Clayton-le-Woods Church of England Primary School

Computing

Long term overview and Statement of Intent

Together we inspire one another to live life to its fullness, rooted and built up in Christ, so that every member of our school community can learn, develop and flourish, to live in the world as the unique individuals God created us to be.

Clayton-le-Woods CEP Long Term Overview and Statement of Intent - Computing

Intent of the teaching and learning of Computing

We teach computing so that our children can analytically solve computational problems, communicate in a digitally literate world and become competent and confident users of information technology which will facilitate them in flourishing in their lives in an ever changing world. Each unit of work has substantive and s, identified in the long term overview, which will enable children to engage on a deep level with their learning and also ensure that they can access and communicate their understanding in a safe and competent manner. Although computing is not specified for Early Years, we provide children with high-quality learning opportunities that develop their common play behaviours and allow them to create and think critically when using technology or to support computational thinking.

Implementation of the teaching and learning of Computing

Our computing curriculum is carefully sequenced following the Teach Computing scheme of learning. Units are progressive and inclusive and provide children with specific focuses for knowledge and skills in the areas of programming, creating media, data and information and computing systems and networks.

Each lesson is sequenced so that it builds on the learning from the previous lesson, and where appropriate, activities are scaffolded so that all pupils can succeed and thrive. Scaffolded activities provide pupils with extra resources, such as visual prompts, to reach the same learning goals as the rest of the class. Exploratory tasks foster a deeper understanding of a concept, encouraging pupils to apply their learning in different contexts and make connections with other learning experiences. As well as scaffolded activities, embedded within the lessons are a range of pedagogical strategies which support making computing topics more accessible. Children are provided with front covers at the beginning of the unit of work, which includes new and unfamiliar vocabulary which is then pre-taught to ensure all children are able to access the learning to a deeper level. To remain up-to-date as research continues to develop, every aspect of the Teach Computing Curriculum is reviewed each year and changes are made as necessary

Knowledge and skill gained in computing lessons is also embedded throughout the curriculum when, for example, conducting research in Geography and History lessons and using online Music software. Children are given ample opportunities to learn about staying safe online, (identified within the PSHE long term overview) how to recognise acceptable and unacceptable behaviour online and understand how to report any concerns and these are shared with the whole school and parents through assemblies and weekly National Online Safety newsletters.

We use adaptive teaching approaches, taking into account recommendations from external agencies, across the curriculum. Approaches such as chunking learning into smaller steps, frequent repetition of learning ensures all pupils, including those with SEND, are able to access the learning and gain granular knowledge within the subject to the same high-standard as their peers, providing a flexible, ambitious and robust curriculum for all.

Impact of the teaching and learning of Computing

Work produced on the computers is saved in individual children's folders which can be accessed by pupils and staff. Examples of work produced is also collected on Seesaw. The learning of online safety is present in the use of Project Evolve

We assess computing both formatively, during each session in the unit and summatively, at the end of the unit based on the final outcome. These assessments are recorded on the knowledge and skills maps, where children working at different expectations and the next steps for the teaching and learning of the unit is logged. This is then shared with the subject leader and curriculum lead who will review the outcomes termly so overall strengths and areas for improvement can be identified and acted upon. We also draw upon pupil voice to support us in future planning and development of the curriculum with the aim of supporting the children in knowing and remembering more.

Mrs S Hogg
September 2023

How we live out our British and Christian Values in Computing				
Democracy	**The Rule of Law and Forgiveness**	**Individual Liberty and Courage**	**Mutual Respect, Respect and Friendship**	**Tolerance of those of different faiths and Beliefs, Thankfulness and Truthfulness**

In computing, we are learning to understand and be considerate to the views of other internet users. We understand that we are each part of the democracy of the internet and that we can each, in our own small way, affect the way the internet exists.	In computing, we understand the use of rules on computers and the internet, such as when we are allowed to use social media and what we are allowed to post and share. We understand that rules are to keep others and ourselves safe and to help the internet to be an enjoyable and engaging place. We explore the value of **forgiveness** and how we can forgive when situations may go wrong.	In computing, we understand how to use our right to freedom of speech in a respectable and thoughtful way, being considerate of how this speech will affect others. We understand the freedom the internet and computers offer us in discovering information and connecting us with the world. We know we need to show **courage** when making decisions about computing and use of technology.	In computing we appreciate and understand the views of others, our right to challenge, question and discuss opinions and views, and to do this in a respectful and thoughtful way. We understand that as we are connected with the world while accessing the internet, we are exposed to the widest range of views, and we are learning to **respect** them whilst showing **friendship** with those we communicate with.	In computing, we understand that we are connected to people across the whole world. We understand that these are people from different communities, cultures, faiths and beliefs. We use the opportunities offered in computing to question, challenge and understand people with these different characteristics to support and develop our tolerance of them showing **thankfulness** for opportunities to engage with the wider world, whilst being **truthful** about situations we encounter.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Willow Class	**Common Play Behaviours:** Role play things that they have seen adults do. Respond to being given responsibility and independence with equipment. Respond to videos they see.					
	INFORMATION GATHERING	**OPERATING**	**WORD PROCESSING**	**PROGRAMMING**	**E-SAFETY**	
	See information from videos etc. on technology sources.	Know what a mouse if for. Use a basic digital camera. Make technology based toys work.	Know what a keyboard and letter keys are. Explore using keys.	Know that buttons have a purpose.	Know that we have to be careful with ICT equipment. Use two hands to carry ICT equipment.	

