily understood and</p>	<p>Unit 4.1 – We are Year 4 rule writers</p> <ul style="list-style-type: none"> Consider online safety scenarios encountered in Year 3 (both at school and at home) and appreciate how these new experiences can be used to update their online safety rules. Consider what new strategies they can apply to online safety scenarios, beyond talking to a trusted adult. Review and edit their 	<p>Unit 5.1 – We are Year 5 rule writers</p> <ul style="list-style-type: none"> Consider online safety scenarios encountered in Year 4 (both at school and at home) and appreciate how these new experiences can be used to update their online safety rules. Consider what new strategies they can apply to online safety scenarios, such as clicking the CEOP ‘Report abuse’ button. Review and edit their online 	<p>Unit 6.1 – We are online safety ambassadors</p> <ul style="list-style-type: none"> Consider online safety scenarios encountered in Year 5 (both at school and at home) and appreciate how these new experiences can be used to update their online safety rules. Consider what new strategies they can apply to

<p>they are not happy about something online or when using technology.</p> <ul style="list-style-type: none"> Developing online safety rules which are understood and appropriate for EYFS. 	<p>affect other people, even though we can't see them.</p> <ul style="list-style-type: none"> understand that the rules created in Unit 1.1 can be applied to any concerns they may have about their online activities. <p>Unit 1.3 – We are responsible internet and device users</p> <ul style="list-style-type: none"> learn the very basic principles of what the internet is. understand how people use the internet. understand that using computer devices too often can be bad for us and we should take time out from technology to do other things. 	<p>online safety guidelines.</p> <ul style="list-style-type: none"> develop their online safety rules so they are easily understood and appropriate for Year 2 pupils. <p>Unit 2.2 – We are not online bullies</p> <ul style="list-style-type: none"> begin to understand the concept of online bullying and the role of the bystander. develop an understanding of the consequences of online bullying. <p>recall their online safety rules for reporting concerns and inappropriate behaviour.</p> <p>Unit 2.3 – We are safe searchers</p> <ul style="list-style-type: none"> understand the very basic 	<p>appropriate for Year 3 pupils.</p> <p>Unit 3.2 – We are digital friends</p> <ul style="list-style-type: none"> begin to understand that information shared online cannot always be controlled develop a deeper understanding of the consequences of online bullying. understand the role of a bystander in online bullying. <p>Unit 3.3 – We are internet detectives</p> <ul style="list-style-type: none"> use clues to make choices about which web pages they consider most useful and trustworthy. understand that not all links are safe or trustworthy. 	<p>online safety guidelines.</p> <p>Develop their online safety rules so they are easily understood and appropriate for Year 4 pupils.</p> <p>Unit 4.2 – We are standing up to peer pressure</p> <ul style="list-style-type: none"> Understand that peer pressure can be a positive and negative influence. Understand that access to the internet is not the same for everyone. Recall ways to report concerns and inappropriate behaviour. <p>Unit 4.3 – We are aware that our online content lasts forever</p> <ul style="list-style-type: none"> Understand that because of the internet, 	<p>safety guidelines.</p> <p>Develop their online safety rules so they are easily understood and appropriate for Year 5 pupils.</p> <p>Unit 5.2 – We are responsible for our online actions</p> <ul style="list-style-type: none"> Recognise that online behaviour can have real life negative effects on other people. Understand that we must take responsibility for our own actions online, regardless of what other people are doing. Critically assess all information surrounding an online safety scenario to decide whether 	<p>online safety scenarios, such as using reporting buttons within websites and apps.</p> <ul style="list-style-type: none"> Review and edit their online safety guidelines. Develop their online safety rules so they are easily understood and appropriate for Year 6 pupils. <p>Unit 6.2 – We will not share inappropriate images</p> <ul style="list-style-type: none"> Understand the negative consequences of sharing nude selfies.
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	<ul style="list-style-type: none"> • discuss what to do if they see or hear something online that upsets them. <p>Unit 1.4 – We are protectors</p> <ul style="list-style-type: none"> • understand what is meant by ‘personal information’. • recognise that anyone online who we don’t know in real life is a stranger. • understand how we can protect our personal information, including reporting worries to trusted adults. <p>Unit 1.5 – We are good digital citizens</p> <ul style="list-style-type: none"> • understand what is meant by ‘digital citizen’. • understand how to be 	<p>principles of how search engines work.</p> <ul style="list-style-type: none"> • understand the key steps for searching the web safely. • understand how to report concerns when searching the web. <p>Unit 2.4 – We are code masters</p> <ul style="list-style-type: none"> • understand that passwords are an important part of keeping information safe. • understand the differences between strong and weak passwords. <p>understand that sharing a password makes it weak.</p> <p>Unit 2.5 – We are online behaviour experts</p> <ul style="list-style-type: none"> • understand that the way technology is used is as 	<p>understand different ways to report concerns and inappropriate behaviour.</p> <p>Unit 3.4 – We are aware of our digital footprint</p> <ul style="list-style-type: none"> • Understand that every time we use the internet we leave a digital trail that can be found, copied, shared and broadcast <p>Understand that the things we upload onto the internet last forever.</p> <p>Unit 3.5 – We are netiquette experts</p> <ul style="list-style-type: none"> • understand that good online behaviour is important for making the internet an enjoyable place for everyone • understand that email is a widely used 	<p>information can be spread more quickly and reach more people now than at any time in the past.</p> <p>Understand that although information posted on the internet might not always be true or accurate, it lasts forever.