



## Progression Computing

Skill	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Communication and Collaboration	<b>Messaging</b> <ul style="list-style-type: none"> <li>Look at the different ways that messages can be sent, forums, letters, telephone, email, Stickies, text, instant messaging, walkie talkies</li> <li>Contribute ideas to a class email or respond to a message or forum on the learning platform</li> <li>Remember password to log into VLE</li> </ul>	<b>Messaging</b> <ul style="list-style-type: none"> <li>Compare all the different ways that messages can be sent and start to consider their advantages and disadvantages</li> <li>Contribute and discuss ideas to compose and respond to class/group/individual e-mails, forums, blogs</li> </ul>	<b>Messaging</b> <ul style="list-style-type: none"> <li>In online discussion: start new threads and contribute to others relevant to the topic; consider relevance of contributions</li> <li>Begin to experience other forms of online discussion, such as blogs, wikis, quizzes, surveys and video conferencing</li> </ul>	<ul style="list-style-type: none"> <li>select from your best work to save and share through an e-portfolio</li> <li>use at least two online communication methods (eg online discussion, surveys, quizzes, blogs, wikis, shared online folders, web quests) through the Learning Platform in topic work</li> <li>discuss advantages and disadvantages of these communication methods</li> <li>To start to think about the different styles of language layout and format of online communications sent to different people</li> </ul>	<b>Unit 1: Internet research</b> Use advanced search functions in Google, e.g. quotations.  Understand websites such as Wikipedia are made by users (link to E-Safety)  Use strategies to check the reliability of information, e.g. cross checking with books.  Use their knowledge of domain names to aid their judgment of the validity of websites.	

				(eg. when it is appropriate to use "text language").		
	<p><b>Publishing: (Refer to Multimedia Unit)</b></p> <ul style="list-style-type: none"> <li>• Contribute ideas to a class blog, forum or web page</li> <li>• Use simple authoring tools to create their own content or homepage on the learning platform</li> <li>• With support use sound recording tools to convey a simple message or introduction</li> <li>• With support add pictures they have created onto the learning platform</li> <li>• Talk about who can see pages on the learning platform and see their work at home ( out of school)</li> </ul>	<p><b>Publishing: ( Refer to Multimedia Unit)</b></p> <ul style="list-style-type: none"> <li>• Contribute and discuss ideas to compose and respond to discussions and forums on the Learning platform</li> <li>• Begin to talk about the advantages of using electronic communications in terms of sharing pages and information with a wider audience at home and school</li> <li>• Look and talk about other people's contributions on the learning platform</li> <li>• Consider who can see their contributions on the learning platform</li> </ul>	<p><b>Publishing</b></p> <ul style="list-style-type: none"> <li>• Begin to personalise your own Learning Platform page, adding a photo and favourite web links</li> <li>• Access a shared space to follow web links and read instructions for work</li> <li>• upload work to a shared space</li> </ul>		<p><b>Unit 2: Cloud computing</b> Understand files may be saved off their device in 'clouds' (servers).</p> <p>Upload/download a file to the cloud on different devices.</p> <p>Understand about syncing files using cloud computing folders.</p>	<p><b>Blogging (kidblog.org)</b></p> <ul style="list-style-type: none"> <li>• Register for a blog: selecting a url and navigate to their blog once it is created.</li> <li>• Alter the theme and appearance of their blog, adding background images etc.</li> <li>• Create a new post, save it as a draft and publish it.</li> <li>• Embed photos, hyperlinks and videos into posts.</li> <li>• Reorganise posts and remove posts they no longer want.</li> <li>• Like/follow other blogs and build up their blog content over the year.</li> </ul>