Ash Class	**Common Play Behaviours:** Show initiative in using equipment. Test out their experiences of using equipment at home or in other settings. Apply things they know into a different context. Begin to understand the processes involved in finding information from a computer, or how a piece of technology can help to complete a task. Evidence of using prior knowledge of different devices, gaining confidence and ability as they gain exposure to equipment.				
	INFORMATION GATHERING	**OPERATING**	**WORD PROCESSING**	**PROGRAMMING**	**E-SAFETY**
	Know that information can be found on the internet.	Know how to turn the computer/device on and off. Use a digital camera. Completes a simple program on a computer.	Use letter keys to type simple or familiar words e.g. name.	Select the correct buttons on a beebot, camera etc.	Know that the internet should be used alongside an adult. Know to tell an adult if something they see on a computer/table upsets them. Know that they shouldn't click on anything they don't understand.

Focus	Online Safety
Self Image and Identity **Autumn 1**	•I can recognise, online or offline, that anyone can say 'no' - 'please stop' - 'I'll tell' - 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset.
Online relationships **Autumn 2**	•I can recognise some ways in which the internet can be used to communicate. •I can give examples of how I (might) use technology to communicate with people I know
Online reputation **Spring 1**	•I can identify ways that I can put information on the internet.
Online bullying **Summer 1 and 2**	•I can describe ways that some people can be unkind online. •I can offer examples of how this can make others feel
Managing online information **Spring 2**	•I can talk about how to use the internet as a way of finding information online •I can identify devices I could use to access information on the internet..

Year 1						
Year 1	How can technology help us in our everyday lives? Information technology, Digital literacy	How can we paint using computers? Information technology, Digital literacy	How can I make a floor robot move?	How can we label, group and search data? Information technology, Digital literacy	How can we use a computer to create and change text? Digital literacy	What is a sprite? How can I make it move? Computer science

	Algorithms, Computer systems Significant people studied/ Wow moments – trips/ visitors – each year will hear from a STEM ambassador with a specialism in computing and computer science 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	Creating Media, Effective use of tools Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Creating media - Digital Painting	Computer science, Information technology, Digital literacy Algorithms, Programming 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 Recognise common uses of information technology beyond school Programming - Moving a robot	Algorithms, Data and information Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies Data and information - Grouping data	Creating Media, Effective use of tools, Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies Creating media - Digital writing	Design and development, Programming 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 Programming - Programming animations

	internet or other online technologies Computing systems and networks - Technology Around Us					

Focus	Online Safety
Self image and identity **Spring 1**	• I can recognise that there may be people online who could make someone feel sad, embarrassed or upset
Online relationships **Autumn 1 and 2**	• I can give examples of when I should ask permission to do something online and explain why this is important • I can use the internet with adult support to communicate with people I know (e.g. video call apps or services).. • I can explain why it is important to be considerate and kind to people online and to respect their choices. • I can explain why things one person finds funny or sad online may not always be seen in the same way by others.
Online reputation **Spring 2**	• I can recognise that information can stay online and could be copied • I can describe what information I should not put online without asking a trusted adult first..
Online bullying **Summer 1**	• I can describe how to behave online in ways that do not upset others and can give examples.
Privacy and security **Summer 2**	• I can recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names). • I can explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others.

Year 2						
Year 2	How is information technology being used for good in our lives? Information technology, Digital literacy Computer systems, Computer networks Significant people studied/ Wow moments – trips/ visitors	How can different devices be used to capture photographs? Information technology, Digital literacy Creating Media, Effective use of tools Use technology purposefully to create, organise, store,	How can I design algorithms and test them? Computer science, Digital literacy Algorithms, Programming Understand what algorithms are, how they are implemented as	How can data be collected and presented? Information technology, Digital literacy Data and information, Effective use of tools Use technology purposefully to create, organise, store,	How can we make music using percussion instruments and digital tools? Digital literacy Creating Media, Design and development Use technology purposefully to create, organise, store,	How can we design and create a program? Computer science Design and development, Programming Understand what algorithms are, how they are implemented