</p> <p>Unit 4.4 – We are online risk managers</p> <ul style="list-style-type: none"> • Understand the risks involved in clicking on and opening links on suspicious websites and in emails. • Understand that hacking can be illegal and has consequences for the hacker. <p>Develop awareness of viruses and what to do if they think</p>	<p>it constitutes online bullying.</p> <ul style="list-style-type: none"> • Use their knowledge of online safety to reach a consensus on the appropriate response to an online incident. <p>Unit 5.3 – We are content evaluators</p> <ul style="list-style-type: none"> • Understand that some people get paid to endorse products online. • Develop a discerning attitude to online content so that they can confidently reach their own conclusions. <p>Appreciate the value of trusted adults in helping them reach an informed conclusion.</p>	<ul style="list-style-type: none"> • Develop confidence in saying no when they are posed with a request for inappropriate and/or indecent images of themselves. • Understand that once an image is online, it stays online forever. • Understand what is meant by nude selfies and learn that, sending, sharing and storing inappropriate images of Under-18s is a crime. <p>Unit 6.3 – We are safe social networkers</p> <p>Unit 6.4 – We are respectful of others</p>
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	<p>responsible, respectful and safe online.</p> <ul style="list-style-type: none"> understand that being a good digital citizen means having a kind heart, a warning tummy and a thinking brain; all things that keep us safe online. recall what to do if something happens online that makes them feel uncomfortable – building on <i>Unit 1.4 – We are information protectors</i> lesson. <p>Unit 1.6 – We are responsible gamers</p> <ul style="list-style-type: none"> understand the importance of playing games in shared spaces where grown-ups are available for support. 	<p>important as good online behaviour.</p> <ul style="list-style-type: none"> understand that the way we use technology impacts the people around us. further develop responses to incidents of poor behaviour online. <p>Unit 2.6 – We are game raters</p> <ul style="list-style-type: none"> recognise the PEGI age rating system for digital games. understand that the system is useful for helping people decide which games are appropriate. understand what to do if someone 	<p>form of digital communication that lasts forever and can be shared.</p> <p>Unit 3.6 – We are avatar creators</p> <ul style="list-style-type: none"> understand that internet identities are actively constructed by the user recognise that internet identities can be misleading or not representative of the creator recall that personal information should not be shared by anyone online who we don't know in real life. 	<p>their account has been compromised.</p> <p>Unit 4.5 – We are respectful of digital rights and responsibilities</p> <ul style="list-style-type: none"> Understand that both digital rights and responsibilities are important to ensure the internet is a great place for everyone. Understand that there are consequences for knowingly ignoring rights. Further develop a positive and responsible attitude towards technology and internet use. <p>Unit 4.6 – We are careful when talking to virtual friends</p>	<p>Unit 5.4 – We are protecting our online reputation</p> <ul style="list-style-type: none"> Understand that posting inappropriate information online can cause regret later. Understand how to manage their online reputation. Understand that, although information posted on the internet might not always be true or accurate, it can last forever. <p>Understand that it is possible to search the internet for information about particular individuals.</p> <p>Unit 5.5 – We are respectful of copyright</p> <ul style="list-style-type: none"> Understand that copyright 	<ul style="list-style-type: none"> Understand that they need to respect other people's preferences when uploading images or video to the internet. Understand that everyone has the right to privacy and can refuse permission for images or videos of themselves being uploaded to the internet. <p>Develop their understanding that content posted on the internet can last forever.</p> <p>Unit 6.5 – We are online safety problem solvers</p> <ul style="list-style-type: none"> Develop confidence in
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	<ul style="list-style-type: none"> understand the importance of taking breaks away from technology. 	<p>nearby is playing a game which is inappropriate for them.</p>		<ul style="list-style-type: none"> Understand that virtual friends are still strangers that they do not know. Apply their knowledge of online safety to decide what information they, as virtual friends, can safely share online. Recap rules for reporting suspicious or uncomfortable online situations. 	<p>laws exist to protect original content creators.</p> <ul style="list-style-type: none"> Understand that content they choose to use or upload on the internet may be subject to copyright laws. Further develop their understanding of rights and responsibilities as digital citizens. <p>Unit 5.6 – We are game changers</p> <ul style="list-style-type: none"> Understand different business models for online games. Understand that accounts for devices are linked to real-life bank accounts. Understand that some 	<p>their ability to act appropriately when confronted with unfamiliar situations involving technology and the internet.</p> <ul style="list-style-type: none"> Revisit the key concepts of digital citizenship. <p>Unit 6.6 – We are safe gaming experts</p> <ul style="list-style-type: none"> Understand the risks involved with online gaming, including exposure to inappropriate content, grooming, bullying, trolling and the use of bribery tactics. Understand that research and parental controls and
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					<p>features in online games and apps cost real money.</p> <ul style="list-style-type: none"> • Understand that research, parental controls and device settings are tools we can use to help us game confidently. 	<p>device settings are tools we can use to help us game safely and confidently.</p> <ul style="list-style-type: none"> • Apply their knowledge of safe gaming practices to plan and deliver an assembly to other children and/or parents. <p>Consolidate everything they have learnt about age-appropriate online gaming.</p>
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EYFS

