LONGTON LANE PRIMARY SCHOOL
A place to learn, a place to achieve, a place to enjoy.

COMPUTING End of Year 1 Expectations

	Pupils SEN / Emerging / Expected / Exceeding	**ALGORITHMS** - *execute by following precise and unambiguous instructions* **PROGRAMS** - *create and debug simple programs* use [redacted]	**DATA RETRIEVING AND ORGANISING** *use technology purposefully to create, organise, store, manipulate and retrieve digital content*	**COMMUNICATING** *understand computer networks including the internet; how they can provide multiple services, such as the world wide*
Yr1		**We are treasure hunters .** *(Unit 1.1)* • Use logical reasoning to predict the behaviour of simple programs • Create a simple series of instructions - left and right • Record their routes • Understand forwards, backwards, up and down • Put two instructions together to control a programmable toy • Begin to plan and test a journey • Break down a process into simple, clear steps, as in an algorithm **(TV chef)**	**We are TV chefs** *(Unit 1.3)* • Capture images with a camera • Print out a photograph from a camera with help • Record a sound and play it back • Enter information into a template to make a graph • Talk about the results shown on a graph • Use different features of a video camera • Use a video camera to capture moving images **We are Painters** *(Unit 1.3)* **and We are TV chefs** *(Unit 1.2)* • Use a paint program to create an illustration • Edit an image • Combine multiple illustrations into a single document • Export a document in a portable format • Know what to do if they find inappropriate Images. (e-safety) • Organise images into groups **We are Story Tellers.***(Unit 1.5)* • Plan and rehearse the sound effects needed in an audio book • Plan and rehearse the dialogue needed in an audio book • Record sound effects using a digital audio recorder (or software) • Record dialogue directly to a computer • Be able to retrieve previously saved work	**Throughout units.** • Recognise what an email address looks like • Join in sending a class email • Use the @ key and type an email address • Word process ideas using a keyboard • Use the spacebar, back space, enter, shift and arrow keys • Print out a page from the internet • develop collaboration skills • Discuss their work and ways to improve it. **We are Celebrating.** *(Unit 1.6)* • Enter text for their card • Find appropriate images using a search engine • Combine text and an image to make a greetings card • Be able to save and load files from the computer drive or network **We are collectors (1.4)** • Search for images using online galleries • Copy an image from the web and paste it into their presentation • Move images in their presentation • Know what to do if they discover bad images • Organise images into groups

	We are treasure hunters . *(Unit 1.1)*	**We are TV chefs** *(Unit 1.2)*	**We are Painters** *(Unit 1.3)*	We are collectors (1.4)	**We are Story Tellers.***(Unit 1.5)*	**We are Celebrating.** *(Unit 1.6)*
 *Throughout all units of work* *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*	• Use simple programmable toys safely and sensibly, As well as showing respect for the work of their peers. • Web access is Supervised and safe practices are encouraged. • Children when filming do so With appropriate consent and assent.	• Use digital video cameras safely and to show respect to those they are filming, including recognising the need for consent and assent. • Children are aware of the importance of not sharing videos more widely than is appropriate is considered, as is the need to exclude information that might identify individuals from video recordings. • When using the web, pupils turn the screen off and tell their teacher if they encounter material that concerns them. • Beginning to be aware about copyright, recognising that they own the copyright in their original work and that this cannot be published or copied without their permission.	• When searching for images on the web, children work initially from a set of carefully chosen sites. • Aware that they should turn the screen off and tell their teacher if they encounter material that concerns them. • If work is uploaded to a public area, the importance of protecting the children's identity is recognised. • Initial opportunity for the children to learn some aspects of using email safely.	• Technology is used safely, as well as showing respect for others' intellectual property through observing copyright conditions. • Children have been introduced to the school's Acceptable Use Policy, if they haven't already had this explained to them.	• Can use audio recorders or microphones and audio recording software safely and sensibly.	• Can search for images on the web, and again learn to use technology safely, switching off the screen if they have concerns, and reporting these to their teacher. • Pupils only use photos of themselves if appropriate permission is in place. • If children share their work, then attention is paid to protecting their identity and copyright. • If they send cards by email they use a class address and consider some aspects of using email safely.

