• Progression of Computing

	Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
National Curriculum programme of study		In Key Stage 1 pupils should be taught to: • Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Create and debug simple programs • Use logical reasoning to predict the behaviour of simple programs • Use technology purposefully to create, organise, store, manipulate and retrieve digital content • Recognise common uses of information technology beyond school • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.		In key Stage 2 pupils should be taught to: • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.		
Area of study **E-Safety**	Introduction to keeping safe online and what to do if they see something they don't like	• To know that the internet brings together everything that anywhere wants to put on it and that they may encounter material that is inappropriate for their age group. • To know that is it important to close down and report anything undesirable encountered when on the internet. • To know that when they play a game online or have an online interaction, they are interacting with a real person who may be lying about who they are.	To know that the internet brings together everything that anywhere wants to put on it and that they may encounter material that is inappropriate for their age group. • To know that is it important to close down and report anything undesirable encountered when on the internet. • To know that when they play a game online or have an online interaction, they are interacting with a real person who may be lying about who they are.	• To know to keep all passwords safe and only give personal information to trusted friends. • To remember that people online may not be who they pretend to be. • That snippets of information posted online can be put together to build a comprehensive picture of who we are.	To know that information, photos and videos posted online may later prove impossible to remove a may be used by others for different purposes that you envisaged. • To know that snippets of information posted online can be put together to build a comprehensive picture of who we are. • That we should never meet up with anyone online without first discussing this with our parents	That cyber bullying may be a criminal offence, and can often be reported or blocked. • That retaliating to cyber bullying may itself constitute bullying and may also be taken down as a criminal offence. • That examples of cyber bullying should never be deleted, but instead kept as evidence. • Understand the effect if online comments and show responsibility and sensitivity when online.	Know the importance of anti-virus software and that viruses can be picked up by downloading from untrusted sources. • Know that many emails and websites are scams and that common tricks include competition wins for competitions you didn't enter and websites relying on mistyped or incorrectly spelled websites. • Know that clicking on a link contained in an email may take you to a 'spoof' website that is not the one you believe it its – if entering confidential information then it is better to type in a known address than navigate via a link. • Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music

							or games, without express written permission from the copyright holder.
Using the internet and networking	Use a simple application on a computer or mobile device	To know what a 'search engine' is and that Google is easily the most comprehensive, although there are alternatives. To know that information can be located on Google, images on Google images and maps on Google maps. • Know that it is possible to switch between map view, aerial photo view and street view in Google maps.	To know that information and pictures can be copied from the internet and used in own work. To be able to independently use Google to search for information, images and maps.	To know how to send a message, including attachments. To know how to filter Google images for different sized images. To appreciate the importance of using correctly seized pictured from the internet for the purpose intended and suggest when different sizes might be most useful – e.g. large images wont blur when stretched but take up greater memory and will be slower to load.	To know the strategies for fine tuning google searches. To be able to suggest when the different search strategies might be able to be used in real life.	Use my previous learning to be able to independently and successfully use the internet	Use my previous learning to be able to independently and successfully use the internet
Computers and creating content	To use familiar hardware and software to support learning and play	To know how to log on to the school system and know that it is necessary to log off and shut down when finished. • To know what it means to open and save documents. • To know common places to save and appreciate the importance of naming documents appropriately and regularly saving important work. • To know how to print work. • To be able to change font, text colour and writing size in word. • To be able to highlight and underline text.	To know that the undo tool is the quickest way of correcting errors. • To know that zigzag underlining suggests an error and that right clicking suggests improvements – but that the computer will not always be correct. • To know that Microsoft Word is best for documents to print but that Microsoft Powerpoint is best for making presentations to look at on a screen. • To be able to insert WordArt, Clip Art and Shapes in Word and Powerpoint.	To be able to independently manipulate images and text between Paint, Word, Powerpoint and the internet. • Know that stretching an image diagonally retains its original proportions. • Able to create information pages by combining text and images. • Able to use text boxes to aid page layout. • Know that right clicking on an image and using text wrapping menu prevents images from floating or disappearing and allows user to control what goes on top of what.	To know that animation is simply many images displayed quickly. • To be able to create own animations. • To know that excel can be used as a database which stores information. • To be able to enter information into cells and use co-ordinates to identify any given cell. • To use the sort and filter tool. • To be able to use available software to create an effective slideshow, inserting images and sounds. • To effectively edit photographs using available software.	Use Moviemaker to edit a video. • Use available software to make a news podcast. • To insert sounds into an animation. • Choose the most suitable applications and devices for the purpose of communication.	Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner.
Coding	To begin to show an interest in programmable toys	To give a set of instructions and follow them using age appropriate software	To be able to control motion by specifying the number of steps to travel, direction and turn. • To be able to specify the nature of events (such as single event or loop).	To add text strings, show and hide objects and changes the features of an object. • To select sounds and control when they are heard, their duration and volume. • Control when drawings appear and set the pen colour, size and shape.	To use specified screen coordinates to control movement. • Set the appearance of objects and create sequences of changes. • Create and edit sounds. Control when they are heard, their volume, duration and rests. • Control the shade of	Change the position of objects between screen layers (send to back, bring to front). • Combine the use of pens with movement to create interesting effects. • Use IF THEN ELSE conditions to control events or objects.	Set IF conditions for movements. Specify types of rotation giving the number of degrees. • Upload sounds from a file and edit them. Add effects such as fade in and out and control their implementation. • Set events to control other events by

				• Specify user inputs (such as clicks) to control events. • Create conditions for actions by waiting for a user input (such as responses to questions like: what is your name?)	pens. • Specify conditions to trigger events. • Use IF THEN conditions to control events or objects. • Create conditions for actions by sensing proximity or by waiting for a user input. • Use variables to store a value. • Use the functions define, set, change, show and hide to control the variables. • Use the reporter operators ()+(), ()_(), ()*(), ()/() to perform calculations.	• Use lists to create a set of variables.	'broadcasting' information as a trigger.