

Computing Scheme of Work



St. Mary's Church of England Primary School, High Crompton



Computing Scheme of Work

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EYFS - Autumn

Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Suggested Hardware / Software
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<p>Can I recognise a range of technology that is used in places such as homes and schools?</p> <p>Can I select and use technology for a particular purpose?</p> <p>Can I name and use a keyboard and mouse with developing control?</p> <p>Can I use the keyboard to write my name with a capital letter?</p> <p>Can I access and use simple activities using touch technology with increasing control?</p> <p>Can I logon/unlock a digital device? (e.g. digital camera, iPads etc)</p>	<p>Explore school and look at and explore a range of technology e.g children to have a go at photocopying, printing, using the office keyboards, looking in the kitchens at a variety of technology.</p> <p>Give children a variety of challenges to identify technology for a given purpose e.g would a telephone be used to make a cake? Nonsense challenges.</p> <p>Look at a variety of keyboards, including those on touch screen and laptops. Children to explore these and write their own name and simple words or letters.</p> <p>Open apps independently and be able to control and manipulate objects confidently and talk about how to do this using the words 'scroll', 'drag' 'click' 'open' and 'close'</p>	<p>Ipads/ipods, cameras, photocopier, printers, phones, weighing scales, video recorders, alarms, microwave, cooker.</p> <p>A variety of keyboards on tablets, laptops and pc's if available.</p> <p>A variety of age related APPS on a range of touch technology devices.</p>
<p>Algorithms and Programs.</p> <p>This area of the curriculum is a main area of the new curriculum. Children should be taught this strand discreetly in order to fulfil the new requirements.</p>	<p>Can they use a range of control toys and devices?</p>	<p>Look at controlling a car around a track, cause and effect of pressing buttons. Use the buttons to make the bee bots move across a map or course.</p>	<p>Bee-bots</p>
<p>Communicating / Presentation.</p> <ul style="list-style-type: none"> - Write name on a device including a keyboard. - Take photographs on digital devices. <p>Record sounds on ipads.</p>	<p>Can they use a simple paint programme with increasing mouse control?</p> <p>Can they use a digital device to take a photograph?</p> <p>Can they understand the purpose of and experiment with hardware such as cameras, computers, ipads, voice recorders etc?</p>	<p>Draw a self- portrait or character.</p> <p>Use the fill tool to fill a picture.</p> <p>Draw a symmetrical pictures using 2simple.</p> <p>Photograph items linked to topic</p> <p>use devices to record video . Record sounds - voices, sound effects or music.</p>	<p>2simple, purple mash, Microsoft paint</p> <p>Digital cameras, Flip cams, I-Pads, I-Pods</p> <p>Beatbox</p>
<p>E-Safety</p> <p>This forms a critical part of the curriculum, which should link through all your sessions. This could be linked to your PSHCE.</p>	<p>Can they talk about what they are doing on a computer?</p> <p>Can they say if something they find on the internet makes them feel bad?</p> <p>Can they understand not to feel guilty if something comes on the screen that makes them feel bad?</p>	<p>Demonstration on how to close a website or window.</p> <p>Discussions on what to if they find something that makes them feel bad.</p> <p>Hectors world safety button - swimming dolphin</p>	

