

<p>Computing: Progression of Skills and Knowledge Year 1</p>	
<p>E-Safety <u>Make decisions about whether or not statements are true.</u> <u>Identify devices that can be used to search the internet.</u> <u>Identify when inappropriate content is accessed and act appropriately.</u></p> <p>Programming <u>Give commands including straight forwards / backwards / turn one at a time.</u> <u>Explore what happens when a sequence of instructions is given.</u> <u>Give a set of instructions to form simple geometric shapes.</u> <u>Improve/change their sequences of commands.</u></p> <p>Multimedia <u>Use various tools such as brushes, pens, rubber, stamps, shapes.</u> <u>Record sound at and away from the computer.</u> <u>Save, retrieve and edit sounds.</u> <u>Use a space bar, backspace, delete, arrow keys, return.</u> <u>Use the internet to generate ideas for their work.</u> <u>Capture video.</u> <u>Discuss which videos to keep and which to delete.</u> <u>Arrange clips to create a short film.</u></p> <p>Understanding Technology <u>Talk about websites they have been on.</u> <u>Explore a website by clicking on the arrows, menus and hyperlinks.</u></p> <p>Data Handling <u>Know that images give information.</u> <u>Say what a pictogram is showing them.</u> <u>Sort data into groups.</u></p>	<p>We are treasure hunters</p> <ul style="list-style-type: none"> • Follow instructions. • Make their toy move. • Predict where your toy will end up. • Program toy to find treasure! • Spot and correct mistakes. <p>We are TV chefs</p> <ul style="list-style-type: none"> • Tell a robot chef what to do. • Draw the steps for making a snack. • Use a video camera. • Take part in their own TV clip. • Edit their TV clip. <p>We are painters</p> <ul style="list-style-type: none"> • Look at characters from traditional tales. • Plan your picture and write keywords. • Create your picture. • Edit each other's pictures. • Make your eBook. • Look at the eBooks. • Make your eBook even better. <p>We are collectors</p> <ul style="list-style-type: none"> • Look for animal pictures. • Make a page of fish pictures. • Sort bird pictures into two groups. • Put mini beast pictures into groups. • Order mammal pictures. • Use yes/no questions to guess the animal. <p>We are storytellers</p> <ul style="list-style-type: none"> • Listen to an audio book. • Think about sound effects. • Plan their talking book. • Use a microphone and audio recorder. • Record and save sound effects. • Record and save their talking book. • Look at their books. Make them better. <p>We are celebrating</p> <ul style="list-style-type: none"> • Look at cards. • Think about their card. • Use the keyboard. • Write and edit the text for your card. • Save it. • Create the image for their card. Save it. • Finish their card. Make it even better!

<p>Computing: Progression of Skills and Knowledge Year 2</p>	
<p>E-Safety <u>Recognise that a variety of devices can be used to connect a number of people.</u> <u>Identify what things count as personal information.</u> <u>Identify when inappropriate content is accessed and act appropriately.</u> <u>Consider other people's feelings on the internet.</u></p> <p>Programming <u>Explore what happens when a sequence of instructions is given.</u> <u>Give a set of simple instructions to follow out a task.</u> <u>Improve/change their sequences of commands.</u></p> <p>Multimedia <u>Save, retrieve and print work.</u> <u>Start to use two hands when typing.</u> <u>Use the internet to generate ideas for their work.</u> <u>Word process short texts to present.</u> <u>Choose a suitable subject and collect some information.</u> <u>Create a mind map of this data.</u> <u>Present the information to a group.</u></p> <p>Understanding Technology <u>Recognise an email address.</u> <u>Find the @ key on the internet.</u> <u>Contribute to a class email.</u> <u>Open and select to reply to an email as a class.</u></p> <p>Data Handling <u>Sort objects and pictures into lists or simple tables.</u> <u>Make a simple Y/N tree diagram to sort information.</u> <u>Create a branching database.</u></p>	<p>We are astronauts</p> <ul style="list-style-type: none"> • Plan instructions and try them out. • Work out how to get from the Earth to the Moon – and then on to Mars! • Work with Scratch. • Use Scratch to program their spaceship. • Write a program in Scratch. • Debug it. • Move their sprite from the Earth to the Moon – and then on to Mars! <p>We are games testers</p> <ul style="list-style-type: none"> • Find out how a variety of games work. • Look at complex games. • Work out the rules in each other's games. <p>We are researchers</p> <ul style="list-style-type: none"> • Write questions in a mind map. • Add information to their mind map. • Use Google to search for information. • Use other search engines and Simple Wikipedia to search for information. • Create a presentation. • Give a presentation to the class. <p>We are photographers</p> <ul style="list-style-type: none"> • Look at photos and talk about what makes a good photo. • Learn about a camera. • Take photos on your chosen theme. • Use Picasa to organise photos. • Edit photos. • Pick their best photos for the portfolio. <p>We are detectives</p> <ul style="list-style-type: none"> • Read and reply to an email. • Work with email attachments. • Write and send an email. • Organise the fact file records. • Set out your evidence in a class email. • Review what you have learned about email safety. <p>We are zoologists</p> <ul style="list-style-type: none"> • Hunt for bugs and record what they find. • Edit and organise bug photos. • Use bug data to create a chart. • Add bug information using maps. • Present results and discuss them.