	– each year will hear from a STEM ambassador with a specialism in computing and computer science 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 Computing systems and networks - Information technology around us	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 Creating media - Digital photography	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 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 Programming - Robot algorithms	manipulate, and retrieve digital content Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies Data and information – Pictograms	manipulate, and retrieve digital content Creating media - Making music	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 Programming - Programming quizzes

Focus	Online Safety
Self image and identity **Spring 2**	• I can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened; I can give examples of how they might get help.
Online relationships **Autumn 1**	• I can explain who I should ask before sharing things about myself or others online.
Online reputation **Spring 1**	• I can explain how information put online about someone can last for a long time. • I can describe how anyone's online information could be seen by others. I know who to talk to if something has been put online without consent or if it is incorrect.
Online bullying **Autumn 2**	• I can explain what bullying is, how people may bully others and how bullying can make someone feel. • I can explain why anyone who experiences bullying is not to blame • I can talk about how anyone experiencing bullying can get help.
Managing online information **Summer 1**	• I can use simple keywords in search engines • I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). • I can 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). • I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real' • I can explain why some information I find online may not be real or true.
Privacy and security **Spring 2**	• I can explain and give examples of what is meant by 'private' and 'keeping things private'. • I can describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords).

Year 3						
Year 3	How are computers connected? What does our school network look like? Computer science, Information technology, Computer networks, Computer systems Significant people studied/ Wow moments – trips/ visitors	Can a picture move? What is stop frame animation? Digital literacy Creating Media, Effective use of tools Nick Park Creating a stop frame animation	How can I sequence when programming? Computer science Design and development, Programming Select, use and combine a variety of software (including internet services) on a range of	What is a branching database and how can I create one? Information technology, Digital literacy Data and information, Effective use of tools Select, use and combine a variety of software (including internet services) on a range of	How can I add content and edit desktop publishing? Digital literacy Creating Media, Effective use of tools Select, use and combine a variety of software (including internet services) on a range of digital devices to design	How can I program a sprite? Computer science, Design and development, Programming Select, use and combine a variety of software (including internet services) on a range of digital

	– each year will hear from a STEM ambassador with a specialism in computing and computer science Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Understand computer networks, including the internet; how they can provide multiple services, such as the	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 on the internet or other online technologies Creating media - Stop frame animation	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 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	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 on the internet or other online technologies Data and information - Branching databases	and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Creating media - Desktop publishing	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 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

	World Wide Web, and the opportunities they offer for communication and collaboration Computing systems and networks - Connecting computers		in algorithms and programs Programming - Sequencing sounds			work and to detect and correct errors in algorithms and programs Programming - Events and actions in programs

Focus	Online Safety
Self image and identity **Spring 1**	• I can explain what is meant by the term 'identity'. • I can explain how people can represent themselves in different ways online. • I can 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.
Online relationships 1 **Autumn 1**	• I can describe ways people who have similar likes and interests can get together online. • I can explain what it means to 'know someone' online and why this might be different from knowing someone offline. • I can explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with.
Online relationships 2 **Summer 1 and 2**	• I can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried. • I can explain how someone's feelings can be hurt by what is said or written online. • I can 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.
Online bullying **Autumn 2**	• I can describe appropriate ways to behave towards other people online and why this is important.. • I can give examples of how bullying behaviour could appear online and how someone can get support.
Health and wellbeing **Spring 2**	• I can explain why spending too much time using technology can sometimes have a negative impact on anyone; I can give some examples of both positive and negative activities where it is easy to spend a lot of time engaged • I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).
Year 4	

Year 4	Who owns the web and what is the internet made of? Information technology, Computer networks, Safety and security Significant people studied/ Wow moments – trips/ visitors – each year will hear from a STEM ambassador with a specialism in computing and computer science 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 Understand computer networks, including the	How can I create an combine audio? Digital literacy Creating Media, Effective use of tools Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a	How can I use repetition and loops within programming? Computer science Algorithms, Programming 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 Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	What is a data logger and what can it record? Computer science, Information technology, Digital literacy Computer systems, Data and information 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 Data and information - Data logging	How can digital images be changed and edited? Digital literacy Creating Media, Effective use of tools Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a	Can we design and create our own game? Computer science, Design and development, Programming 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 Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by

	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 Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact on the internet or other online technologies Computing systems and networks - The internet	range of ways to report concerns about content and contact on the internet or other online technologies Creating media - Audio production	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 Programming - Repetition in shapes		range of ways to report concerns about content and contact on the internet or other online technologies Creating media - Photo editing	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 Programming - Repetition in games

Focus	**Online Safety**
Self image and identity **Spring 2**	• I can explain how my online identity can be different to my offline identity. • I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them. • I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.