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	<p>Can they speak to an adult about what they have seen?</p> <p>Can I follow the school's safer internet rules?</p>		
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EYFS – Spring			
Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Suggested Hardware / Software
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<p>Can I select and use technology for a particular purpose?</p> <p>Can I name and use a keyboard and mouse with developing control?</p> <p>Can I use the keyboard to write my name with a capital letter?</p> <p>Can I access and use simple activities using touch technology with increasing control?</p>	<p>Give children a variety of challenges to identify technology for a given purpose e.g would a telephone be used to make a cake? Nonsense challenges.</p> <p>Look at a variety of keyboards, including those on touch screen and laptops. Children to explore these and write their own name and simple words or letters. Open apps independently and be able to control and manipulate objects confidently and talk about how to do this using the words 'scroll', 'drag' 'click' 'open' and 'close'</p>	<p>Ipads/ipods, cameras, photocopier, printers, phones, weighing scales, video recorders, alarms, microwave, cooker.</p> <p>A variety of keyboards on tablets, laptops and pc's if available.</p> <p>A variety of age related APPS on a range of touch technology devices.</p>
<p>E-Safety</p> <p>This forms a critical part of the curriculum, which should link through all your sessions. This could be linked to your PSHCE.</p>	<p>Can they talk about what they are doing on a computer?</p> <p>Can they say if something they find on the internet makes them feel bad?</p> <p>Can they understand not to feel guilty if something comes on the screen that makes them feel bad?</p> <p>Can they speak to an adult about what they have seen?</p>	<p>Demonstration on how to close a website or window.</p> <p>Discussions on what to if they find something that makes them feel bad.</p> <p>Hectors world safety button - swimming dolphin</p>	
<p>Communicating / Presentation.</p> <ul style="list-style-type: none"> - Write name on a device including a keyboard. - Take photographs on digital devices. - Record sounds on ipads. 	<p>Can they write their name using a keyboard on different devices?</p> <p>Can they use the caps lock for the initial sound in their name?</p> <p>Can they use the use the space bar, backspace and return key?</p> <p>Can they use a simple paint programme with increasing mouse control?</p>	<p>Write own name using keyboard. Demonstrate caps lock for initial sound, space bar, backspace and return key.</p> <p>Write a simple sentence</p> <p>Draw a self- portrait or character.</p>	<p>Computer, laptop, I-Pad, I-Pod</p> <p>2 simple, purple mash</p> <p>2simple, purple mash, Microsoft paint</p>

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	<p>Can they use a digital device to take a photograph?</p> <p>Can they explore sounds?</p> <p>Can they understand the purpose of and experiment with hardware such as cameras, computers, ipads, voice recorders etc?</p> <p>Can they create an image relating to a topic covered in class and add a title?</p>	<p>Use the fill tool to fill a picture. Draw a symmetrical pictures using 2simple.</p> <p>Photograph items linked to topic</p> <p>use devices to record video . Record sounds - voices, sound effects or music.</p>	<p>tiny tap</p> <p>Digital cameras, Flip cams, I-Pads, I-Pods</p> <p>Beatbox</p>
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EYFS – Summer

Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<p>Can I select and use technology for a particular purpose?</p> <p>Can I name and use a keyboard and mouse with developing control?</p> <p>Can I use the keyboard to write my name with a capital letter?</p> <p>Can I access and use simple activities using touch technology with increasing control?</p>	<p>Give children a variety of challenges to identify technology for a given purpose e.g would a telephone be used to make a cake? Nonsense challenges.</p> <p>Look at a variety of keyboards, including those on touch screen and laptops. Children to explore these and write their own name and simple words or letters.</p> <p>Open apps independently and be able to control and manipulate objects confidently and talk about how to do this using the words 'scroll', 'drag' 'click' 'open' and 'close'</p>	<p>Ipads/ipods, cameras, photocopier, printers, phones, weighing scales, video recorders, alarms, microwave, cooker.</p> <p>A variety of keyboards on tablets, laptops and pc's if available.</p> <p>A variety of age related APPs on a range of touch technology devices.</p>
<p>E-Safety</p> <p>This forms a critical part of the curriculum, which should link through all your sessions. This could be linked to your PSHCE.</p>	<p>Can they talk about what they are doing on a computer?</p> <p>Can they say if something they find on the internet makes them feel bad?</p> <p>Can they understand not to feel guilty if something comes on the screen that makes them feel bad?</p> <p>Can they speak to an adult about what they have seen?</p>	<p>Demonstration on how to close a website or window.</p> <p>Discussions on what to do if they find something that makes them feel bad.</p> <p>Hectors world safety button - swimming dolphin</p>	
<p>Communicating / Presentation.</p> <ul style="list-style-type: none"> - Write name on a device including a keyboard. - Take photographs on digital devices. - Record sounds on ipads. 	<p>Can they write their name using a keyboard on different devices?</p> <p>Can they use the caps lock for the initial sound in their name?</p> <p>Can they use the space bar, backspace and return key?</p> <p>Can they use a simple paint programme with increasing mouse control?</p> <p>Can they use a digital device to take a photograph?</p> <p>Can they explore sounds?</p>	<p>Write own name using keyboard. Demonstrate caps lock for initial sound, space bar, backspace and return key.</p> <p>Write a simple sentence</p> <p>Draw a self portrait or character.</p> <p>Use the fill tool to fill a picture.</p> <p>Draw a symmetrical pictures using 2simple.</p>	<p>Computer, laptop, I-Pad, I-Pod</p> <p>2 simple, purple mash</p> <p>2simple, purple mash, Microsoft paint</p>