COMPUTING End of Year 2 Expectations

SEN / Emerging / Expected / Exceeding	**ALGORITHMS** - *execute by following precise and unambiguous instructions* **PROGRAMS** - *create and debug simple programs*	**DATA RETRIEVING AND ORGANISING** *use technology purposefully to create, organise, store, manipulate and retrieve digital content*	**COMMUNICATING** *understand computer networks including the internet; how they can provide multiple services, such as the world wide*
Yr2	**We are Astronauts.** *(Unit 2.1)* • Predict the outcomes of a set of instructions • Use right angle turns • Use the repeat commands • Test and amend a set of instructions • Write a simple program and test it • Plan an algorithm to move a spaceship from Earth to the Moon • Implement algorithms on floor turtle • Predict what the outcome of a simple program will be **We are Game Testers.** *(Unit 2.2)* • Understand that computer games are made up of precise instructions for the computer • to follow • Understand that computer programmers will have implemented many algorithms in • making a computer game • Use logical reasoning to make predictions about what happens next • Suggest ways in which simple computer games could be improved	**We are Photographers.** *(Unit 2.3)* • Take photos using a digital camera, tablet • or smartphone • Review and reject photos • Add titles and stars to digital photos • Apply adjustments and effects to digital • photos • Select their favourite photos for inclusion in • a shared portfolio • Let you know if they find images they are concerned about **We are Researchers.** *(Unit 2.4)* • Add questions to a mind map • Add information from independent research to a mind map • Locate information from one or more relevant websites • Search for information on a small number of sites using a custom search engine • Know how to report concerns over content when searching the web • Create a short presentation summarising • their findings • Experiment with text, pictures and animation to make a simple slide show **We are Zoologists.** *(Unit 2.6)* • Take digital photographs of bugs • Import photos to a computer or the network • Create charts to show the data they collect • Explore Google Maps or Google Earth to find a familiar location • Create an IWB resource summarising their data	**We are Detectives *(Unit 2.5)*** • Record audio or written notes from an email or attachments • Explain why it is important to type email addresses correctly • Read emails • Compose and respond to emails • Send and reply to messages sent by a safe email partner (within school) • Word process a piece of text • Insert/delete a word using the mouse and arrow keys • Highlight text to change its format (B, U, I)?

	(Unit 2.1) **We are Astronauts.**	*(Unit 2.2)* **We are Game Testers.**	*(Unit 2.3)* **We are Photographers**	*(Unit 2.4)* **We are Researchers.**	*(Unit 2.5)* **We are Detectives**	*(Unit 2.6)* **We are zoologists**
 *Throughout all units of work* *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*	• Understand that they must let their teacher know if they encounter inappropriate material when they search the web. • If the pupils use third-party images in their projects, they should use images with public domain or Creative Commons licences.	• Children are aware of age restrictions on games and that these should be kept to. • Children are aware that Comments on games like Scratch and Minecraft are not moderated before they appear Children know they should report any which are inappropriate to an adult. • Children are aware of where to go for help and support when they have concerns about content or contact.	• Children know that once images are posted online, it's impossible to control what happens to them. • Children have discussed facial recognition software and geotagging mean that those posting images might inadvertently fail to keep some personal information private. • Children know how to minimise risks, and learn what they should do if they have concerns about images they encounter on the web. • Children demonstrate an understanding of what is acceptable and unacceptable to photograph, for example, that it is usually not a good idea to take or share photographs in which children can be identified, or that might reflect badly on the school.	• Children can consider how to stay safe while researching online, and show respect for others' ideas and intellectual property by citing their sources, and using licensed images. • Children know that safe search filters are in place for using Google or Bing and school internet access is filtered.	• Children show awareness of some of the risks associated with email. • Children know that attached files can contain viruses or other harmful programs, that email addresses and embedded links can be 'spoofed', and that 'spam' is a common problem.	• Children know that when sharing photographs and geo-location information online they need to consider the importance of keeping personal information private; they achieve this by not including names or photographs of people. • Respectful of rules for using digital equipment when out of the classroom, to ensure the equipment is kept safe and that they are not so focused on using it that they become ware of risks around them.

