Elvington Church of England Primary School

Progression of Skills and Knowledge for Computing						
Programming and Coding						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
-Show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movement or new images. -Complete a simple program on a computer.	-To give precise instructions. -To combine start up and input events. -Explore what happens when a sequence of instructions is given.	-To write code that responds to inputs from the keyboard. -Program buttons to make objects move. -Improve/change sequences or commands.	-Create simple animations and simulations using sequences of instructions. -Use conditional statements within code (If...) -Write code that controls a simple external circuit. -Begin to look for errors in code to ensure its effectiveness.	-Create simple code that uses variables -Write code that includes repetition and loops. -Debug own code	-Create code that can change an objects speed -Write code that can generate random numbers and use this in a simulation -Confidently debug code	-Use variables to create more complex outcomes -Manipulate inputs to create useful outputs -Use properly values and parameters to store information about objects -Write and use code to control more complex external circuits.
Related National Curriculum Objectives in italics:	*-Understanding 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.*		*-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 algorithms work and to detect and correct errors in algorithms and programs.* *-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.*			

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Digital Literacy						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
-Select and use technology hardware to interact with age-appropriate computer software.	-Use a space bar, backspace, delete, arrow keys, return -To word process a short text -Combine an image from the internet with text -Talk about websites they have been on -Recognise an email address	-Choose a suitable subject and collect some information -To bring to use 2 hands to type -To recognise common uses of technology beyond school -To retrieve and store digital content -Explore a website by clicking on arrows, menus and hyperlinks -Open and select to reply to an email as a class	-To manipulate, organise, store and retrieve digital content -Use a variety of font styles, colours and sizes -Continue to practise typing with 2 hands. Change layout of slides when presenting information -Insert picture or text from internet or personal files. -Type in a URL to find a website -Add websites to favourites list -Use a search engine to find a range of media, e.g. images, texts -Log into an email account, open, create and send an email	-To explore touch typing -Use search engines effectively -Confidently use a range of presentation approaches -Use effective transitions between slides -To evaluate digital content -Download and save files from an email -Email more than one person and reply to all	-Work independently to create multi-slide presentations that combine text, images and speaker notes -Embed sounds and moving graphics with a document -Continue to practise touch typing -Understand websites such as Wikipedia are made by users (link to e-safety)	-Work on increasing words per minute using touch typing -Research and present work independently ensuring reliability of information -Make decisions about which software is best for the desired outcome -Use their knowledge of domain names to aid their judgements of the validity of websites.

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Related National Curriculum Objectives in italics:	-Recognise common uses of information technology beyond school. -Use technology safely and respectfully, keeping personal information private; where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	-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. -Understands 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Multimedia						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
-They select and use technology for particular purposes	-Capture a short video -Discuss which videos to keep and delete	-Develop skills for capturing moving images -Convey ideas for capturing video footage -Arrange clips to create a short film	-Capture a video for a purpose -Chose which clips to keep and which to discard -Trim and arrange clips to convey meaning	- Add titles and credits -Use slide translations and special effects to add to a movie	-Storyboard and capture video for a purpose -Plan for the use of special effects and transitions	-Plan a multi-scene animation including character, scenes, camera angles and special effects
Related EYFS National Curriculum Objectives in italics:	-Use technology purposefully to create, organise, store, manipulate and retrieve 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. -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.			

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Digital Imagery

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
-Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.	-Use a digital camera to take a photo To add text to a photo.	-Create and save a digital picture -Use technology to manipulate a digital picture -To use a digital image to create a repeating pattern	-Use the print screen or snip function to capture an image -Acquire, store and combine images from cameras or the internet for a purpose	-Use advanced settings on cameras to take digital images -Manipulate and layer images -Use CAD(computer aided design) to design 3D shapes	.-Confidently use advanced settings on cameras to take digital images -Use a range of tools to edit and manipulate photos -Use software to create 3D representations	-Confidently take, upload, save, retrieve and embed photos -Confidently edit and manipulate photos for a purpose, evaluating their success
Related National Curriculum Objectives in italics:	*-Use technology purposefully to create, organise, store, manipulate and retrieve digital content.* *-Recognise common uses of technology beyond school.*		*-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.*			

Music and Sound

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
-Shows how to operate simple equipment, e.g. turns on CD player and uses a remote control	-Record a sound at and away from the computer -Play sounds back	-Use software to record sounds -Save, retrieve and edit sounds -Change sounds recorded	-Combine, text, images and sound on a page -Combine sounds to create a simple soundtrack	-Record sounds/ narration to accompany photos -Manipulate length of recordings to fit where needed -Create a more complex soundtrack using a variety of different sounds layered together	-Collect audio from a variety of resources including own recordings and internet clips -Create a multi-track recording using effects	-Edit and refine their sound recordings to improve outcomes -Trim, arrange and edit audio levels to improve quality of the outcome