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	Can they create an image relating to a topic covered in class and add a title?	Photograph items linked to topic use devices to record video . Record sounds - voices, sound effects or music.	tiny tap Digital cameras, Flip cams, I-Pads, I-Pods Beatbox
Data Retrieving and Organising Main teaching strands: Creating a simple Pictogram	Can they insert data into a pictogram, as a class? Can they answer simple questions relating to the pictogram as a class?	Create a pictogram to represent eye colour/hair colour etc.	2 Count

Year 1 – Autumn			
Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Suggested hardware/software



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<p>E-Safety</p> <p>This forms a critical part of the curriculum, which should link through all your sessions. This could be linked to your PSHCE.</p>	<ul style="list-style-type: none"> ● Can they begin to evaluate websites and know that everything on the internet is not true? ● Can they recognise that the majority of technology devices have access to the internet? ● Can they understand that some information is personal and should not be shared online? ● Can they understand that things sometimes happen on computers that are not their fault? E.g, pop-ups) ● Do they know how to act if they find inappropriate content online? ● Do they know where they can access support regarding online incidents? 	<p>Undertake activity with the children to understand whether the internet is a brain or a box.</p> <p>Sorting activity – What devices will access the internet and which ones don't.</p> <p>Hectors world cartoon 'Welcome to the carnival' http://www.thinkuknow.co.uk/5_7/hectorsworld/Episode2</p> <p>Demonstration of how to close down the website or window and discussion about why these pop-ups appear.</p> <p>Discussion about what procedure to take if content is seen. Following the schools internet safety policy</p>	<p>www.thinkuknow.co.uk</p> <p>Hector's World cartoon.</p> <p>CBBC Stay safe website</p>
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<ul style="list-style-type: none"> ● Do they know that there is a wide range of technology and can they name some equipment? ● Do they use a range of different technology and talk about its use? ● Can they discuss and talk about control technology and new technologies' and understand how to use them? ● Can they select and launch the appropriate program for a given task? ● Can they use keyboard skills to access an account (e.g. School Network or website)? ● Do they know how to operate a piece of equipment safely and appropriately? 	<p>Explore a variety of ranges of technology in the environment and name them e.g common uses of ICT beyond that of the school context. Hunt and tour school – how can we use control technology?</p> <p>Discuss how to use basic equipment safely. Teach children the basic uses of equipment, and how to use it safely such as turning on and off a computer, and being able to discuss the use of a keyboard and the basic functions of it.</p> <p>Explore how to log on and off computers, and touch technologies. Teach children why we have a password- link to e-safety. Children to name uses of the keyboard and be able to use these simply.</p> <p>Explore a variety of programs, apps and algorithms and be able to drag and move images using these.</p>	<p>Ipads/ipods, cameras, photocopier, printers, phones, weighing scales, video recorders, alarms, microwave, cooker.</p>
<p>Algorithms and Programs.</p> <p>This area of the curriculum is a main area of the new curriculum. Children should be taught this strand discreetly in order to fulfil the new requirements.</p>	<ul style="list-style-type: none"> ● Can they use a range of control toys and devices? ● Can they begin to develop computational thinking by following instructions to move around a course and create a series of instructions for others to follow? ● Can they explore outcomes when individual buttons are pressed on robots and combine these together to draw simple shapes or follow a route? ● Do they know that commands affect algorithms? ● Can they understand that computers and technology can be used to represent and model situations? ● Can they understand the link between a simulation and a program? 	<p>Practical application of using Bee Bots. Explore using Bee bots to navigate a track or a map include right and left turns and number of steps.</p> <p>Practically use arrows and numbers to create a set of instructions for others to follow.</p> <p>Move onto using the Bee Bot app on Ipads. Children should be taught the correct terminology sequence and algorithms.</p>	<p>Bee bots (hardware)</p> <p>Bee bots app on iPads</p>