<b>Data</b>	<ul style="list-style-type: none"> <li>• Use ICT to Sort objects into groups according to a given criterion;</li> <li>• Identify criteria for sorting objects on screen</li> <li>• Use further criterion for grouping the same objects in different ways</li> <li>• Understand that ICT can create and modify charts quickly and easily</li> <li>• Use pictogram software to represent and interpret simple data</li> </ul>	<ul style="list-style-type: none"> <li>• Develop different criteria and create own pictograms</li> <li>• Use a simple graphing package to record information - add labels and numbers as appropriate</li> <li>• Use ICT to edit and change the information quickly.</li> </ul>	<ul style="list-style-type: none"> <li>• To choose, print and annotate appropriate graphs, to answer simple questions e.g. bar charts, or pie charts and interpret data</li> </ul> <p><b>Database</b></p>	<p><b>Graphing</b></p> <ul style="list-style-type: none"> <li>• Have regular opportunities to enter data into a graphing package and use it to create a range of graphs, and to interpret data across all subjects</li> <li>• To compare how different graphs can be</li> </ul>	<p><b>Modelling and Simulation</b></p> <ul style="list-style-type: none"> <li>• to change variables in a spreadsheet to solve problems</li> <li>• to make predictions and changes and check results.</li> <li>• to enter formulae for the four operations (+-x/) into a spreadsheet</li> </ul>	<p><b>Database</b></p> <ul style="list-style-type: none"> <li>• to identify a problem which can be solved by collecting data</li> <li>• to identify which data to collect</li> <li>• to collect data in an efficient and accurate way</li> </ul>

	<ul style="list-style-type: none"> <li>• Use a pictogram to create and help answer questions</li> </ul>	<ul style="list-style-type: none"> <li>• Talk about how ICT helps them to organise their information</li> <li>• Save , retrieve and amend their work</li> <li>• Use a graphs to create and answer questions</li> </ul> <p style="text-align: center;"><b>Branching Database</b></p> <ul style="list-style-type: none"> <li>• Understand the difference between questions and answers</li> <li>• Ask questions that comply with the rule that it can only have a yes or no answer</li> <li>• Use a branching database to identify objects using yes or no questions</li> </ul>	<ul style="list-style-type: none"> <li>• Collect information by designing and using a simple questionnaire to record numbers, text and choices.</li> <li>• As a class, design what information needs to go on record cards</li> <li>• Create record cards to store collected information</li> <li>• Use a database to generate bar charts and graphs to answer questions</li> <li>• Answer questions by searching and sorting the database</li> </ul>	<p>used for different purposes</p> <p><b>Branching Databases</b></p> <ul style="list-style-type: none"> <li>• search a branching database</li> <li>• create and use a branching database to organise, reorganise and analyse information</li> <li>• compare the use of graphing software, branching database and card-based database for organising and interpreting data</li> <li>• explore some real-life examples of branching databases, such as keys for animal identification</li> </ul>	<ul style="list-style-type: none"> <li>• to use 'SUM' to calculate the total of a set of numbers in a range of cells</li> <li>• to change data in a spreadsheet to answer 'what if...?' questions and check predictions</li> <li>• Using a simple layout demonstrated by the teacher, create a simple spreadsheet model and use it to solve problems</li> </ul> <p><b>Data logging</b></p> <ul style="list-style-type: none"> <li>• Plan an investigation using data logging technology</li> <li>• Make predictions for this investigation and understand how to make it a fair test</li> <li>• Carry out the investigation, ensuring accuracy</li> <li>• Interpret results, draw conclusions and analyse the effectiveness of the technology</li> </ul>	<ul style="list-style-type: none"> <li>• to organise data by designing fields and records in a database</li> <li>• to interpret data by using a range of searches and graphs</li> <li>• to draw conclusions from data</li> <li>• to use conclusions to solve the original problem</li> <li>• to present findings to a specified audience</li> <li>• to justify reasons for their choices and explain why other methods were not appropriate</li> </ul> <p><b>Simulation</b></p> <ul style="list-style-type: none"> <li>• To identify and enter the correct formulae into cells, modify the data, make predictions of changes and check them</li> <li>• to identify formulae and enter them into a spreadsheet</li> <li>• Copy formulae to create tables of results</li> <li>• to use a spreadsheet to draw a graphs and answer questions</li> <li>• to change the data and formulae in a spreadsheet to answer 'what if ...?' questions and check predictions</li> </ul>