Within the revised EYFS statutory framework, the Technology strand within Understanding the World has been removed. However, there are opportunities within each area of the framework to enable practitioners to effectively prepare children for studying the computing curriculum.

Objectives to be taught in EYFS:

- Be able to name the technology they use in school and at home.
- Begin to use technology (ipads, digital cameras, beetbots, voice recording, videoing) purposefully to create digital content.
- Become familiar with a range of input devices- keyboard and mouse.
- Be able to follow a sequence of events such as a journey or in a story.
- Begin to be able to give precise instructions using directional language- left, right, up and down.
- Begin to recognise mistakes in instructions and how to fix them.

<p>Understanding the world Hugglescote Priority: Communication</p>	<p>Classrooms contain a role play area with a range of technology, both functioning and model / broken devices, or a variety of electronic toys, such as remote controlled cars, walkie-talkies and interactive pets, as part of continuous provision. Further technology could be included in conjunction with other activities, such as digital cameras for pupils to photograph their own learning, although children need to be given the opportunity to select and use technology for a certain purpose.</p>
<p>Literacy Hugglescote Priority: Community</p>	<p>Children create a story about the Bee Bot's journey, such as around a local area or a country being studied, or sequence events within a story being studied.</p>
<p>Physical Development Hugglescote Priority: Wellbeing</p>	<p>Children are given opportunities to become familiar with a range of input devices, including the keyboard and mouse, in order to develop the required fine motor skills.</p>
<p>Communication and Language Hugglescote Priority: Communication, Mental Health and Wellbeing</p>	<p>Unplugged activities, or those away from the machine, give children an opportunity to develop their understanding of technology without the need for expensive devices. Children could be asked to give precise instructions verbally and links made to the importance of using the correct vocabulary, along with speaking clearly and precisely. Giving instructions could also form part of sessions linked to physical development activities, such as determining rules for certain playground games.</p>
<p>Personal, Social and Emotional Development Hugglescote Priority: Communication, Mental Health and Wellbeing</p>	<p>Voice recorders, or the microphone built into a tablet device, are used to record how pupils are feeling, or to discuss their relationships with others. This could be extended through pupils creating their own videos, which could also link to children giving online safety guidance to their peers on appropriate use of technology and what to do if they feel worried or concerned when using a device. (Links to Safer Internet Day)</p>
<p>Expressive Arts and Design Hugglescote Priority: Communication, Mental Health and Wellbeing, Community</p>	<p>Creative outcomes can be produced, which allows pupils to take ownership of their work. Outputs produced could be linked to other uses of technology, such as producing mats for Bee Beets to travel around, whilst other physical computing devices, such as <u>Spheros</u>, can even be put into paint and controlled using a tablet device to produce images. Outfits for a device to wear, such as Bee Bot head dresses or Sphero paper cup people, could also be developed.</p>
<p>Mathematics</p>	<p>Controlling devices provides an excellent opportunity to develop pupils' understanding of left and right, along with directional language. Pupils could be asked to guide a device around a shape for example to develop this understanding further.</p>

Hugglescote Priority: Communication, Wellbeing	
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<p>EYFS outcome</p> <ul style="list-style-type: none"> To effectively prepare children for studying the computing curriculum.

Computer Science						
	<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
Year 1	<p>1.1 We are treasure hunters Understand what algorithms are Understand how algorithms are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p>	<p>1.2 We are TV chefs Understand what algorithms are</p>	<p>1.3 We are Digital Artists</p>	<p>1.4 We are Publishers</p>	<p>1.5 We are rhythmic</p>	<p>1.6 We are Detectives</p>
Year 2	<p>2.1 We are astronauts Understand what algorithms are. Understand how algorithms are implemented as programs on digital</p>	<p>2.2 We are game testers Understand what algorithms are. Understand how algorithms are implemented as programs on digital</p>	<p>2.3 We are photographers Understand what algorithms are.</p>	<p>2.4 We are safe researchers</p>	<p>2.5 We are animators</p>	<p>2.6 We are zoologists</p>

	devices, and that programs execute by following precise and unambiguous instructions.	devices, and that programs execute by following precise and unambiguous instructions.				
Year 3	<p>3.1 We are programmers Controlling or simulating physical systems. Solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables. Work with various forms of input and output. Use logical reasoning to detect and correct errors in algorithms and programs.</p>	<p>3.2 We are bug fixers Controlling or simulating physical systems. Solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables. Work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work. Use logical reasoning to detect and correct errors in algorithms and programs.</p>	<p>3.3 We are presenters</p>	<p>3.4 We are who we are</p>	<p>3.5 We are co-authors Understand computer networks including the Internet. Understand how networks can provide multiple services, such as the World Wide Web.</p>	<p>3.6 We are opinion pollsters Understand computer networks including the Internet. Understand how networks can provide multiple services, such as the World Wide Web.</p>
Year 4	<p>4.1 We are software developers</p>	<p>4.2 We are makers</p>	<p>4.3 We are musicians</p>	<p>4.4 We are bloggers</p>	<p>4.5 We are artists</p>	<p>4.6 We are meteorologists</p>

	<p>Design, write and debug programs that accomplish specific goals. Solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables. Work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work. Use logical reasoning to detect and correct errors in algorithms and programs.</p>	<p>Design, write and debug programs that accomplish specific goals. Controlling or simulating physical systems. Solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables. Work with various forms of input and output.</p>	<p>Use sequence, selection and repetition in programs; work with variables. Work with various forms of input and output.</p>	<p>Understand computer networks including the Internet. Understand how networks can provide multiple services, such as the World Wide Web.</p>	<p>Use sequence, selection and repetition in programs; work with variables. Work with various forms of input and output.</p>	<p>Solve problems by decomposing them into smaller parts. Work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work.</p>
Year 5	<p>5.1 We are game developers Design, write and debug programs that accomplish specific goals. Controlling or simulating physical systems.</p>	<p>5.2 We are cryptographers Use logical reasoning to explain how some simple algorithms work. Use logical reasoning to detect and correct errors in algorithms and programs.</p>	<p>5.3 We are architects Solve problems by decomposing them into smaller parts.</p>	<p>5.4 We are web developers Understand computer networks including the Internet. Understand how networks can provide multiple services, such as the World Wide Web.</p>	<p>5.5 We are adventure gamers</p>	<p>5.6 We are VR designers Design, write and debug programs that accomplish specific goals. Controlling or simulating physical systems.</p>