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	<ul style="list-style-type: none"> • Can they use the word debug and understand how it relates to finding mistakes in algorithms? 		
<p>Communicating / Presentation.</p> <p>-Create a talking book.</p>	<ul style="list-style-type: none"> • Can they enter text using a keyboard? • Can they capture & download images from a camera/device? • Can they record a sound and play it back? 	<p>Look at and explore a variety of different talking books. Discuss the uses of talking books.</p> <p>Photographs relating to topic taken using ipods/ipads/cameras and print.</p> <p>Record sounds to use in their talking books.</p>	<p>Purple Mash - 2 Create a Story</p>

Year 1 – Spring

Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Suggested hardware/software
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<ul style="list-style-type: none"> • Can they use keyboard skills to type a simple username and password into a given program? • Can they select and launch the appropriate program for a given task? • Do they know how to safely use technology by opening and closing a piece of equipment safely? 	<p>Discuss how to use basic equipment safely. Teach children the basic uses of equipment, and how to use it safely such as turning on and off a computer, and being able to discuss the use of a keyboard and the basic functions of it.</p>	

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		<p>Explore how to log on and off computers, and touch technologies. Teach children why we have a password- link to e-safety. Children to name uses of the keyboard and be able to use these simply.</p> <p>Explore a variety of programs, apps and algorithms and be able to drag and move images using these.</p>	
<p>Algorithms and Programs.</p> <p>This area of the curriculum is a main area of the new curriculum. Children should be taught this strand discreetly in order to fulfil the new requirements.</p>	<ul style="list-style-type: none"> • Do they know that commands affect algorithms? • Can they understand that computers and technology can be used to represent and model situations? • Can they explore a simulation to support a given topic and talk about what happens and why? 	<p>Teach algorithms via Purple Mash - 2code.</p> <p>Within the introduction talk about simulations being the games they may play at home on their computer.</p> <p>Simulations – Showing a variety of simulations which may link to topic. This does not necessarily have to be taught discreetly.</p> <p>Use the Bee-bot app to demonstrate a simulation on screen. Discuss why it moves and that the Bee-Bot is following commands.</p>	<p>Purple Mash – 2 Code – Fun with fish</p> <p>Bee-Bot app</p>
<p>Communicating / Presentation.</p> <p>-Send a class email.</p>	<ul style="list-style-type: none"> • Do they recognise what an email address looks like? • Can they join in sending a class email? 	<p>Email head teacher- or other member of staff/ person of interest linked to topic or current class learning</p>	<p>School Jotter</p>

Year 1 - Summer

Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<ul style="list-style-type: none"> • Can they select the appropriate program by finding and retrieving through the school network? • Can they use keyboard skills to type a simple username and password into a given program? 	<p>Discuss how to use basic equipment safely. Teach children the basic uses of equipment, and how to use it safely such as turning on and off a computer, and being able to discuss the use of a keyboard and the basic functions of it.</p>	<p>Ipads/ipods, cameras, photocopier, printers, phones, weighing scales, video recorders, alarms, microwave, cooker.</p>