COMPUTING End of Year 3 Expectations

	SEN / Emerging / Expected / Exceeding	**ALGORITHMS** *Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions* **PROGRAMS** *Create and debug simple programs* *Use logical reasoning to predict the behaviour of simple program*	**DATA RETRIEVING AND ORGANISING**	**COMMUNICATING** *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*	**USING THE INTERNET** *Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content*	**DATABASES**	**PRESENTATION** *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*
Yr3		***We are Programmers.*** *(Unit 3.1)* • Draw a square, rectangle and other regular shapes on screen, using commands • Create an algorithm for an animated scene in the form of a storyboard (Write more complex programs) • Use 90 degree and 45 degree turns • Break the scene down into small sections of action and dialogue • Write a program in Scratch to create the animation • Give an on-screen robot directional instructions • Experiment with variables to control models • Put the blocks of their Scratch script into order **We are Bug Fixers.** *(Unit 3.2)* • Correct 'off-by-one' errors in loops • Improve the performance of the circle drawing • program • Get the dialogue in the joke program to • work in sequence • Experiment with the speed variable and other factors in the racing car simulator	**We are presenters.** *(Unit 3.3)* • Review images on a camera and delete unwanted images • Experienced downloading images from a camera into files on the computer • Use photo editing software to crop photos and add effects • Manipulate sound when using simple recording story boarding	**We are network engineers** *(Unit 3.4)* • Name some of the hardware that connects computers • Take part in a simulation of how data is transmitted via the internet • Use ping, ipconfig and commands • Appreciate the implications of how networks work for their online safety **We are Communicators** *(Unit 3.5)* • Realise that email and video conferencing work via the internet • Use email and video conferencing to communicate • Use text and video for communication • Ensure their use of email and video conferencing complies with the school's AUP • Use the email address book • Open and send an attachment	**Covered across the units.** • Find relevant information by browsing a menu. • Search for an image, then copy and paste it into a document • Use 'Save picture as' to save an image to the computer • Copy and paste text into a document • Begin to use note making skills to decide what text to copy	**We are opinion pollsters.** *(Unit 3.6)* • Input data into a prepared database • Sort and search a database to answer simple questions • Use a branching database • Collect data via the internet • Treat data collected in a way that shows • respect for individuals • Use Google Forms to collect data • Use Google Slides to present their results	**We are presenters.** *(Unit 3.3)* • Operate a simple video camera correctly • Record useable footage • Import and edit their footage • Record an audio commentary for their footage • Create a presentation that moves from slide to slide and is aimed at a specific audience • Combine text, images and sounds and show awareness of audience • Know how to manipulate text, underline text, center text, change font and size and save text to a folder
E-Safety		**Unit 3.1** **We are programmers**	**Unit 3.2** **We are bug fixers**	**Unit 3.3** **We are presenters**	**Unit 3.4** **We are network engineers**	**Unit 3.5** **We are communicators**	**Unit 3.6** **We are opinion pollsters**