<b>Digital Media</b>	<p style="text-align: center;"><b>Graphics</b></p> <ul style="list-style-type: none"> <li>• Use a paint package to create a picture to communicate their ideas</li> <li>• Explore shape, line and colour to communicate a specific idea</li> </ul>	<p style="text-align: center;"><b>Graphics</b></p> <ul style="list-style-type: none"> <li>• Use ICT to source, generate and amend ideas for their art work</li> <li>• Talk about the advantages and</li> </ul>	<p style="text-align: center;"><b>Digital Imagery</b></p> <ul style="list-style-type: none"> <li>• To use still and video cameras, independently</li> <li>• To take photographs with a digital microscope</li> </ul>	<p style="text-align: center;"><b>Graphics</b></p> <p>import a photograph and explore the effects which can be created</p>	<p style="text-align: center;"><b>Digital Imagery</b></p> <ul style="list-style-type: none"> <li>• To use different filming techniques and camera angles e.g. zoom, panning, wide shot etc to create different mood/perspective</li> </ul>	<p style="text-align: center;"><b>Digital Imagery</b></p> <ul style="list-style-type: none"> <li>• explore all the features of a given video editing or animation package</li> </ul>

	<ul style="list-style-type: none"> <li>• Talk about their use of a paint package and their choice of tools</li> <li>• Talk about the differences between a graphics package and paper based art activities (undo, changes quickly and easily made)</li> <li>• To print</li> <li>• To save with help</li> </ul>	<p>disadvantages of using a graphics package over paper based art activities</p> <ul style="list-style-type: none"> <li>• Develop a variety of skills using a range of tools and techniques to communicate a specific idea or artistic style /effect</li> <li>• Create a stamp to make patterns and designs</li> <li>• Describe to others their use of a paint package and their reason for choice of tools</li> </ul> <p><b>Digital Imagery</b></p> <ul style="list-style-type: none"> <li>• Develop greater control over the digital stills or video camera</li> <li>• Begin to discuss the quality of their image and make decisions (e.g delete a blurred / bad image)</li> <li>• Begin to select and edit and change images</li> <li>• Begin to change or enhance photographs and pictures (crop, re-colour)</li> </ul>	<ul style="list-style-type: none"> <li>• To evaluate quality of footage taken</li> <li>• To understand the need to frame shots and keep the camera still</li> <li>• To download still images and video</li> <li>• to sequence still images and video and use simple editing techniques to create a presentation</li> <li>• create a simple animation either by using stop-motion techniques with a webcam, or by using animation software</li> <li>•</li> </ul>	<p>use a range of visual effects such as filters, hues and painting over photographs.</p> <p>Create patterns and montages</p> <p>select areas and manipulate to give different effects.</p>	<ul style="list-style-type: none"> <li>• Plan a video or animation by drawing a storyboard</li> <li>• Use a range of sound effects, music and voice-overs to create mood/ atmosphere</li> <li>• Select and edit sounds, text, movie clips and other effects to suit purpose and audience</li> <li>• Evaluate and improve work with a view to purpose and audience</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• plan a storyboard for a video or animation to suit a purpose</li> </ul> <p>film, create, edit and refine to ensure quality; present to an audience</p>
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		<p><b>Animation</b></p> <ul style="list-style-type: none"> <li>• Create a sequence of still images which together form a short animated sequence</li> <li>• Create a simple animation to illustrate a story or idea</li> </ul> <p>Upload their images on the learning platform</p>				
	<p><b>Music and Sound</b></p> <ul style="list-style-type: none"> <li>• Recognise that an electronic keyboard can be used to select and control sounds</li> <li>• Experiment with a range of devices which create and record sounds and musical phrases</li> <li>• Understand that devices have stop, record and playback functions</li> <li>• Explore a range of electronic music and sound devices including software and different peripherals</li> <li>• Talk about their music when they share their recordings with the rest of the class</li> </ul>	•	<p><b>Music and Sound</b></p> <ul style="list-style-type: none"> <li>• use ICT to select and record sounds in multimedia software</li> <li>• use music software to organise and reorganise sounds</li> <li>• locate, record, save and retrieve sounds</li> <li>• To begin to layer sounds using music composition software, Audacity or Podium</li> <li>• Add sounds from different sources.