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	<ul style="list-style-type: none"> Do they know how to safely use technology by opening and closing a piece of equipment safely? 	<p>Explore how to log on and off computers, and touch technologies. Teach children why we have a password- link to e-safety. Children to name uses of the keyboard and be able to use these simply.</p>	
<p>Data Retrieving and Organising</p> <p>Main teaching strands:</p> <p>Creating a simple graph.</p>	<ul style="list-style-type: none"> Can they enter information into a template to make a graph and pictogram? Can they answer questions relating to a graph and pictogram? 	<p>Link to topics, give children a graph template for example using the purple mash 2 graph programs available.</p> <p>Ask children to answer given questions based on online pictogram/graphs.</p> <p>Create their own simple pictograms using given software and templates.</p>	<p>2Graph, 2Count</p>
<p>Communicating / Presentation.</p> <p>- Create a simple video with sound.</p>	<ul style="list-style-type: none"> Can they record video? Can they record people's voices as a voice over? 	<p>Create a simple film - such as a video demonstrating the instructions of how to make a cake. Using the device to record voice or sounds.</p>	<p>iPads</p>

Year 2 - Autumn

Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>E-Safety</p> <p>This forms a critical part of the curriculum, which should link through all your sessions. This could be linked to your PSHCE.</p>	<ul style="list-style-type: none"> Can they follow the school's safer internet rules? Can they begin to understand the term web address? Can they evaluate websites and know that everything on the internet is not true? 	<p>Design a class E-safety poster at the start of the year.</p> <p>Demonstration of how to type in a web address. Start with the schools web address and other different learning sites.</p> <p>Play detectives! Change details or pictures on the school website e.g class</p>	<p>www.thinkuknow.co.uk</p> <p>Hector's World cartoon.</p> <p>CBBC Stay safe website</p>

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	<ul style="list-style-type: none"> • Can they recognize that there are other people on the internet and this affects how they should use it? • Do they know how to act if they find inappropriate content online? • Can they tell a trusted adult if someone they don't know tries to contact them via the internet? • Can they understand that they should only open an email from someone they know? • Can they send and receive an email safely as a class? • Do they understand why passwords shouldn't be shared? • Can they use the internet safely for learning and communicating with others? • Can they recognize advertising on website and learn to ignore it? • Do they know where they can access support surrounding incidents online? 	<p>teacher. Children to list all of the false information.</p> <p>Hectors world cartoons.</p> <p>Discussion about correct procedure. Following the schools internet safety policy.</p> <p>Receive an unknown class email, open dialogue about whether or not we should open the email.</p>	
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<ul style="list-style-type: none"> ● Do they know some uses of a wide range of technology and can describe how it works in a variety of different contexts? ● Can they select the appropriate piece of technology for a particular purpose and communicate this? ● Can they save their work to a folder and retrieve it when needed? ● Can they understand how to edit and copy information using a variety of media? ● Can they capture a digital image, retrieve and manipulate it? 	<p>Explore technology in a range of jobs and look at the purpose of their uses and why they are needed for a variety of roles. If possible visit professional place of work or invite visitors from local shops to discuss the technology used and why. (PSHCE link)</p> <p>Be able to select between touch technology, laptops, control equipment such as bee-bots and choose the right piece of technology for the right job and purpose. Know how to predict from this how programs can be made.</p> <p>Look at a variety of ways to save and retrieve work.</p>	<p>Ipads/ipods, cameras, photocopier, printers, phones, weighing scales, video recorders, alarms, microwave, cooker, tills.</p>
<p>Data Retrieving and Organising</p> <p>-Creating a graph using data collected in class.</p>	<ul style="list-style-type: none"> ● Can they produce simple graphs using ICT? ● Can they amend teacher prepared graphs? 	<p>Independently create graph from data collected, eg favourite Christmas presents, favourite seaside destinations.</p>	<p>2Graph, 2Count</p>
<p>Communicating / Presentation.</p> <p>- Create simple emails.</p>	<ul style="list-style-type: none"> ● Are they aware that email is used beyond school? ● Can they send group/individual email in a controlled environment and reply? 	<p>Send email to another group in class/school and reply.</p> <p>Teacher demonstrate how email can be used beyond school e.g library, author, planned trip, linking school.</p>	<p>School Jotter</p>