<p>Computing: Progression of Skills and Knowledge Year 3</p>	
<p>E-Safety <u>Make judgements in order to stay safe, whilst communicating with others online.</u> <u>Identify what things count as personal information.</u> <u>Recognise social networking sites and social networking features built into other things (such as online games and handheld games consoles).</u> <u>Tell and adult if anything worries them online.</u></p> <p>Programming <u>Navigate the Scratch programming environment.</u> <u>Create a background and a sprite for a game.</u> <u>Add inputs to control their sprite.</u></p> <p>Multimedia <u>Capture video for a purpose.</u> <u>Choose which clips to keep and which to discard.</u> <u>Trim and arrange clips to convey meaning.</u> <u>Add titles, credits, slide transitions, special effects.</u> <u>Get quicker at typing with both hands.</u> <u>Align text left, right and centre.</u> <u>Create a title slide and choose a style.</u> <u>Change the layout of the slide.</u> <u>Insert a picture/text/graph from the internet or personal files.</u> <u>Decide upon and use effective transitions.</u></p> <p>Understanding Technology <u>Log into an email account, open, create and send an email.</u> <u>Attach files to an email.</u> <u>Download and save files from an email.</u> <u>Email more than one person and reply to all.</u> <u>Type in a url to find a website.</u> <u>Add websites to a favourites list.</u> <u>Add websites to a favourites list.</u></p> <p>Data Handling <u>Choose information to put into a data table.</u> <u>Design a questionnaire to collect information.</u> <u>Sort and organise information to use in other ways.</u> <u>Create and search a branching database.</u></p>	<p>We are programmers</p> <ul style="list-style-type: none"> • Find out about animations. • Create a storyboard. • Create characters and a background. • Animate the characters. • Add sounds to your animation. • Watch your animation and think about ways to improve. <p>We are presenters</p> <ul style="list-style-type: none"> • Find out how a TV programme is made. • Practise using a video camera. • Shoot their video files. • Edit their video files. • Get feedback on their video. • Make changes to their video. • Think about what went well and what they would do differently next time. <p>We are bug fixers</p> <ul style="list-style-type: none"> • Find and correct the bugs in a variety of programs. • Think of ways to improve a variety of programs. <p>We are network engineers</p> <ul style="list-style-type: none"> • Find out how computers are connected in school. • Find out how data is passed across networks. • Test computer connections by ‘pinging’. • Find out the route that packets of data take. • Look up IP addresses. • Create a poster on data safety. <p>We are communicators</p> <ul style="list-style-type: none"> • Write an email to another class. • Learn how email works. • Find out how to use email safely. • Create a presentation. • Email it to their partner. • Edit your presentation with a partner. • Share your presentation in a video conference. <p>We are opinion pollsters</p> <ul style="list-style-type: none"> • Decide on the topic for a survey. • Write questions for a survey. • Create a survey. • Collect data. • Use your data to create charts and graphs. • Present the results of your survey.