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Related National Curriculum Objectives in italics:	*-Use technology purposefully to create, organise, store, manipulate and retrieve 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.*

Data						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
-Children recognise that a range of technology is used in places such as homes and schools.	-Know that images give information -Input simple data to create a bar chart/pictogram	-Collect data using tick or tally charts -Use simple graphing software to produce pictograms and basic graphs to analyse data	-Design a questionnaire to collect data -Interpret data collected and produce a graph to show findings	-Recognise which data is suitable for their topic -Select relevant data to present on a topic	-Create data collection forms and enter data accurately from these -Know which formulas to use when the spreadsheet model needs changing -Make graphs from calculations on the spreadsheet	-Know how to check for and spot inaccurate data -Understand that changing the numerical data effects the calculation. -Sort and filter information
Related National Curriculum Objectives in italics:	*-Use technology purposefully to create, organise, store, manipulate and retrieve 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.*			

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E-Safety		
EYFS	**Year 1**	**Year 2**
-Recognise that sometimes things online can be upsetting or scary

-Children are aware that they can use the internet to play and learn supported by a trusted adult/teacher

-To understand the difference between real and online experiences

-Know that the internet can be used to communicate with family and friends.

-Know that pictures and messages can be shared safely with family using the schools virtual learning environment (VLE) Example: tapestry | -Understand the schools e-safety policy appropriate to age

-To begin to understand they have to abide by the rules on Internet Safety

-Identify what things can be classed as personal information

-Understand passwords are used to log in and why these should be kept private

-Know what to do if they find something inappropriate online
-to understand that messages can be sent electronically over distances and these should be polite and friendly | -Understand the schools e-safety policy appropriate to age

- Understand passwords are used to log in and why these should be kept private.

-Recognise that a range of devices can be used to connect to a variety of people

-Share ideas with others using email in a polite and friendly manor.

-Consider the effect of their online actions on others

-To know that not everything on the internet is true.

-To use a search engine

-Identify the steps that can be taken to keep personal data and hardware secure |
| **Related Curriculum Objectives:**
-To safely select and use technology for a particular purpose | **Related Curriculum Objectives:**
-Use technology safely and respectfully, keeping personal information private; where to go for help and support when they have concerns about content or contact on the internet or other online technologies. | **Related Curriculum Objectives:**
-Use technology safely and respectfully, keeping personal information private; where to go for help and support when they have concerns about content or contact on the internet or other online technologies. |
| **Year 3** | **Year 4** | **Year 5** |
| - Understand the schools e-safety policy; appropriate to their age

- Understand passwords are used to log in to access some web content and why these should be kept private. | -Understand the schools e-safety policy; appropriate to their age

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-Use age appropriate search engines/ trusted websites provided by the teacher -Make judgements in order to stay safe, whilst communicating with others online -Understand that email/messages have to be sent to a specific email address/recipient and received emails. -Articulate examples of good and bad online behaviours and know not everything on the internet is true. -Know what to do if they access something inappropriate. -To share ideas with others by responsibly publishing online using 2Blog. -To understand that blogs can be for a wider audience and can be seen and responded to by a wider group of people and understand the need for responsible use. -Recognise social networking sites and social networking features built into other things (such as online games and handheld games consoles)	-Children recognise the need to keep some information private in order to protect them when communicating online. -To be able to present information and share it with others through, Blogs, forums and creating their own pages on the VLE's secure environment. -Question the validity of what they see on the internet and know that not everything they see is true. -Children use the internet, as a resource to support their work, and begin to understand plagiarism/copyright -Continue to recognise social networking sites and social networking features built into other things (such as online games and handheld games consoles). -Identify dangers when presented with scenarios -Know what to do if they access something inappropriate. -Children begin to recognise how electronic communications may be used for manipulation or persuasion.	-Share and exchange their ideas using e-mail and electronic communications respectfully -Judge what sort of privacy settings might be relevant to reducing different risks -Judge when and when not to answer a question online. -Children understand that good online research involves processing the information (rather than copying) and interpreting it for others -Recognise that not all information on the internet is accurate or unbiased (advertising) -Recognise issues of copyright and the importance of acknowledging sources -To be able to present information and share it with others through, Blogs, forums and creating their own pages on the VLE's secure environment. -Find 'report' and 'flag' buttons in commonly used sites and names sources of help (childline etc.)
Related Curriculum Objectives: *-Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.*	**Related Curriculum Objectives:** *-Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.*	**Related Curriculum Objectives:** *-Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.*

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Year 6		
-Understand the potential risks of providing personal information in an increasing range online technologies both within and outside -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 -Articulate what constitutes good behaviour online and know what to do if they access something inappropriate -Use different sources to double check information found online -Act as a role model for younger pupils		
Related National Curriculum Objectives in italics: *-Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.*		

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