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Year 2 – Spring

Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p style="text-align: center;">Algorithms and Programs.</p> <p style="text-align: center;">This area of the curriculum is a main area of the new curriculum.</p> <p style="text-align: center;">Children should be taught this strand discreetly in order to fulfil the new requirements.</p>	<ul style="list-style-type: none"> ● Can they continue to explore floor turtles, combining sequences of instructions to follow a course? ● Can they explore an on screen turtle and navigate it around a course or grid and/or draw shapes by inputting a sequence of instructions? ● Can they begin to understand that the on screen turtle can be directed through the use of text? 	<p>Explore using bee bots further using more complex courses, including drawing shapes or patterns. Begin to use the terminology quarter, half and full turn.</p> <p>Use Purple Mash -2Go – Extend to using make my own, change settings for diagonal arrows to create shapes on screen.</p> <p>Use purple mash – 2 code – Turtle (Chimp) to direct the turtle through the use of text.</p>	<p>Bee bots and Bee Bots app.</p> <p>Purple Mash – 2Go</p> <p>Purple Mash – 2 Code - Turtle</p>

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<p>Communicating / Presentation.</p> <p>-Create an ebook using copy/paste images.</p> <p>- Word processing skills - speed typing.</p>	<ul style="list-style-type: none"> • Can they explore and use the extended keyboard? E.g. Shift, symbols. • Do they know how to use the simple functions of a tool bar? • Can they develop speed when typing and navigate the screen with increasing control? • Can they word process work, changing the font, font size, colour? • Can they add images and use text boxes, word art? • Can they cut, copy and paste on to a document? • Can they create basic presentations? • Can they format their text to refine and improve? e.g underline, italics, bold. 	<p>Using an office based programme - Microsoft word / pages to produce and edit documents linked to topic.</p>	<p>Microsoft Word</p> <p>Purple Mash – 2 type</p> <p>PowerPoint</p>
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Year 2 – Summer			
Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>Algorithms and Programs.</p> <p>This area of the curriculum is a main area of the new curriculum. Children should be taught this strand discreetly in order to fulfil the new requirements.</p>	<ul style="list-style-type: none"> • Can they enter information into a basic computer simulation and explore the effects of changing the variables in simulations and discuss the benefits of using these simulations? • Can they discuss their use of simulations and compare with reality? 	<p>Continue to Teach algorithms via Purple Mash 2 Code</p> <p>Use Purple Mash 2 Code: Air Traffic Control, Guard the Castle, Sounds (Chimp activities)</p>	<p>Purple Mash 2 Code</p>
<p>Data Retrieving and Organising</p> <p>Main teaching strands: Creating a graph using data collected in class.</p>	<ul style="list-style-type: none"> • Can they use a branching database to answer questions? • Can they input data into a pre prepared database and can they search and sort a database to answer simple questions? 	<p>2investigate to create and use a branching database.</p>	<p>2investigate</p>

Computing Scheme of Work



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Year 3 - Autumn			
Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>E-Safety</p> <p>This forms a critical part of the curriculum, which should link through all your sessions. This could be linked to your PSHCE.</p>	<ul style="list-style-type: none"> • Can they understand that once an online message has been sent it cannot be taken back and understand that there might be consequences of this? • Can they recognise that people on the internet are not always who they say they are? • Can they understand that if they make personal information available online it may be seen by others? • Can they understand the need to keep personal information and password private? • Do they know how to respond if asked for personal information or feel unsafe about the content of a message? 	<p>Link to PSHE lesson. As children come into class have a derogatory message about class teacher blu taced on the board, over the top of the same message. Discuss how innaproprate messages of this type are and rip up the paper. Discuss that message still exists and they have all seen it. Apply to online messages.</p> <p>Lee and Kim cartoon and activities- Think you Know Use VLE as an example/demonstration.</p> <p>Create a poster communicating key messages from Lee and Kim cartoon.</p> <p>Thinkuknow Lesson 3 (Google search)</p>	<p>http://factsaboutoldham.webs.com/</p> <p>ThinkUKnow Website</p>