</li> </ul>	<p><b>Music and Sound</b></p> <ul style="list-style-type: none"> <li>• listen to a variety of radio programmes, evaluating their style</li> <li>• write a script for a radio programme</li> <li>• plan and record audio for a radio program, eg interview, news broadcast, advert, cookery programme</li> <li>• evaluate and re-record (maybe editing)</li> <li>• maybe publish work online as a podcast</li> </ul>	<p><b>Music and Sound</b></p> <ul style="list-style-type: none"> <li>• record sounds using sound editing software</li> <li>• collect sounds from a variety of sources (online, digital sound recorder)</li> <li>• import sounds into sound editing software</li> <li>• layer and edit sounds</li> <li>• plan, create and refine either a radio programme or play with sound effects or a sonic postcard</li> <li>• Save as a web compatible format for uploading and podcasting; share online</li> </ul>	
E Safety	E-Safety - Online Exploration	E-Safety Online Research	E-Safety Online Research	E-Safety Online Research	E-Safety Online Research	E-Safety Online Research

	<ul style="list-style-type: none"> <li>• Children need help from their teacher or trusted adult before they go online.</li> <li>• Children explore onscreen activities that mimic real life.</li> <li>• Children talk about the differences between real and online experiences.</li> </ul> <p><b>E-Safety - Online research</b></p> <ul style="list-style-type: none"> <li>• Use simple navigation skills to open a teacher selected website from a favourites link or shortcut.</li> <li>• Make choices by clicking on buttons in a webpage and navigate between pages by using the forward and back arrows.</li> <li>• Start to evaluate web sites by giving opinions about preferred or most useful sites.</li> <li>• Know how to return to the home page of a teacher directed website.</li> <li>• Know how to minimise a screen or turn off a monitor if they see something inappropriate on a website and tell a trusted adult.</li> </ul>	<p>Children explore a range of age-appropriate digital resources.</p> <p>Children to know that not everything they find online is accurate.</p> <p>Know that some websites contain advertisements (often embedded) and learn how to ignore them.</p> <p>Children to know what to do if they find something inappropriate online.</p> <p>Children discuss, understand and abide by the school's e-Safety SMART Rules</p>	<p>Use child-friendly search engines independently to find information through key words.</p> <p>Understand that the Internet contains fact, fiction and opinions and begin to distinguish between them.</p>	<p>Use internet search engines to gather resources for their own research work.</p> <p>Be aware of different search engines and discuss their various features (e.g. Google image &amp; video search).</p> <p>Show children how to change the 'Search Settings' to Strict in Google.</p> <p>Understand the importance of framing questions into search criteria when conducting web searches.</p> <p>Be aware that not everything they find online is accurate and that information needs to be checked and evaluated.</p> <ul style="list-style-type: none"> <li>•</li> </ul>	<p>When using the Internet to research their work, children recognise the need to ask appropriate questions to find appropriate answers.</p> <p>Children know that good online research involved interpreting information, rather than copying.</p> <p>Children are able to carry out more refined web searches by using key words.</p> <p>Children evaluate search results and refine as necessary for the best results.</p> <p>Know that information found on websites may be inaccurate or biased and to check the validity of a website.</p> <p>Develop strategies to ignore or cancel unsolicited advertising (pop-ups, banners, videos or audio).</p> <p>Children use websites where resources can be downloaded without infringing copyright.</p>	<p>Children use a range of sources to check the validity of a website.</p> <p>Children recognise that different viewpoints can be found on the web. They critically evaluate the information they use, and understand some of the potential dangers of not doing so.</p> <p>Children are aware of the issues of plagiarism, copyright and data protection in relation to their work.</p> <p>Children select copyright free images and sounds from sources such as the Audio Networks and NEN image gallery.</p> <ul style="list-style-type: none"> <li>•</li> </ul>
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					Acknowledge sources used in their work.	