	<p>Solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables. Work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work. Use logical reasoning to detect and correct errors in algorithms and programs.</p>	<p>Understand computer networks including the Internet. Understand how networks can provide multiple services, such as the World Wide Web.</p>				<p>Solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables. Work with various forms of input and output.</p>
Year 6	<p>6.1 We are toy makers Design, write and debug programs that accomplish specific goals. Controlling or simulating physical systems. Solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in</p>	<p>6.2 We are computational thinkers Design, write and debug programs that accomplish specific goals. Use sequence, selection and repetition in programs; work with variables. Work with various forms of input and output.</p>	<p>6.3 We are publishers Understand computer networks including the Internet. Understand how networks can provide multiple services, such as the World Wide Web.</p>	<p>6.4 We are connected Understand computer networks including the Internet. Understand how networks can provide multiple services, such as the World Wide Web.</p>	<p>6.5 We are advertisers</p>	<p>6.6 We are AI developers Design, write and debug programs that accomplish specific goals. Controlling or simulating physical systems. Solve problems by decomposing them into smaller parts.</p>

	<p>programs; work with variables. Work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work. Use logical reasoning to detect and correct errors in algorithms and programs.</p>	<p>Use logical reasoning to explain how some simple algorithms work. Use logical reasoning to detect and correct errors in algorithms and programs.</p>				
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Information Technology						
	<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
Year 1	<p>1.1 We are treasure hunters</p>	<p>1.2 We are TV chefs Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.</p>	<p>1.3 We are Digital Artists Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.</p>	<p>1.4 We are Publishers Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.</p>	<p>1.5 We are rhythmic Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.</p>	<p>1.6 We are Detectives Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.</p>
Year 2	<p>2.1 We are astronauts</p>	<p>2.2 We are game testers</p>	<p>2.3 We are photographers</p>	<p>2.4 We are safe researchers</p>	<p>2.5 We are animators</p>	<p>2.6 We are zoologists</p>

			Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.	Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.	Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.	Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.
Year 3	3.1 We are programmers	3.2 We are bug fixers	3.3 We are presenters Select, use and combine a variety of software (including Internet services) on a range of digital devices Design and create a range of programs, systems and content that accomplish given goals. Collecting, analysing, evaluating and presenting data and information.	3.4 We are who we are Select, use and combine a variety of software (including Internet services) on a range of digital devices Design and create a range of programs, systems and content that accomplish given goals. Collecting, analysing, evaluating and presenting data and information.	3.5 We are co-authors Use search technologies effectively. Appreciate how search results are selected and ranked.	3.6 We are opinion pollsters Select, use and combine a variety of software (including Internet services) on a range of digital devices. Design and create a range of programs, systems and content that accomplish given goals. Collecting, analysing, evaluating and presenting data and information.
Year 4	4.1 We are software developers	4.2 We are makers	4.3 We are musicians Select, use and combine a variety of software (including Internet services) on	4.4 We are bloggers Design and create a range of programs, systems and content that accomplish given goals.	4.5 We are artists Select, use and combine a variety of software (including Internet services) on	4.6 We are meteorologists Select, use and combine a variety of software (including Internet services) on



			<p>a range of digital devices. Design and create a range of programs, systems and content that accomplish given goals.</p>	<p>Collecting, analysing, evaluating and presenting data and information.</p>	<p>a range of digital devices. Design and create a range of programs, systems and content that accomplish given goals.</p>	<p>a range of digital devices. Design and create a range of programs, systems and content that accomplish given goals. Collecting, analysing, evaluating and presenting data and information. Use search technologies effectively. Appreciate how search results are selected and ranked.</p>
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Year 5	<p>5.1 We are game developers</p>	<p>5.2 We are cryptographers</p>	<p>5.3 We are architects Select, use and combine a variety of software (including Internet services) on a range of digital devices. Design and create a range of programs, systems and content that accomplish given goals. Collecting, analysing, evaluating and presenting data and information. Use search technologies effectively. Appreciate how search results are selected and ranked.</p>	<p>5.4 We are web developers Select, use and combine a variety of software (including Internet services) on a range of digital devices. Design and create a range of programs, systems and content that accomplish given goals. Collecting, analysing, evaluating and presenting data and information.</p>	<p>5.5 We are adventure gamers Design and create a range of programs, systems and content that accomplish given goals. Collecting, analysing, evaluating and presenting data and information. Use search technologies effectively.</p>	<p>5.6 We are VR designers Select, use and combine a variety of software (including Internet services) on a range of digital devices. Design and create a range of programs, systems and content that accomplish given goals.</p>
Year 6	<p>6.1 We are toy makers</p>	<p>6.2 We are computational thinkers</p>	<p>6.3 We are publishers Select, use and combine a variety of software (including Internet services) on a range of digital devices. Design and create a range of programs, systems and content</p>	<p>6.4 We are connected Appreciate how search results are selected and ranked. Use search technologies effectively.</p>	<p>6.5 We are advertisers Select, use and combine a variety of software (including Internet services) on a range of digital devices. Design and create a range of programs, systems and content</p>	<p>6.6 We are AI developers Select, use and combine a variety of software (including Internet services) on a range of digital devices. Design and create a range of programs, systems and content</p>

			<p>that accomplish given goals. Collecting, analysing, evaluating and presenting data and information. Use search technologies effectively. Appreciate how search results are selected and ranked</p>		<p>that accomplish given goals. Collecting, analysing, evaluating and presenting data and information. Use search technologies effectively. Appreciate how search results are selected and ranked</p>	<p>that accomplish given goals. Collecting, analysing, evaluating and presenting data and information.</p>
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Digital Literacy						
	<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
Year 1	<p>1.1 We are treasure hunters</p>	<p>1.2 We are TV chefs Keeping personal information private.</p>	<p>1.3 We are Digital Artists 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>	<p>1.4 We are Publishers 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>	<p>1.5 We are rhythmic</p>	<p>1.6 We are Detectives Keeping personal information private.</p>
Year 2	<p>2.1 We are astronauts Identify where to go for help</p>	<p>2.2 We are game testers Use technology safely and respectfully.</p>	<p>2.3 We are photographers Use technology safely and respectfully.</p>	<p>2.4 We are safe researchers Keeping personal information private.</p>	<p>2.5 We are animators Use technology safely and respectfully.</p>	<p>2.6 We are zoologists Use technology safely and respectfully.</p>