<p>Computing: Progression of Skills and Knowledge Year 4</p>	
<p>E-Safety <u>Question the 'validity' of what they see on the internet.</u> <u>Use a browser address bar not just search box and shortcuts.</u> <u>Identify dangers when presented with scenarios, social networking profiles etc.</u> <u>Articulate examples of good and bad behaviour online.</u></p> <p>Programming <u>Create a background and a sprite for a game.</u> <u>Add inputs to control their sprite.</u> <u>Use conditional statements within the programme to control the sprite (if...then...)</u> <u>Design their own game including sprites, backgrounds, scoring and/or timers.</u></p> <p>Multimedia <u>Acquire, store and combine images from cameras, iPads or the internet for a purpose.</u> <u>Use the print screen or snip function to capture an image.</u> <u>Edit pictures using a range of tools in a graphics programme.</u> <u>Create a new book aimed at a target audience.</u> <u>Combine text, images and sound on each page.</u> <u>Add information about the author and title for publishing.</u> <u>Use a variety of font sizes, styles and colours.</u></p> <p>Understanding Technology <u>Navigate to view a blog.</u> <u>Understand that it can be updated from a range of devices.</u> <u>Comment on what should be on a class blog.</u> <u>Talk about the reliability of information on the internet, e.g. the difference between fact and opinion.</u></p> <p>Data Handling <u>Recognise which information is suitable for their topic.</u> <u>Create a database from information collected.</u></p>	<p>We are software developers</p> <ul style="list-style-type: none"> • Plan an educational game. • Program a game. • Add repetition to the game. • Add a way of keeping score. • Add some graphics and sound. • Add in different levels. • Test and review each other's games. <p>We are musicians</p> <ul style="list-style-type: none"> • Create music with Isle of Tune. • Record sound samples. • Use samples to create a piece of music. • Edit their composition. • Share their music with an audience. <p>We are authors</p> <ul style="list-style-type: none"> • Plan the content for an E-Safety book • Mind map key issues • Create a storyboard. • Create images from a range of sources • Record sounds. • Edit their story • Discuss what went well and what they could improve next time. <p>We are toy designers</p> <ul style="list-style-type: none"> • Find out about inputs and outputs. • Plan their toy. • Design a toy in Scratch. • Program a toy simulation. • Test and improve their toy simulation. • Present their toy idea. <p>We are meteorologist</p> <ul style="list-style-type: none"> • Find out about ways of measuring weather. • Record the weather at school. • Look at the weather data. • Start to predict the weather. • Prepare your own weather forecast. • Present a TV-style weather forecast. <p>We are HTML editors</p> <ul style="list-style-type: none"> • Learn about the web. • Edit HTML in web pages. • Learn how to use HTML tags. • Remix HTML code. • Contribute to a class blog. • Make changes to their web page and share it with others.

Computing: Progression of Skills and Knowledge Year 5	
<p>E-Safety Judge what sort of privacy settings might be relevant to reducing different risks. Be a good online citizen and friend. Make judgements in order to stay safe, whilst communicating with others online. Use different sources to double check information found online. Find 'report' and 'flag' buttons in commonly used sites and names sources of help (childline etc) Discuss scenarios involving online risk. State the source of information found on the internet.</p> <p>Programming <u>Use external triggers and infinite loops to control sprites.</u> <u>Use conditional statements.</u> <u>Design their own game including sprites, backgrounds, scoring and/or timers.</u> <u>The games finish when the player wins or losses and they must know they have won or lost.</u> <u>Evaluate the effectiveness of the game and debug as required.</u></p> <p>Multimedia <u>Use to create a 3D representation of an existing building.</u> <u>Use the tools available to design their own fit for purpose building.</u> <u>Change the style, colour and texture of the walls.</u> <u>Change the viewpoint angle while designing the building to gain insight to its look from a variety of angles.</u> <u>Collect audio from a variety of resources including own recordings and internet clips.</u></p> <p>Understanding Technology <u>Register for a blog, select a URL and navigate to their blog once it is created.</u> <u>After the theme and appearance of their blog, adding background images etc.</u> <u>Create a new post, save it as a draft and publish it.</u> <u>Embed photos, hyperlinks and videos into posts.</u> <u>Reorganise posts and remove posts they no longer want.</u> <u>Understand websites such as Wikipedia are made by users (link to e-safety).</u></p> <p>Data Handling <u>Create data collection forms and enter data accurately from these.</u> <u>Know how to check for and spot inaccurate data.</u></p>	<p>We are game developers</p> <ul style="list-style-type: none"> • Think about and plan the type of game they want to develop. • Create backgrounds and sprites, and record sound effects, dialogue (and possibly backing music) • Start programming the game. • Correct the problems (bugs) in their game. • Test the game and receive feedback on it. <p>We are cryptographers</p> <ul style="list-style-type: none"> • Send and receive messages in semaphore. • Learn about – and use – Morse code. • Create secret messages and crack codes. • Find out the importance of having a secure password. • Learn how to stay safe on the web. <p>We are artists</p> <ul style="list-style-type: none"> • Create simple tessellations using Inkscape. • Make more complex tessellations. • Use Scratch to create Islamic-style art. • Use Inkscape to create art in the style of Bridget Riley. <p>We are web developers</p> <ul style="list-style-type: none"> • Collect information regarding E-safety • Creating a website about cyber safety • Learn how Search works. • Use Wikipedia to find information. • Start work on a class wiki. • Edit each other’s wiki pages. <p>We are bloggers</p> <ul style="list-style-type: none"> • Sharing experiences and opinions • Find out what makes a good blog. • Write a blog post. • Comment on one another’s blog posts. • Add images to a blog post. • Insert audio or video to a blog post. <p>We are architects - Creating a virtual space</p> <ul style="list-style-type: none"> • Explore art galleries. • Create a sculpture using SketchUp. • Start work on your virtual gallery. • Add furniture to your gallery. • Put your artwork into your gallery. • Create a virtual tour of your gallery.