 *Throughout all units of work* *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*	• To consider copyright when sourcing images for their programs and/or uploading their own work to the Scratch community site. • Searching for content for programs or viewing others' cartoons also offers an opportunity to develop safe search habits. • Can participate in the Scratch community, they need to think about what information they can share and how to participate positively in an online community, as well as obtaining parental permission.	• Consider the implications of bugs in software. Participating in the Scratch community would enable the pupils to help others with their projects as well as allowing them to receive help on their own. Participation requires parental permission, and the pupils should consider what behaviour is acceptable online.	• In filming one another, the pupils need to ensure that the appropriate permission has been obtained, and that they act respectfully and responsibly when filming, editing and presenting their work. • Should think through the implications of videos being made available on the school network or more widely via the internet. • Discuss why schools and other organisations have strict policies over filming.	• Learn about how networks, including the internet, operate. • Know that data transmitted via the internet is not always encrypted. • They consider some of the implications for privacy, e.g. their 'digital footprint' associated with using the internet. • Become aware of the importance of DNS for safe use of the internet. • Use command line diagnostic tools safely and responsibly.	• Should think about the safe use of email. • Learn how email can be used positively. • Become aware of some of its risks, including malware attachments, hacked accounts, spam and spoofed links, • Consider how their exposure to such risks can be reduced. • Consider the importance of introductions in extending circles of trust. • Use video conferencing can be used positively, to support learning with a known partner.	• Learn some of the legal and ethical requirements for designing online surveys and processing data. • Consider what information it would be appropriate for them to give in an online survey, and some implications of data processing. • Can use online tools for collaborating on survey design and analysis, considering how to use these appropriately. • Address issues of the pupils' attitudes to online safety.

	COMPUTING End of Year Expectations Cohort Tracker Year 4 SEN / Emerging / Expected / Exceeding	**ALGORITHMS** *Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions* **PROGRAMS** *Create and debug simple programs* *Use logical reasoning to predict the behaviour of simple program*	**DATA RETRIEVING AND ORGANISING**	**COMMUNICATING** *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*	**USING THE INTERNET** *Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content*	**DATABASES**	**PRESENTATION** *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*
Yr4		**We are software developers** *(Unit 4.1)* • Design an interactive educational game • Develop an interactive educational game • Use repeat instructions to draw regular shapes on screen, using commands • Experiment with variables to control models • Make turns specifying the degrees • Put Scratch blocks into the right order for their game • Use the *if/then/else* block correctly • Use the keyboard for input and the screen for output • Make accurate predictions about the outcome of a program they have written **We are toy designers** **(Unit 4.2)** • Design a toy with computer-controlled input and output • Write an algorithm to show how their toys • Experiment with variables to control models • Give an on-screen robot specific directional instructions that takes them from x to y • Would produce output in response to the input received • Test input and output on a simulation of their toy using simple scripts • Identify ways in which their simulated toy does not function as expected •	**We are musicians** *(Unit 4.3)* • Explain how digital technology contributes to creating music • Create a simple composition using sequencing software • Record samples for use in sequencing software • Combine samples to produce a piece of music • Export their composition in a standard compressed format **We are meteorologists** **(Unit 4.6)** • Enter data • Take digital photos • Create simple charts • Make predictions • Create a presentation for their weather forecast • Identify unusual data	**We are co-authors** **(Unit 4.5)** • Find and read an article on Wikipedia • Create content for a wiki • Create a lengthy presentation that moves from slide to slide and is aimed at a specific audience **We are meteorologists** **(Unit 4.6)** • Take digital photos • Add measurements and descriptions to photographs • Present the weather effectively to their peers • Create simple charts • Make predictions • Create a presentation for their weather forecast	**We are HTML editors** **(Unit 4.4)** • Understand the difference between the web • Understand computer networks and the internet • Use tabbed browsing to open two or more web pages at the same time • Use a search engine to find a specific website • Use note-taking skills to decide which text to copy and paste into a document • Open a link to a new window • Open a document (PDF) and view it? • Understand that web pages are written and transmitted in HTML • Know and use some simple HTML tags • Edit the HTML for a web page • Create web pages that do not reveal pupils' personal information	**We are meteorologists** **(Unit 4.6)** • Input data into a prepared database • Sort and search a database to answer simple questions • Recognise what a spread sheet is • Use the terms 'cells', 'rows' and 'columns' • Enter data, highlight it and make bar chart • Analysing data	**We are co-authors** **(Unit 4.5)** • Find and read an article on Wikipedia • Create content for a wiki • Create a lengthy presentation that moves from slide to slide and is aimed at a specific audience • Edit their own content • Insert sound recordings into a multi media presentation • Know how to manipulate text, underline text, centre text, change font and size and save text to a folder • Edit the HTML for a web page