	and support when they have concerns about content or contact on the Internet or other online technologies.	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.		Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.		Keeping personal information private.
Year 3	3.1 We are programmers	3.2 We are bug fixers	3.3 We are presenters Use technology safely, respectfully and responsibly.	3.4 We are who we are Use technology safely, respectfully and responsibly.	3.5 We are co-authors Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour. Know a range of ways to report concerns and inappropriate behaviour. Be discerning in evaluating digital content. Understand the opportunities networks offer for communication and collaboration.	3.6 We are opinion pollsters Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour. Know a range of ways to report concerns and inappropriate behaviour. Be discerning in evaluating digital content. Understand the opportunities networks offer for communication and collaboration.
Year 4	4.1 We are software developers	4.2 We are makers	4.3 We are musicians Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour.	4.4 We are bloggers Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour.	4.5 We are artists	4.6 We are meteorologists Be discerning in evaluating digital content.

			Know a range of ways to report concerns and inappropriate behaviour. Be discerning in evaluating digital content.	Know a range of ways to report concerns and inappropriate behaviour. Understand the opportunities networks offer for communication and collaboration.		
Year 5	5.1 We are game developers	5.2 We are cryptographers Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour. Know a range of ways to report concerns and inappropriate behaviour. Understand the opportunities networks offer for communication and collaboration.	5.3 We are architects Be discerning in evaluating digital content.	5.4 We are web developers Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour. Know a range of ways to report concerns and inappropriate behaviour. Be discerning in evaluating digital content. Understand the opportunities networks offer for communication and collaboration.	5.5 We are adventure gamers Use technology safely, respectfully and responsibly.	5.6 We are VR designers
Year 6	6.1 We are toy makers	6.2 We are computational thinkers	6.3 We are publishers Use technology safely, respectfully and responsibly. Be discerning in evaluating digital content. Understand the opportunities networks	6.4 We are connected Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour.	6.5 We are advertisers Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour.	6.6 We are AI developers

			offer for communication and collaboration.	Know a range of ways to report concerns and inappropriate behaviour. Be discerning in evaluating digital content. Understand the opportunities networks offer for communication and collaboration.	Know a range of ways to report concerns and inappropriate behaviour. Be discerning in evaluating digital content.	
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Unit Content Progression and E-safety						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Hugglescote Priority: Communication	Hugglescote Priority: Communication, Wellbeing, Community	Hugglescote Priority: Mental health and wellbeing, Communication	Hugglescote Priority: Communication, Wellbeing	Hugglescote Priority: Communication	Hugglescote Priority: Communication, Community
Year 1	We are Treasure Hunters <ul style="list-style-type: none"> that a programmable robot can be controlled by inputting a sequence of instructions to develop and record sequences of 	We are TV Chefs <ul style="list-style-type: none"> break down a process into simple, clear steps (an algorithm) use different features of a video camera use a video camera to 	We are Digital Artists <ul style="list-style-type: none"> how to select and set brushes and colours to create artwork in a range of styles on iPads to use the undo function if they make mistakes and to 	We are publishers <ul style="list-style-type: none"> plan a small multimedia eBook choose and import images record audio commentary add and format titles and other text 	We are rhythmic <ul style="list-style-type: none"> record audio on a digital device program sprites to playback recorded audio in ScratchJr program ScratchJr to create repeating rhythms 	We are Detectives <ul style="list-style-type: none"> how data can be structured as records with fields for information how data can be organised into groups and subgroups how data can be structured as a tree how data can be

	<p>instructions as an algorithm</p> <ul style="list-style-type: none"> to program a robot to follow their algorithm to predict how their programs will work to debug programs. 	<p>capture moving images</p> <ul style="list-style-type: none"> record a video using ground rules for filming edit a video to include an audio commentary develop collaboration skills discuss their work and think about how it could be improved. 	<p>encourage experimentation</p> <ul style="list-style-type: none"> to use multiple layers in their art to transform layers to paint on top of photographs 	<ul style="list-style-type: none"> think carefully about protecting their privacy respect other people's copyright revise and improve their work. 	<ul style="list-style-type: none"> explore different effects that can be applied to audio create a repeating percussion pattern using a virtual drum machine experiment with a range of virtual instruments. 	<p>organised into a table how data in a table can be filtered and searched.</p>
Final Outcome	Being able to debug faulty instructions for a beebot.	A film of their recipe, which includes a commentary.	To use paint to recreate famous artwork by Rothko, Kandinsky, Picasso, Matisse, Opie and Mondrian.	To create a multimedia e-book which celebrates the things they have enjoyed and achieved so far in school.	To create a multi-track recording in garage band.	To use a spreadsheet database to solve clues.
E-safety Recap/ Review	Explicit teaching of the Year 1 e-safety objectives	Unit 1.1 We are rule writers Unit 1.4- We are information protectors Unit 1.5- We are good digital citizens	Unit 1.1 We are rule writers Unit 1.3 We are responsible internet and device users.	Unit 1.1 We are rule writers Unit 1.2 We are kind and thoughtful	Unit 1.1 We are rule writers Unit 1.6 We are responsible gamers	Unit 1.1 We are rule writers All Year 1 E-safety units to consolidate learning
	Hugglescote Priority: Legacy, communication	Hugglescote Priority:Communication	Hugglescote Priority:Community, Legacy	Hugglescote Priority: Communication,	Hugglescote Priority:	Hugglescote Priority:Communication, Legacy

