Overview Computing Year 3

	-Computat	-Computational ThinkingDigital Literacy and Online Safety			-Computers and Hardware	
	Autu	Autumn Term Spring Term		Summer Term		
Big Question	What was here before me?		How do living things survive?		What creates change?	
Other Subject links	Prehistoric (dinosaurs), Stone Age, light, fossils, rocks & soil, map skills.		Bronze age & their trading routes in the Middle East, food & diet. Iron age		Romans Forces and magnets/Materials (science)	
	Autumn 1 -	Autumn 2 -	Spring 1 -	Spring 2 -	Summer 1 -	Summer 2 -
	Video Trailers	Comparison Cards Databases	Journey inside a Computer	Programming Scratch	Emailing	Networks and the Internet
National Curriculum	- 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	- 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 forms of input and output - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts - Use sequence, selection, and repetition in programs; work with variables and various forms of input and output - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	- Understand computer networks including the internet; how they can provide multiple services, such as the worldwide web; and the opportunities they offer for communication and collaboration Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report	- Understand computer networks including the internet; how they can provide multiple services, such as the worldwide 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,

	discerning in evaluating digital content				concerns about content and contact.	systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
Knowledge	Explain what is meant by the term 'identity' and how we can represent ourselves in different ways online. Explain ways to change identity online and why it might be done (e.g. gaming, social media) Know how to take photographs and record video. Know how to use editing software to edit and enhance video with sound, music, text and transitions.	Explain why we should be careful who we trust online and what information we can trust them with. Explain what is meant by 'trusting someone online' and why this is different from 'liking someone online'. Know who I should ask if I am not sure if I should put something online. Know the vocabulary associated with databases: field, record, data. Know the pros and cons of digital versus paper databases. Know how to sort and filter databases to easily retrieve information. Know how to create and interpret charts and graphs to understand data.	Explain why spending too much time using technology can sometimes have a negative impact on me. Know what the different components of a computer do and how they work together. Identify comparisons between different types of computers.	Explain what bullying is and can describe how people may bully others. Know how to use decomposition to explain the parts of a laptop computer. Know how to use decomposition to explore the code behind an animation. Know how to use repetition in programs. Know that computers follow instructions. Know how to use logical reasoning to explain how simple algorithms work. Explain the purpose of an algorithm and create algorithms independently. Know how to incorporate loops to make code more efficient. Know how to remix existing code. Know how to use a systematic approach to debugging code; justifying what is wrong and how it can be corrected.	Know and give reasons why passwords are important. Know simple strategies for creating and keeping passwords private. Know the purpose of emails. Know how to log in and log out of an email account. Know how to write an email including a subject, 'to' and 'from'. Know how to send an email with an attachment. Know how to reply to an email.	Explain why copying someone else's work from the internet without permission can cause problems. Know what a server does. Know what a network is and its purpose. Identify the key components within a network, including whether they are wired or wireless. Know how data is transferred.
Skills	Online Safety	Online Safety	Online Safety	Online Safety	Online Safety	Online Safety

	a) I understand the need to keep personal information and passwords private. b) I understand that if they make personal information available online it may be seen and used by others c)I know how to respond if asked for personal information or feel unsafe about content of a Message. a) I can review images on a camera and delete unwanted images. b) I can download images from a camera into files on the computer. c) I can use photo editing software to crop photos and add effects. d) I can copy graphics from a range of sources and paste into a desktop publishing program.	a) I can recognise that cyber bullying is unacceptable and will be sanctioned in line with the schools policy b) I know how to report an incident of cyber bullying. c) know the difference between online communication tools used in school and those used at home. a) I can combine text, image and sounds and show awareness of audience b) I know how to manipulate text, underline text, centre text, change font and size and save text to a folder.	a) I understand the need to develop an alias for some public online use a) I can combine text, image and sounds and show awareness of audience. b) I know how to manipulate text, underline text, centre text, change font and size and save text to a folder.	a) I can recognise that cyber bullying is unacceptable and will be sanctioned in line with the schools policy b) I know how to report an incident of cyber bullying. c) know the difference between online communication tools used in school and those used at home. a) I can experiment with variables to control models. b) I can use 90 degrees and 45 degrees turns. c) I can give an on-screen robot directional instructions. d) I can draw a square, rectangle and other regular shapes on screen, using commands. e) I can write more complex programs.	a) I understand the need for rules to keep them safe when exchanging learning and ideas online b) I understand the need to keep personal information and passwords private. a) I can use the email address book. b) I can open and send an attachment. c) I can "Save picture as" to save an image to a computer. d) I can copy and paste text into a document. e) I can search for an image, then copy and paste it into a document.	a) I can recognise that information on the internet may not be accurate or reliable and may be used for bias, manipulation or persuasion. b) I understand that the internet contains fact, fiction and opinion and begin to distinguish c) I can use strategies to verify information, eg cross-checking d) I understand the need for caution when using an internet search for images and what to do they find an unsuitable image f) I understand that copyright exists on most digital images, video and recorded music a) I can find relevant information by browsing a menu.
Vocabulary	edit, film, film editing software, graphics, import, plan, recording,	categorise, data, database, fields, filter, graphs, charts, record, sort, spreadsheet.	CPU, data, desktop, GPU, Hard Disk Drive HDD, QR	algorithm, animation, computer, computer program (app), code, code block, debug,	log on, log off, mouse, password, username, application,	DSL, file, internet, network, map, router,

	sound effects, video, voiceover.		code, RAM, ROM, tablet device, trackpad.		cyberbullying, spam, avatar, text speak, autocomplete, account, attachment, BCC, CC, domain, email, emoji, information.	
Computer program/s and/or devices needed	iPads iMovies	Databases - Google Sheets/Excel		Scratch	Internet Access	Internet Access