	<b>E-Safety - Online Communication and E-Awareness</b> <ul style="list-style-type: none"> <li>Children understand that they can share information online, e.g. via email or the school learning platform.</li> <li>Children understand that there is a right and wrong way to communicate and this may be different depending on who you are communicating with</li> <li>Know that email is a method of sending and receiving messages through the Internet.</li> <li>Participate in the sending of class emails.</li> <li>Understand the need to keep passwords private.</li> </ul>	<b>E-Safety Communication &amp; Collaboration</b> <p>Children are able to send suitable and purposeful emails, developing awareness of appropriate language to use.</p> <p>Children know that passwords help to keep information safe and secure and that they should not be shared</p> <p>Children contribute to a class discussion forum.</p>	<b>E-Safety Communication &amp; Collaboration</b> <p>Use a range of online communication tools, such as email, forums and polls.</p> <p>Know how to deal with unpleasant forms of electronic communication (save the message and speak to a trusted adult).</p> <p>Be able to discern when an email should or should not be opened.</p>	<b>E-Safety Communication &amp; Collaboration</b> <p>Children use online communication tools to exchange and develop their ideas in a range of curriculum opportunities.</p> <p>Use sensitive and appropriate language when using online communication tools.</p> <p>Use email as a form of communication, use the "To" box and add a subject heading.</p> <p>Add an attachment to an email.</p> <p>Develop understanding of when it is unsafe to open an email or an email attachment.</p> <ul style="list-style-type: none"> <li></li> </ul>	<b>E-Safety Communication &amp; Collaboration</b> <p>Be aware of the different forms of technology that can be used to access the Internet and communicate with others.</p>	<b>E-Safety Communication &amp; Collaboration</b> <ul style="list-style-type: none"> <li>Decide which online communication tool is the most appropriate to use for a particular purpose, e.g. email, discussion forums, podcast, or multi-user documents on Fronter.</li> <li>Discuss issues to do with Social Networking. E.g. giving too much information, people using information online, not knowing who is at the other end of the conversation</li> <li></li> </ul>
	<b>E-Safety E-Awareness</b> <ul style="list-style-type: none"> <li>Know that some information (full name, address, birthday etc...) is 'special' as it applies to them.</li> <li>Children know that personal information is as valuable online as offline and that it should not be shared without a parent, carer or teacher's permission.</li> </ul>	<b>E-Safety E-Awareness</b> <p>Children are aware that not everyone they meet online is automatically trustworthy.</p> <p>Children understand that personal information is unique to them and should not be shared without a</p>	<b>E-Safety E-Awareness</b> <p>Develop awareness of relevant e-Safety issues, such as cyber bullying.</p> <p>Children understand and abide by the school's 'Being SMART Online' Rules and know that it contains rules that exist in order to keep children safe online.</p>	<b>E-Safety E-Awareness</b> <p>Children understand and abide by the school's 'Being SMART Online' rules and aware of the implications of not following the rules.</p> <p>Children understand that a password can keep information secure and the need to keep it a secret.</p>	<b>E-Safety E-Awareness</b> <p>Children recognise their own right to be protected from the inappropriate use of technology by others and the need to respect the rights of other users.</p>	<b>E-Safety E-Awareness</b> <p>Be aware of the issues surrounding cyberbullying and understanding the impact on an individual of sending or uploading unkind or inappropriate content.</p> <ul style="list-style-type: none"> <li>Know that malicious adults use the Internet and attempt to make contact with children and know how to report abuse.</li> </ul>

	<ul style="list-style-type: none"> <li>• Children discuss, understand and abide by the school's e-Safety SMART Rules.</li> <li>• For children to understand the importance of talking to a trusted adult about their online experiences.</li> </ul>	<p>teacher or parent's permission.</p> <p>Children identify characteristics of people who are worthy of their trust.</p>	<p>Understand what personal information should be kept private.</p> <p>Know that passwords keep information secure and that they should be kept private</p>	•		•
<b>Multimedia and word processing</b>	<ul style="list-style-type: none"> <li>• Develop familiarity with the keyboard - spacebar, backspace, shift, enter, to provide text on screen that is clear and error free</li> <li>• Select appropriate images</li> <li>• Begin to select or record a sound to add to my work</li> <li>• Add text to photographs, graphics (images) and sound e.g. captions, labelling and simple sentences through the use of e.g. <i>2create A Story</i></li> <li>• Use pre-defined layouts or templates for presentations</li> <li>• Begin to explain reasons why choices have been made to teacher or talk partner</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to word process short narrative and non-narrative texts</li> <li>• Develop basic editing skills including different presentational features (font size, colour and