				Mental health and wellbeing	Communication, Community	
Year 2	<p>We are astronauts</p> <ul style="list-style-type: none"> plan a sequence of instructions to move sprites in ScratchJr create, test and debug programs for sprites in ScratchJr work with input and output in ScratchJr use repetition in their programs design costumes for sprites. 	<p>We are game testers</p> <ul style="list-style-type: none"> observe and describe carefully what happens in computer games use logical reasoning to make predictions of what a program will do and test these think critically about computer games create sequences of instructions for a virtual robot to solve a problem work out strategies for playing a game well be aware of how to use games safely and in balance with other activities. 	<p>We are photographers</p> <ul style="list-style-type: none"> consider the technical and artistic merits of photographs use the iPad camera app take digital photographs review, reject or pick the images they take edit and enhance their photographs. 	<p>We are safe researchers</p> <ul style="list-style-type: none"> develop collaboration skills through working as part of a group develop research skills through searching for information on the Internet think through privacy implications of their use of search engines be more discerning in evaluating online information improve note-taking skills through the use of mind mapping develop presentation skills through creating and 	<p>We are animators</p> <ul style="list-style-type: none"> how animation works to use storyboards to plan an animation to create their own original characters, props and backgrounds for an animation to film, review and edit a stop-motion animation to record audio to accompany their animation to provide constructively critical feedback to their peers. 	<p>We are zoologists</p> <ul style="list-style-type: none"> sort and classify a group of items by answering questions collect data using tick or tally charts take, edit and enhance photographs use Google Sheets or Microsoft Excel to produce basic charts record information on a digital map summarise what they have learned in a presentation.



				delivering a multimedia presentation.		
Final Outcome	To create their own drawing in ScratchJr and edit it in the paint editor in Scratch.	To explore different games (race, fish, tennis, shooting, strategy) and understand what makes games enjoyable	To produce high quality photographs using an iPad.	To create a multimedia presentation about what they have learned through their safe research skills.	To create a short stop motion animation about a topic of their choice.	To create a summary of what they have learned about different types of data (digital map, chart, tally chart).
E-safety Recap/ Review	Explicit teaching of the Year 2 e-safety objectives	Unit 2.1 We are Year 2 rule writers Unit 1.6 We are responsible gamers Unit 2.6 We are gamers	Unit 2.1 We are Year 2 rule writers Unit 2.3 We are safe searchers Unit 1.3 We are responsible internet and device users	Unit 2.1 We are Year 2 rule writers Unit 2.5- We are online behaviour experts Unit 1.4- We are information protectors	Unit 2.1 We are Year 2 rule writers Unit 2.2 We are not online bullies Unit 1.2 We are kind and thoughtful	Unit 2.1 We are Year 2 rule writers Unit 2.4 We are code masters Unit 1.5 We are good digital citizens All Year 2 E-safety units to consolidate learning
<p>KS1 Outcomes</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 • 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. 						
Year 3	Hugglescote Priority: Communication	Hugglescote Priority: Mental health and wellbeing	Hugglescote Priority: Communication, Community	Hugglescote Priority: Communication, Mental health and wellbeing	Hugglescote Priority: Communication, Legacy, Mental health and wellbeing	Hugglescote Priority: Communication, Community

Year 3	<p>We are programmers</p> <ul style="list-style-type: none"> • plan and create an algorithm for an animated scene in the form of a storyboard • write a program in Scratch to create the animation, including characters, dialogue, costumes, backdrops and sound • review their animation programs and correct mistakes. 	<p>We are bug fixers</p> <ul style="list-style-type: none"> • develop a number of strategies for finding errors in programs • build up resilience and strategies for problem solving • increase their knowledge and understanding of Scratch • recognise a number of common types of bugs in software. 	<p>We are presenters</p> <ul style="list-style-type: none"> • develop their web-based research skills • structure, prepare and deliver a talk about a given topic or subtopic studied in another curriculum area • record a piece to camera • edit a movie using static images and green screen footage • give constructive, critical feedback on recorded presentations. 	<p>We are who we are</p> <ul style="list-style-type: none"> • create a number of structured presentations • create a narrated presentation consider issues of trust and privacy when sharing information. 	<p>We are co-authors</p> <ul style="list-style-type: none"> • understand the conventions for collaborative online work, particularly in wikis • be aware of their responsibilities when editing other people’s work • become familiar with Wikipedia, including potential problems associated with its use • practise their research skills • write for a target audience using a wiki tool • develop collaboration skills • develop proofreading skills. 	<p>We are opinion pollsters</p> <ul style="list-style-type: none"> • understand some elements of survey design • understand some ethical and legal aspects of online data collection • use the Internet to facilitate data collection • gain skills in using charts to analyse data • gain skills in interpreting results.
Final Outcome	To create an animation of a	To identify bugs in scratch (one off,	To create a presentation using	To use google slides or Microsoft	To produce a class wiki about Coalville.	To collect and present data using google forms

	simple story using Scratch	performance, multi thread, conceptual, arithmetical and resource) and ways to fix them.	IMovie about their history topic.	Powerpoint to create a presentation about themselves.		about a topic of their choice.
E-safety Recap/ Review	Explicit teaching of the Year 3 e-safety objectives	Unit 3.1 We are Year 3 rule writers Unit 3.3 We are internet detectives Unit 2.6 We are game raters	Unit 3.1 We are Year 3 rule writers Unit 3.4 We are aware of our digital footprint Unit 2.3 we are safe searchers	Unit 3.1 We are Year 3 rule writers Unit 3.6 We are avatar creators Unit 1.4 We are information protectors	Unit 3.1 We are Year 3 rule writers Unit 3.5 We are netiquette experts Unit 3.3 We are internet detectives	Unit 3.1 We are Year 3 rule writers Unit 3.2 We are digital friends All Year 3 E-safety units to consolidate learning
	Hugglescote Priority: Community, Communication	Hugglescote Priority: Communication, Mental health and wellbeing	Hugglescote Priority: Communication, Legacy	Hugglescote Priority: Communication, Community	Hugglescote Priority: Community, Legacy	Hugglescote Priority: Communication, Legacy
Year 4	<p>We are software developers</p> <ul style="list-style-type: none"> develop an educational computer game using selection and repetition understand and use variables start to debug computer programs recognise the importance of user interface 	<p>We are makers</p> <ul style="list-style-type: none"> about the input – process – output model of computation about the inputs and outputs available on a BBC micro:bit to program using the MakeCode blockbased environment to test and debug programs they write, using an on- 	<p>We are musicians</p> <ul style="list-style-type: none"> create a repeating percussion rhythm play music using virtual instruments compose or edit tunes using the piano roll (pitch and duration) tool perform electronic music using pre-recorded loops, 	<p>We are bloggers</p> <ul style="list-style-type: none"> become familiar with blogs as a medium and a genre of writing create a sequence of blog posts on a theme incorporate additional media comment on the posts of others develop a critical, reflective view 	<p>We are artists</p> <ul style="list-style-type: none"> develop an appreciation of the links between geometry and art become familiar with the tools and techniques of a vector graphics package develop an understanding of turtle graphics 	<p>We are meteorologists</p> <ul style="list-style-type: none"> understand different measurement techniques for weather – both analogue and digital use computer-based data logging to automate the recording of some weather data use spreadsheets to create charts analyse data, explore inconsistencies in