	Unit 4.1 We are software developers	Unit 4.2 We are toy designers	Unit 4.3 We are musicians	Unit 4.4 We are HTML editors	Unit 4.5 We are co-authors	Unit 4.6 We are meteorologists
 <u>*Throughout all units of work*</u> *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*	• Consider copyright when sourcing images or media for their programs and/or uploading their own work to the Scratch community site. • Search for content for their programs or viewing others' games also offers an opportunity to develop safe search habits. • Be aware of what information they can share and how to participate positively in an online community, as well as obtaining parental permission.	• Think carefully about copyright in sourcing images and other media for their toy prototypes and presentations, or if uploading their own work to the Scratch community. • If the pupils do participate in the online Scratch community, they should think through how to do so in a safe and responsible manner, and should obtain their parents' consent. • If the pupils link their programs to hardware, they need to take care to work safely with a range of tools and electronic equipment.	• Think about copyright when sourcing audio or publishing their own compositions. They are encouraged to use Creative Commons licensed content if working with others' audio files. • Discuss how copyright relates to music performed in school as well as illegal downloading and sharing of copyrighted music.	• Learn how easy it is to create content for the web. The unit provides an opportunity to address some of the risks of using the web, and how pupils could best keep themselves safe while doing so. • Learn how easily web pages can be modified, which provides an opportunity to consider the reliability of web-based content.	• When using Wikipedia, consider some strategies for evaluating the reliability of online content as well as the rules and processes that the Wikipedia community has evolved. • Develop a shared wiki, thinking carefully about how to do so safely and responsibly, and considering what conduct is appropriate when collaborating on a shared resource.	• Know importance of obtaining and using accurate data for any information-processing work. • When filming one another, ensure appropriate permission is obtained and that recordings are made, edited and shown in safe, respectful and responsible ways. • Think carefully about the implications of uploading their films to the school network or to the internet.

COMPUTING End of Year 5 Expectations

	SEN / Emerging / Expected / Exceeding	**ALGORITHMS** *Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions* **PROGRAMS** *Create and debug simple programs* *Use logical reasoning to predict the behaviour of simple program*	**DATA RETRIEVING AND ORGANISING**	**COMMUNICATING** *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*	**USING THE INTERNET** *Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content*	**DATABASES**	**PRESENTATION** *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*
Yr5		**We are game developers** **(Unit 5.1)** • Combine sequences of • instructions and procedures to turn devices on or off • Understand input and output • Use an ICT program to control an external device that is electrical and/or mechanical • Use ICT to measure sound or light or temperate using sensors • Explore 'What is' questions by playing adventure or quest games • Write programs that have sequences and repetitions **We are cryptographers** **(Unit 5.2)** • Send and receive messages using Morse and semaphore • Encrypt and decrypt messages using the Caesar and substitution ciphers • Recognise the importance of keeping passwords entirely secret • Recognise the need for encryption when using the web We are aritists • Use the web to explore virtual art galleries • Create simple objects using SketchUp • Create a simple gallery space in SketchUp • Add furniture to their gallery in SketchUp • Add their artwork to the gallery • Create an animated walkthrough of their gallery	Within Unit 5.4, 5.5. • Listen to streaming audio such as online radio • Download and listen to podcasts • Produce and upload a podcast • Manipulate sounds using Audacity • Select music from open sources and incorporate it into multimedia presentations • Work on simple film editing	**We are web developers** **(Unit 5.4)** • Use a range of presentation applications • Make a home page for a website that contains links to other pages • Capture sounds, images and video • Use the word count tool to check the length of a document • Use bullets and numbering tools • Consider audience when editing a simple film • Know how to prepare and then present a simple film • Use ICT to record sounds and capture both still and video images **We are Bloggers (Unit 5.5)** • Understand how to use blogs safely and responsibly • Understand how the internet makes blogging possible • Write a blog post • Comment on a blog post • Add an image, audio or video to a blog post • Add their own original image, audio or video to a blog post	**We are cryptographers** **(Unit 5.2)** • Recognise the importance of using complex passwords • Understand how to check if a web page is encrypted **We are web developers** **(Unit 5.4)** • Use a search engine using keyword searches • Compare the results of different searches • Decide which sections are appropriate to copy and paste from at least two web pages • Save stored information following simple lines of enquiry • Download a document and save it to the computer	• Create a formula in a spreadsheet and then check for accuracy and plausibility • Search databases for information using symbols such as = > or < • Create databases planning the fields, rows and columns • Create graphs and tables to be copied and pasted into other documents	**We are Artists (Unit 5.3)** • Create a tessellating pattern • Write a program to draw a simple shape • Create a pattern using overlapping shapes • Create a pattern using repeating, varied shapes • Create a computer-generated landscape • Use instant messaging to communicate with class members • Conduct a video chat with someone elsewhere in the school or in another school