style)</li> <li>• Select from different presentational features e.g. title, paragraph, label etc</li> <li>• Word process short narrative and non-narrative texts</li> <li>• Save, print, retrieve and amend their work</li> <li>• Use the mouse or arrow keys to insert words and sentences</li> <li>• Use appropriate editing tools to improve their work</li> <li>• Make use of graphics, video and sound to</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate a range of printed and electronic texts, appropriate to task e.g. newspaper, poster, webpage, Photostory, and recognise key features of layout and design</li> <li>• Select and import graphics from digital cameras, graphics packages and the Internet</li> <li>• if multimedia, select suitable sounds (including recording with a microphone) and visual effects</li> <li>• organise and present information for a specific audience</li> <li>• Through peer assessment and self evaluation, evaluate design and make suitable improvements</li> <li>• Recognise the difference and the advantages and disadvantages between electronic media and printed media and select</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate a range of electronic multimedia, appropriate to task e.g. website, photostory, leaflet, and recognise key features of layout and design</li> <li>• With support, plan structure and layout of document/ presentation</li> <li>• Select and import graphics from digital cameras, graphics packages and other sources and prepare it for processing using ICT</li> <li>• If project is multimedia, select and import sounds (eg own recording, sound effects bank created by teacher) and video/ visual effects</li> <li>• Through peer assessment and self evaluation, evaluate work both during and</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate a range of electronic multimedia, and understand the implications appropriate to their given task e.g. key features of layout and design</li> <li>• Plan structure and layout of presentation</li> <li>• evaluate and select suitable information and media from a range of electronic resources</li> <li>• to use a multimedia authoring program to organise, refine and present information for a specific audience</li> <li>• Create a range of hyperlinks to produce a non-linear presentation</li> <li>• Through peer assessment and self evaluation children should evaluate their design and make suitable improvements</li> <li>• <b>When word processing children should:</b></li> </ul>	<ul style="list-style-type: none"> <li>• Select appropriate software for the task/audience</li> <li>• Plan structure and layout of presentation</li> <li>• evaluate and select suitable information and media from a range of electronic resources</li> <li>• organise, refine and present information for a specific audience</li> <li>• Create a range of hyperlinks to produce a non-linear presentation</li> <li>• Through peer assessment and self evaluation, make suitable improvements</li> <li>• choose appropriate techniques to create an effective and well polished presentation considering intended audience.</li> <li>• Discuss and evaluate the presentations and give</li> </ul>



		<p>enhance their text on screen</p> <ul style="list-style-type: none"> <li>• Talk about their use of graphics and sound and how it may enhance or change the mood and atmosphere of their presentation and make changes where appropriate</li> <li>• Use different layouts and templates for different purposes</li> </ul>	<p>key features when designing publications</p> <p><b>When word processing children should:</b></p> <ul style="list-style-type: none"> <li>• use font sizes and effects appropriately to fit purpose of text</li> <li>• recognise key features of layout and design such as text boxes, columns, borders, WordArt</li> <li>• develop further basic drafting and editing skills</li> <li>• cut, copy and paste between applications</li> <li>• use spell checker</li> <li>• delete, insert and replace text using mouse or arrow keys</li> <li>• begin to use more than two fingers to enter text</li> </ul>	<p>after completion, and make suitable improvements</p> <ul style="list-style-type: none"> <li>• Develop increasing sense of audience</li> </ul> <p><b>When word processing children should:</b></p> <ul style="list-style-type: none"> <li>• choose freely from a range of text styles, to suit audience</li> <li>• hold two hands over different halves of the keyboard</li> <li>• use more than two fingers to enter text</li> </ul>	<p>format text to indicate relative importance.</p> <ul style="list-style-type: none"> <li>• justify text where appropriate.</li> <li>• cut and paste between applications.</li> <li>• delete/insert and replace text to improve clarity and mood.</li> <li>• make corrections using a range of tools (eg spell check, find and replace)</li> <li>• develop confidence using both hands when typing</li> </ul>	<p>reasons for the chosen styles and techniques</p> <p><b>When word processing children should:</b></p> <ul style="list-style-type: none"> <li>• be able to use various display features to communicate to an audience: e.g. fact/definition boxes, annotated illustration, leaflet layout.</li> <li>• delete/insert and replace text to improve clarity and mood.</li> <li>• make corrections using a range of tools (eg spell check, find and replace)</li> <li>• develop confidence using both hands when typing</li> </ul>