	design, including consideration of input and output.	<p>screen simulator and the micro:bit</p> <ul style="list-style-type: none"> • how to convert and transfer a program written on screen to the micro:bit. 	<p>and create their own loops</p> <ul style="list-style-type: none"> • create a multi-track composition or performance using multiple instruments give feedback to others on their compositions and performances 	<p>of a range of media, including text</p>	<p>experiment with the tools available, refining and developing their work as they apply their own criteria to evaluate it, and receive feedback from their peers develop some awareness of computer-generated art.</p>	<p>data and make predictions</p> <ul style="list-style-type: none"> • practise using presentation and video software.
Final Outcome	To create an educational maths game.	To create their own micro:bit dice or rock-paper-scissors game.	To create their own multi-track composition using GarageBand.	To create a blog about a topic of their choice on Wordpress.	To use Inkscape to create their own geometric artwork.	To use Google slides or Microsoft PowerPoint to deliver their own weather forecast.
E-safety Recap/ Review	Explicit teaching of the Year 4 e-safety objectives	<p>Unit 4.1 We are Year 4 rule writers</p> <p>Unit 4.5 We are respectful of digital rights and responsibilities .</p> <p>Unit 2.5 We are online behaviour experts</p>	<p>Unit 4.1 We are Year 4 rule writers</p> <p>Unit 4.2 We are standing up to peer pressure</p> <p>Unit 3.4 We are aware of our digital footprint</p>	<p>Unit 4.1 We are Year 4 rule writers</p> <p>Unit 4.3 We are aware that our online content lasts forever</p> <p>Unit 3.2 We are digital friends</p>	<p>Unit 4.1 We are Year 4 rule writers</p> <p>Unit 4.4 We are online risk managers</p> <p>Unit 1.3 We are responsible internet and device users</p>	<p>Unit 4.1 We are Year 4 rule writers</p> <p>Unit 4.6 We are careful when talking to virtual friends</p> <p>All Year 4 E-safety units to consolidate learning</p>
	Hugglescote Priority: Communication, Mental Health and Wellbeing	Hugglescote Priority: Communication, Legacy	Hugglescote Priority: Community, Communication	Hugglescote Priority: Mental health and wellbeing, Communication, Community	Hugglescote Priority: Communication, Community	Hugglescote Priority: Legacy, Communication

<p>Year 5</p>	<p>We are game developers</p> <ul style="list-style-type: none"> • create original artwork and sound for a game • design and create a computer program for a computer game, which uses sequence, selection, repetition and variables • detect and correct errors in their games use iterative development techniques. 	<p>We are cryptographers</p> <ul style="list-style-type: none"> • be familiar with semaphore and Morse code understand the need for private information to be encrypted • encrypt and decrypt messages in simple ciphers • appreciate the need to use complex passwords and to keep them secure have some understanding of how encryption works on the Internet. 	<p>We are architects</p> <ul style="list-style-type: none"> • understand the work of architects, designers and engineers working in 3-D • develop familiarity with a simple CAD tool • develop spatial awareness by exploring and experimenting with a 3-D virtual environment • develop greater aesthetic awareness. 	<p>We are web developers</p> <ul style="list-style-type: none"> • the name and function of components making up the school's network • how information is passed between the components that make up the Internet what the source code for a web page looks like and how it can be edited • how a website can be structured • how to add content to a web page. 	<p>We are adventure gamers</p> <ul style="list-style-type: none"> • how to plan a non-linear presentation to create text as part of a presentation • to add and edit images in a presentation • to use hyperlinks for navigation between the slides of a presentation • to record and add audio narration to a presentation • to use commenting tools to give feedback on a presentation 	<p>We are VR designers</p> <ul style="list-style-type: none"> • explore real-world and imagined locations in VR • create 360° photosphere images • link physical objects to digital content using QR codes • create their own VR scene • program objects and interactions in VR.
<p><u>Final Outcome</u></p>	<p>To develop a simple interactive game (topic of their choice) on Scratch.</p>	<p>To present information about password and internet security.</p>	<p>To create a virtual gallery using SketchUp</p>	<p>To use Google Slides to create a website about an aspect (of their choosing) of online safety.</p>	<p>To use Microsoft PowerPoint to create an interactive adventure game.</p>	<p>To create their own CoSpace scene linked to history/geography/science topic.</p>