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	<ul style="list-style-type: none"> • Can they recognise that information on the internet may not be complete, accurate or reliable? • Can they understand the need for caution when using the internet to search for images and what to do if they find an unsuitable image? • Can they explain the difference between online communication tool used in school and those used at home? Can they understand the outcome of internet searches at home may be different at home than at school? • Can they explain how to use email safely? • Do they know where they can access support surrounding incidents online? 	<p>http://factsaboutoldham.webs.com/</p> <p>Class rules for using the internet and what to do if inappropriate information is found.</p> <p>Class discussion and explain about firewall.</p> <p>Revisiting school internet safety policy. Make a leaflet/presentations about email safety. Thinkuknow lesson 4.</p>	
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<ul style="list-style-type: none"> • Do they know how to use a wide variety of technology to suit a particular purpose? • Do they understand how to navigate the internet simply? • Can they find relevant information by browsing a menu? • Can they search by keyword using a child friendly search engine? • Can they bookmark a page into "your favourites"? 	<p>Understand computer networks including the internet, how they can provide multiple services such as the World Wide Web and the opportunity they offer for communication and collaboration. Learn email/skype/text/chat/ facetime and how they can be used.</p> <p>Select a variety of software and know how to use it to communicate to others for a range of purposes e.g desktop publishing, pages, powerpoint, creating a comic strip, weather report etc.</p>	
<p>Communicating / Presentation.</p> <ul style="list-style-type: none"> • Create and send emails with attachment. • Creating and recording a power point presentation. 	<ul style="list-style-type: none"> • Can they use the email address book and can they open and send an attachment? • Can they understand the difference between word processing and desktop publishing tools? • Can they create a presentation using PowerPoint changing the layout of slides and adding images and sounds? • Can they use the publishing tools to create posters, leaflets etc? • Can they refine and improve work by using spell checker, thesaurus etc? 	<p>Send work to peers to assess</p> <p>Set the same task to groups one using word, one using publisher and compare</p> <p>Create a PowerPoint presentation linked to topic</p> <p>Create poster, leaflet linked to current learning or specific audience</p>	<p>School Jotter</p> <p>Microsoft word. Microsoft Publisher</p> <p>PowerPoint</p>

Computing Scheme of Work



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Year 3 – Spring			
Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>Data Retrieving and Organising</p> <p>-Creating a graph using data collected in class. -Branching database</p>	<ul style="list-style-type: none"> • Can they create a graph or chart to present classified data from a database? • Can they create a simple branching database, identifying objects and questions to classify data? 	<p>Children input data into a pre prepared collaborative database linking to topic using 2Investigate. Teacher poses questions which children use the database to answer.</p> <p>Using the previously prepared database, children create graphs on specific elements as stated by the teacher. Eg, How many girls and boys? Favourite football teams or eye colour.</p> <p>Paper demonstration of a branching database big enough to “walk through”</p>	<p>2investigate</p>
<p>Communicating / Presentation.</p>	<ul style="list-style-type: none"> • Can they use a computer to sequence short pieces of music using a small selection of pre-record sounds? • Can they independently record video for a range of purpose, paying attention to the quality of the video capture? 	<p>Use 2Sequence to create a piece of music.</p>	<p>2Sequence</p> <p>iPads</p>