Programming	<p><b>Unit 1 : Bee Bots</b></p> <ul style="list-style-type: none"> <li>• Explore a range of control toys and devices</li> <li>• Follow instructions to move around a course</li> <li>• Create a series instructions to move their peers around a course</li> <li>• Explore outcomes when individual buttons are pressed on a robot</li> <li>• Explore an on screen turtle ( or Bee BOT) navigate it around a course or grid</li> </ul>	<p><b>Programming Unit 1: Probots</b></p> <ul style="list-style-type: none"> <li>• Talk about how everyday devices can be controlled</li> <li>• Know that devices and actions on screen may be controlled by sequences of actions and instructions</li> <li>• Create a sequence of instructions to create a right-angled shape on screen</li> <li>• Create a sequence of instructions to control a</li> </ul>	<p><b>Programming Unit1 Scratch -Animation</b></p> <ul style="list-style-type: none"> <li>• Navigate the Scratch programming environment.</li> <li>• Create a background and sprite for animation</li> <li>• Change background after a specific time.</li> <li>• Add inputs to control their sprite.</li> <li>• Change position of sprite on screen.</li> </ul>	<p><b>Programming Unit 1: Scratch Simple Game</b></p> <ul style="list-style-type: none"> <li>• Navigate the Scratch programming environment.</li> <li>• Create a background and sprite for a game.</li> <li>• Add inputs to control their sprite.</li> <li>• Use conditional statements (if... then) within their game.</li> <li>•</li> </ul>	<p><b>Programming Unit 2: Scratch: Creating more challenging games</b></p> <ul style="list-style-type: none"> <li>• Design their own game including sprites, backgrounds, scoring and/or timers.</li> <li>• Their game uses conditional statements, loops, variables and broadcast messages.</li> <li>• Their game finishes if the player wins or loses and the player knows if they have won or lost.</li> <li>• Evaluate the effectiveness of their game and debug if required.</li> </ul>	<p><b>Programming Unit 1: Introduction to Python/Small Basics</b></p> <ul style="list-style-type: none"> <li>• Navigate Python/Small Basics programming environment Idle</li> <li>• Declare variables</li> <li>• Use a range of statements</li> <li>• Use selection algorithms</li> <li>• Use comparison and numerical operators</li> <li>•</li> </ul>

	<ul style="list-style-type: none"> <li>• Have experiences of controlling other devices such as sound recording devices, music players, video recording equipment and digital cameras</li> <li>• While navigating around a course on a computer predict what will happen once the next command is entered.</li> </ul>	<p>programmable robot to carry out a pre-determined route to include direction, distance and turn (on screen or floor robot)</p> <ul style="list-style-type: none"> <li>• Control a floor robot using appropriate buttons, Make predictions and estimate distances and turns</li> <li>• Experience a range of control devices such as a microscope, sound recorders, cameras and other devices</li> <li>• Control music software through sequencing icons ( see sound and music modules)</li> </ul>			•	
	<p><b>Unit 2: Daisy Dino/Bee Bots (app)</b></p> <ul style="list-style-type: none"> <li>• Discuss/explore what will happen when instructions are given in a sequence.</li> <li>• Give a sequence of instructions to complete a simple task.</li> <li>• Instructions use both movement commands and additional commands.</li> </ul>	<p><b>Programming Unit 2: Move the turtle</b></p> <ul style="list-style-type: none"> <li>• Generate a sequence of instructions including 'right angle' turns.</li> <li>• Create a sequence of instructions to generate simple geometric shapes (oblong /square).</li> <li>• Discuss how to improve/change their sequence of commands.</li> <li>•</li> </ul>	<p><b>Programming Unit 2: Logo</b></p> <ul style="list-style-type: none"> <li>• Write a simple program in Logo to produce a line drawing.</li> <li>• Use more advanced Logo programming, including pen up, pen down etc.</li> <li>• Write a program to reproduce a defined problem, e.g. geometric shape/pattern.</li> <li>•</li> </ul>	<p><b>Programming Unit 2: Kodu</b></p> <ul style="list-style-type: none"> <li>• Navigate the Kodu macro environment using keyboard and mouse</li> <li>• Create a 3D digital world for a game with land, water and scenery.</li> <li>• Add a sprite to their world.</li> <li>• Program their sprite to navigate their 3D world with an input.</li> <li>• Create paths on which sprites will move.</li> <li>• Use conditional statements ('if...then') to give objects behaviours</li> </ul>	<p><b>Programming Unit 1 - Kodu</b></p> <ul style="list-style-type: none"> <li>• Create more complex games - building on work in Year 4</li> <li>• Create a user controlled sprite, automated sprites and peripheral characters with different behaviours.</li> <li>• Use copying and creatable to create multiple characters.</li> <li>• Shift camera angles in settings and in the code.</li> <li>• Use timers, health monitors and power ups.</li> <li>•</li> </ul>	<p><b>Programming : Unit 2 - HTML</b></p> <ul style="list-style-type: none"> <li>• Create a basic page with head and body sections.</li> <li>• Open and test pages in internet explorer</li> <li>• Add frames to give the page structure</li> <li>• Add text, pictures and video and be able to change these.</li> <li>• Create hyperlinks to other pages and websites.</li> </ul>