<p>Computing: Progression of Skills and Knowledge Year 6</p>	
<p>E-Safety <u>Judge when and when not to answer a question online.</u> <u>Articulate what constitutes good behaviour online.</u> <u>Use different sources to double check information found online.</u> <u>Discuss scenarios involving online risk.</u> Act as a role model for younger pupils. - ALL</p> <p>Programming <u>Create and edit variables.</u> <u>Use conditional statements, loops, variables and broadcast messages in the game.</u> <u>Evaluate the effectiveness of the game and debug as required.</u></p> <p>Multimedia <u>Plan a multi-scene animation including characters, scenes, camera angles and special effects.</u> <u>Use stop-go animation software with an external camera to shoot animation frames.</u> <u>Adjust the number of photographs taken and the playback rate to improve the quality of the animation.</u> <u>Publish their animation and use a movie editing package to edit/refine and add titles.</u> <u>Work independently to create a multi-slide presentations that includes speaker's notes.</u> <u>Include sounds and moving graphics in the slides.</u> <u>Collect audio from a variety of resources including own recordings and internet clips.</u> <u>Present to a large group or class using the notes mode.</u> <u>Create a multi-track recording using effects.</u> <u>Edit and refine their work to improve outcomes.</u></p> <p>Understanding Technology <u>Use advance search functions on Google.</u> <u>Use strategies to check the reliability of information (cross check with other sources such as books).</u> <u>Use their knowledge of domain names to aid their judgement of the validity of websites.</u> <u>Understand files may be saved off their device in 'clouds'.</u> <u>Upload/download a file to the cloud on different devices.</u> <u>Understanding about syncing files using cloud computing folders.</u></p> <p>Data Handling <u>Know which formulas to use when the spreadsheet model needs changing.</u> <u>Make graphs from the calculations on the spreadsheet.</u> <u>Sort and filter information.</u></p>	<p>We are movie makers</p> <ul style="list-style-type: none"> • Use logical reasoning to solve a challenging code. • Research, create and present a presentation about Alan Turing • Create a storyboard • Create the props, set and scripts for a movie • Use video software and equipment to create a movie about code cracking • Edit and publish their movie <p>We are programmers</p> <ul style="list-style-type: none"> • Create appropriate animations for a story scene • Broadcast a message to structure and control the timing of events. • Use the 'show' and 'hide' blocks to control when objects need to be visible. • Add voice sounds to enhance an animated story. • Add interactive user features to a scene or story. <p>We are presenters</p> <ul style="list-style-type: none"> • Use a range of sources to research the topic, discussing their reliability • Create hyperlinks with their presentation and to outside links. • Add a range of animations and sounds • Download media, edit it and insert it into their presentation • Add notes for others to use, <p>We are analysts</p> <ul style="list-style-type: none"> • Enter labels and numbers into a spreadsheet • Use formulas • Order and present data based on calculations • Add, edit and calculate data • Use a spreadsheet to solve problems. • Design a spreadsheet for a specific purpose. <p>We are coders</p> <ul style="list-style-type: none"> • Investigate and evaluate the features of programming software. • Program Kodu using 'When' and 'Do' instructions. • Use tools and add features to create an original landscape in Kodu. • Analyse and deconstruct code to work out its purpose. • Program a character to be controlled around a custom track to reach a goal.

<u>Understand that changing the numerical data effects the calculation.</u>	<ul style="list-style-type: none">• Program a character to follow an automatic path.
	<p>We are animators</p> <ul style="list-style-type: none">• Understand the history of animations• Understand and discuss a range of E-safety scenarios• Understand the range of roles in animation• Order or sequence frames to create the effect of smooth movement.