Online relationships **Autumn 1**	• I can describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms) • I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours. • I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.
Online reputation **Summer 1**	• I can describe how to find out information about others by searching online. • I can explain ways that some of the information about anyone online could have been created, copied or shared by others.
Online bullying **Autumn 2**	• I can recognise when someone is upset, hurt or angry online. • I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat). • I can 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).
Health and wellbeing **Summer 2**	• I can explain how using technology can be a distraction from other things, in both a positive and negative way. • I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time.
Privacy and Security **Spring 1**	• I can describe strategies for keeping personal information private, depending on context. • I can explain that internet use is never fully private and is monitored, e.g. adult supervision. • I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure. • I know what the digital age of consent is and the impact this has on online services asking for consent.

Year 5

Year 5	What are input and output devices? Information technology, Digital literacy	What is video and how can we create our own? Digital literacy Creating Media, Design and development	How can I connect and program components? Computer science, Digital literacy	How can I organise data in a flat-file database? Information technology, Digital literacy	How can I use drawing tools to create vector drawings? Digital literacy	How can I program selections in quizzes? Computer science Algorithms, Programming

	Computer networks, Effective use of tools Significant people studied/ Wow moments – trips/ visitors – each year will hear from a STEM ambassador with a specialism in computing and computer science 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 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,	Dan TDM Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Computer systems, Programming 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 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	Data and information, Effective use of tools Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Data and information - Flat file databases	Creating Media, Effective use of tools 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 Creating media - Vector drawing	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 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

	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 Computing systems and networks - Systems and searching	Creating media - Video production	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 - Selection in physical computing			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 - Selection in quizzes

Focus	Online Safety
Self image and identity **Autumn 1**	• I can explain how identity online can be copied, modified or altered. I can demonstrate how to make responsible choices about having an online identity, depending on context.
Online bullying **Autumn 1 and 2**	• I can recognise online bullying can be different to bullying in the physical world and can describe some of those differences. • I can describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying. • I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult. • I can identify a range of ways to report concerns and access support both in school and at home about online bullying. • I can explain how to block abusive users. I can describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline or The Mix).
Managing online information **Spring 1 and 2**	• I can explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be 'sceptical'. • I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results • I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence.. • I can identify ways the internet can draw us to information for different agendas, e.g. website notifications, pop-ups, targeted ads • I can describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, influencers). • I can 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. • I can describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful I can explain what is meant by a 'hoax'. I can explain why someone would need to think carefully before they share.

Health and wellbeing **Summer 1**	• I can describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively. • I can describe some strategies, tips or advice to promote health and wellbeing with regards to technology. • I 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. I can 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.
Privacy and security **Summer 2**	• I can explain what app permissions are and can give some examples.
Copyright and ownership **Summer 2**	• I can assess and justify when it is acceptable to use the work of others • I can give examples of content that is permitted to be reused and know how this content can be found online.

Year 6						
Year 6	How is data transferred over the internet? Computer science, Information technology, Digital literacy Computer networks, Effective use of tools Significant people studied/ Wow moments – trips/ visitors – each year will hear from a STEM ambassador with a specialism in computing and computer science	What makes a good website? Computer science, Information technology, Digital literacy Creating Media, Design and development 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	How do we use variables in programming? Computer science, Design and development, Programming 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	What is a spreadsheet and how do we use formulae? Information technology, Digital literacy Data and information, Effective use of tools 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	How can I model in 3D? Computer science, Digital literacy Creating Media, Effective use of tools 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	How can I programme a physical device? Computer science, Digital literacy Computer systems, Programming 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

	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 Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they	content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact Creating media - Webpage creation	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 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	content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Data and information - Introduction to spreadsheets	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 Creating media - 3D modelling	and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information 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

	offer for communication and collaboration Computing systems and networks - Internet communication		Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Programming - Variables in games			algorithms and programs Programming – Sensing

Focus	Online Safety
Self image and identity **Spring 2**	• I can 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 • I can describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline. • I can explain the importance of asking until I get the help needed.
Online relationships **Autumn1**	• I can explain how sharing something online may have an impact either positively or negatively • I can 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. • I can describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs. • I can 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.
Online bullying **Autumn 2**	• I can describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me. • I can explain how someone would report online bullying in different contexts.
Health and wellbeing **Summer 2**	• I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. • I recognise and can discuss the pressures that technology can place on someone and how / when they could manage this. • I can recognise features of persuasive design and how they are used to keep users engaged (current and future use). I can 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).
Privacy and security 1 **Spring 1**	• I can describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser). • I can explain what to do if a password is shared, lost or stolen. I can describe how and why people should keep their software and apps up to date, e.g. auto updates.

Privacy and security 2 **Summer 1**	• I can describe simple ways to increase privacy on apps and services that provide privacy settings. • I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing). I know that online services have terms and conditions that govern their use.

Substantive Concept

Disciplinary Concept

Significant people

Books/poems

Wow moments -trips/visits/visitors

National Curriculum/Development Matters objectives