	Unit 5.1 **We are game developers**	Unit 5.2 **We are cryptographers**	Unit 5.3 **We are artists**	Unit 5.4 **We are web developers** *E-safety forms the focus of this unit*	Unit 5.5 **We are bloggers**	Unit 5.6 **We are architects**
 <u>*Throughout all units of work*</u> *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*	• The pupils need to consider copyright when sourcing images or media for their games and/or uploading their own work to the Scratch community site. • Develop safe search habits when searching for content for their games or viewing others' games also offers an opportunity. • If the pupils participate in the Scratch community, they need to think about what information they can share and how to participate positively in an online community, as well as obtaining parental permission. • Consider some personal implications of playing games, perhaps including violent computer games.	• Learn how information can be communicated in secret over open channels, including the internet, using cryptography. Learn about the public key system used to sign and encrypt content on the web, and how they can check the security certificates of encrypted websites. • Learn about the importance of password security for online identity and consider what makes a secure password.	• Reinforce messages around safe searching and evaluating the quality of online content. • Uploading their work for others to see, they should consider the importance of protecting personal information as well as recognising that they are sharing their own copyrighted work with an audience.	• - • Work collaboratively to develop a website in which they present their own authoritative content on a broad range of issues around the safe and responsible use of technology. • Consider the reliability and bias of online content, • Contribute positively to a shared resource • Use search engines safely and effectively.	• Write content for their own or a shared blog, thinking carefully about what can be appropriately shared online. • Consider issues of copyright and digital footprint • Show awareness of what constitutes acceptable behaviour when commenting on others' blog posts. • Understand the importance of creating high-quality online content • Become more discerning in evaluating content as they review others' blogs. • If the pupils' blogs are publicly accessible, it is important that any comments are moderated by their teacher; it is worth discussing with the pupils why the comments should be moderated.	The pupils should observe good practice when searching for and selecting digital content. If the pupils choose to locate their 3D models geographically, they should avoid sharing private information. The pupils should think about copyright when adding content to their model or publishing images or videos of their model.