<p>E-safety Recap/ Review</p>	<p>Explicit teaching of the Year 5 e-safety objectives</p>	<p>Unit 5.1 We are Year 5 rule writers Unit 5.5 We are respectful of copyright Unit 2.4 We are code masters Unit 4.3 We are aware that our online content lasts forever</p>	<p>Unit 5.1 We are Year 5 rule writers Unit 5.3 We are content evaluators Unit 4.4 We are online risk managers</p>	<p>Unit 5.1 We are Year 5 rule writers Unit 5.4 We are protecting our online reputation Unit 3.3 We are internet detectives</p>	<p>Unit 5.1 We are Year 5 rule writers Unit 5.2 We are responsible for our online actions Unit 4.5 We are respectful of digital rights and responsibilities</p>	<p>Unit 5.1 We are Year 5 rule writers Unit 5.6 We are game changers Unit 1.6 We are responsible gamers Unit 4.6 We are careful when talking to virtual friends All Year 5 E-safety units to consolidate learning</p>
	<p>Hugglescote Priority: Legacy, Community, Communication</p>	<p>Hugglescote Priority: Communication</p>	<p>Hugglescote Priority: Mental health and wellbeing, Communication</p>	<p>Hugglescote Priority: Mental health and wellbeing, Communication, Community</p>	<p>Hugglescote Priority: Communication, Legacy</p>	<p>Hugglescote Priority: Communication</p>
<p>Year 6</p>	<p>We are toy makers</p> <ul style="list-style-type: none"> • how computers use stored programs to connect input to output • how to generate and evaluate designs in response to a brief to plan a complex project by decomposing 	<p>We are computational thinkers</p> <ul style="list-style-type: none"> • develop the ability to reason logically about algorithms understand how some key algorithms can be expressed as programs • understand that some algorithms are more efficient than others for the same problem • understand common algorithms 	<p>We are publishers</p> <ul style="list-style-type: none"> • manage or contribute to large collaborative projects, facilitated using online tools write and review content • source digital media while demonstrating safe, respectful and responsible use design and produce a high- 	<p>We are connected</p> <ul style="list-style-type: none"> • Learn about appropriate rules or guidelines for a civil online discussion • how search results are selected and ranked • how to argue their point effectively, supporting their views with sources how to 	<p>We are advertisers</p> <ul style="list-style-type: none"> • think critically about how video is used to promote a cause storyboard an effective advert for a cause • work collaboratively to shoot original footage and source additional content acknowledge 	<p>We are AI developers</p> <ul style="list-style-type: none"> • how decision trees can be trained automatically to classify data • how speech recognition works how a neural net recognises images • to train a neural net to classify images • to train a machine learning system to identify sentiments to consider some ethical principles in



	it into smaller parts <ul style="list-style-type: none"> to work with physical components of a system how to design and write a program for an embedded system to use criteria to provide others with feedback on their work. 	for searching and sorting a list.	quality print document.	counter someone else’s argument while showing respect and tolerance <ul style="list-style-type: none"> how to judge the reliability of an online source some strategies for dealing with online bullying. 	intellectual property rights <ul style="list-style-type: none"> work collaboratively to edit the assembled content to make an effective advert. 	designing AI systems.
Final Outcome	To programme a toy of their choice using micro:bit	To create an algorithm on Scratch to find the fastest way to sort numbers.	To create a Year 6 year book using Microsoft Word and Publisher.	To write a blog post about how to keep themselves safe online using WordPress.	To create a short television advert about a topic of their choice using Imovie.	To create a programme in Scratch for a self-driving car.
E-safety Recap/ Review	Explicit teaching of the Year 6 e-safety objectives	Unit 6.1 We are Year 6 rule writers Unit 6.3 We are safe social networkers Unit 5.2 We are responsible for our online actions	Unit 6.1 We are Year 6 rule writers Unit 6.5 We are online safety problem solvers Unit 3.5 We are netiquette experts	Unit 6.1 We are Year 6 rule writers Unit 6.4 We are respectful of others Unit 4.2 We are standing up to peer pressure	Unit 6.1 We are Year 6 rule writers Unit 6.2 We will not share inappropriate images Unit 5.3 We are content evaluators	Unit 6.1 We are Year 6 rule writers Unit 6.6 We are safe gaming experts Unit 5.5 We are respectful of copyright All Year 6 E-safety units to consolidate learning

KS2 Outcomes

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output

- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Software and Hardware													
	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2		EYFS Ipads Laptops Digital camera Beebots Beebots app Microsoft paint
	Software	Hardware	Software	Hardware	Software	Hardware	Software	Hardware	Software	Hardware	Software	Hardware	
Year 1	Beebot app	Beebots	Camera on ipad I movie app	Ipad	Microsoft paint	Ipads/ laptops	Microsoft powerpoint	Ipads/ laptops	Scratch jr app Garage band	Ipads/ laptops	Microsoft excel	laptops	
Year 2	Scratch jr	Ipads beebots	Scratch Fix the factory	Ipads laptops	Camera app Photo app	ipads	Microsoft powerpoint/ Google slides	Ipads laptops	Istop motion	ipads	Google sheets, documents and my maps. Slides Camera app Photo app	Ipads laptops	
Year 3	Scratch	laptops	Scratch	laptops	Popplet I movie	Ipads	Google slides/ Ipads	Laptops ipads	Google sites	Laptops ipads	Google forms,	Laptops	

Computing Content Progression



			Screen recorder software				Microsoft powerpoint Screen recorder software		Popplet		sheets, slides and drives		
Year 4	Scratch	laptops	Microsoft MakeCode	laptops	Garageband	Ipads	Wordpress Audacity Imovie Camera app Snapseed	Laptops ipads	Inkscape scratch	laptops	Microsoft Excel Microsoft Powerpoint	Laptops	
Year 5	Scratch	Laptops	Scratch	Laptops Ipads	Trimble sketchup Screen recorder	Laptops	Google Chrome Google sites	Laptops	Microsoft Powerpoint	Laptops	Google maps Garageband Cospace s	Ipads	
Year 6	MakeCode / micro:bit	Laptops	Google Maps Scratch	Laptops Ipads	Microsoft publisher Microsoft Word	Laptops	Wordpress Padlet	Laptops Ipads	Imovie	Ipads	Scratch Audacity Google Chrome	Ipads Laptops	