	COMPUTING End of Year 6 Expectations SEN / Emerging / Expected / Exceeding	**ALGORITHMS** *Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions* **PROGRAMS** *Create and debug simple programs* *Use logical reasoning to predict the behaviour of simple program*	**DATA RETRIEVING AND ORGANISING**	**COMMUNICATING** *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*	**USING THE INTERNET** *Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content*	**DATABASES**	**PRESENTATION** *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*
Yr6		**We are interface designers** **(Unit 6.4)** • Sketch ideas for the design of their app • Use a prototyping tool to develop a set of screen layouts for their app • Think through elements of interaction design for their app • Be aware of accessibility issues in apps and other software • Source media assets for their app • Use logical reasoning to explain how some simple algorithms work **We are app developers** **(Unit 6.5)** • Use logical reasoning to detect errors in their algorithms • Use sequence, selection, repetition and variables in their code • Use logical reasoning to detect errors in their code • Use trial and improvement approaches to debug their code • Explain how an algorithm works • Detect errors in a program and correct them • Use an ICT program to control a number of events for an external device • Use ICT to measure sound, light or temperature using sensors and interpret the data • Explore 'what if' questions by planning different scenarios for controlled devices • Use input from sensors to trigger events • Check and refine a series of instruction	**We are marketers** **(Unit 6.6)** • Create an effective and well-designed marketing flyer using their graphics skills to good effect • Explore the menu options and experiment with images (colour effects, options, snap to grid, grid settings etc. • Develop a well-designed and easy-to- navigate site for their app • Be aware of their responsibilities as creators of online content • Edit original and third-party content to create a promotional video •	**We are App Planners** **(Unit 6.1)** • Understand that a smartphone is a programmable computer • View geotagged photos on a map • Identify interesting problems • Search for apps addressing the problems they have identified • Evaluate the quality of a range of competing products • Create an effective presentation to pitch their idea • Create a sophisticated multimedia presentation • Confidently choose the correct page set up option when creating a document • Confidently use text formatting tools, including heading and body text • Use the 'hanging indent' tool to help format work where appropriate (e.g. a play script) **We are marketers** **(Unit 6.6)** • Present a film for a specific audience and then adapt same film for a different audience	**We are market researchers** **(Unit 6.3)** • Create an online survey • Use simple charts to analyse the results of a survey • Conduct an interview or focus group • Analyse the information obtained in an interview or focus group • Present findings from their market research • Use recorded media to analyse information collected during an interview or focus group **We are App Planners** **(Unit 6.1)** • Contribute to discussions online • Use a search engine using keyword searches • Use complex searches using such as '+' 'OR' "Find the phrase in inverted commas"	**We are project managers** **(Unit 6.2)** • Identify the principal aspects of the project • Identify the tasks that need to be completed for the various aspects of the project • Identify the tools and resources needed to • Complete the project • Create original content for use in their app • Evaluate the quality of work already undertaken • Use a search engine using keyword searches • Order the tasks into a sensible sequence • Use complex searches using such as '+' 'OR' "Find the phrase in inverted commas"	**We are App Planners** **(Unit 6.1)** • Create an effective presentation to pitch their idea • Create a sophisticated multimedia presentation **We are market researchers** **(Unit 6.3)** • Conduct a video chat with people in another country or organization **We are interface designers** **(Unit 6.4)** • Sketch ideas for the design of their app • Use a prototyping tool to develop a set of screen layouts for their app **We are marketers** **(Unit 6.6)** • Present a film for a specific audience and then adapt same film for a different audience

	Unit 6.1 We are app planners	Unit 6.2 We are project managers	Unit 6.3 We are market researchers	Unit 6.4 We are interface designers	Unit 6.5 We are app developers	Unit 6.6 We are marketers
 *Throughout all units of work* *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*	• Consider the capabilities of smartphones and tablet computers, and how these can be used purposefully. • Become aware of some of the capabilities of these devices, including how they can be used to record and share location information; • Consider some of the implications of this. • Use search engines safely and effectively.	• Use online tools safely and effectively, considering how they can contribute positively to a shared project. • Use search engines safely and effectively. • Can children make use of online content, respecting any copyright conditions?	• Show regard for the ethical and legal frameworks around conducting interviews and online surveys, such as the need to preserve anonymity and/or confidentiality. • When conducting their research, the pupils need to act safely and responsibly, as well as showing respect for those participating in the research.	• Consider carefully about copyright in relation to both sourcing and creating their own digital content and user interface components for their apps.	• Use their school's tablets or for this unit need to consider how to do so safely and purposefully. • Children participating in online communities for either of the development platforms here need to do so in a safe, responsible and respectful manner. • The pupils should also think carefully about any safety implications of the apps they develop.	• In marketing their app, the pupils should consider the legal and ethical frameworks around advertising across different media. • Think about the need to protect personal information about themselves and other members of their group when marketing their app. • When creating websites for their apps, have pupils shown consideration the e-safety implications for the site's users as well as themselves.