Computing Scheme of Work



Year 4 – Autumn			
Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>E-Safety</p> <p>This forms a critical part of the curriculum, which should link through all your sessions. This could be linked to your PSHCE.</p>	<ul style="list-style-type: none"> Can they understand and articulate that social networking sites carry risk? Do they understand the benefit of developing a nickname for online use? Can they behave appropriately online? Can they understand that copyright exists on most digital images, video and recorded music? Can they recognise that cyber bullying is unacceptable? Do they know how to report an incident of cyber bullying? Can they identify when emails should not be opened and when an attachment may not be safe? Can they recognise the dangers of communicating via a variety of devices such as Xbox live, PSP, phones etc? Can they understand that there are means of reporting unpleasant online data e.g. Ceop ? Do they know where they can access support surrounding incidents online? 	<p>Lesson 9 Thinkuknow (Google search)</p> <p>Fictional Facebook page to demonstrate risks.</p> <p>Produce a school charter of online rights.</p> <p>Discussion and research.</p> <p>Sam's story http://www.bbc.co.uk/cbbc/topics/stay-safe</p> <p>Cyber café (thinkuknow)</p> <p>Discussion</p> <p>Lesson 5 Thinkuknow</p> <p>Cyber café (thinkuknow)</p> <p>Introduction to CEOP</p> <p>Discussion http://www.bbc.co.uk/cbbc/topics/stay-safe</p>	<p>VLE</p> <p>www.thinkuknow.co.uk (Cyber café)</p> <p>CEOP</p> <p>CLC workshops</p> <p>Sam Story www.allaboutexplorers.com</p> <p>http://www.allaboutexplorers.com</p> <p>http://www.allaboutexplorers.com</p>

Computing Scheme of Work



<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<ul style="list-style-type: none"> Do they know what the term browser is and can they use it to navigate a variety of programmes? Can they use tabbed browsing to open two or more web pages at the same time? Can they open a variety of links and use them? Can they use a range of digital devises and combine a variety of software? 	<p>Use search engines effectively to collect, Analyse, evaluate and present data and information.</p>	
<p>Data Retrieving and Organising</p> <p>Main teaching strands: Creating Databases</p>	<ul style="list-style-type: none"> Can they create databases, planning the records and fields taking into consideration data collected? Can they work as a group to collect data on a pre-prepared data collection template? Can they create a database template? Can they input data , using previously collected information, on their database template? Can they use a database to answer questions by constructing queries? 	<p>Children collect data on a pre prepared data sheet relating to topic.</p> <p>Use 2investigate to create their own database..</p> <p>Children pose their own questions to answer using their database.</p>	<p>2Investigate (Purple Mash)</p>

Computing Scheme of Work



Year 4 – Spring			
Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>Data Retrieving and Organising</p> <p>Main teaching strands: Creating Spreadsheets.</p>	<ul style="list-style-type: none"> • Can they explain what a spreadsheet is? • Can they use the terms cells, rows and columns? • Can they enter data highlighted to make bar charts? 	<p>Show pre prepared spreadsheet. Explain cell, row and column. Answer questions relating to these.</p> <p>Using pre prepared spreadsheet, children highlight given data to create graphs.</p>	<p>Excel</p>
<p>Algorithms and Programs.</p> <p>This area of the curriculum is a main area of the new curriculum. Children should be taught this strand discreetly in order to fulfil the new requirements.</p>	<ul style="list-style-type: none"> • Can they explore some simulations and evaluate them? • Can they begin to use software to represent 3D objects or items? 	<p>Teach algorithms via Purple Mash 2code.</p> <p>Purple Mash 2 Code: Vehicles, Shapes, Random Words and Wizards, Traffic Lights</p> <p>Use Blokify app on iPads to create 3d models of buildings.</p>	<p>Purple Mash 2 code</p> <p>Blokify (iPads)</p>

Computing Scheme of Work



Year 4 – Summer			
Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>Communicating / Presentation.</p> <p>Emails</p> <p>Editing videos/ creating presentation.</p> <p>Creating a piece of music using software.</p>	<ul style="list-style-type: none"> • Can they send e-mails between people within their school domain using the 'cc' and 'bcc' fields? • Can they use e-mail to send work completed in school to their teachers and peers? • Can they contribute/edit/refine contributions to a shared document and understand that all changes are visible? • Can they insert sound recordings into a multi- media presentation? • Can they capture images using a variety of technology eg webcams, screen capture, scanning, visualizer and internet? • Can they choose images and download into a file? • Can they transfer graphics from a range of sources and use them in a desktop publishing program? • Can they edit video, applying basic effects and transitions? • Can they create an extended piece of music using pre- recorded samples for a specific audience then evaluate this? 	<p>Send an email copy/blind copy the head or other staff into it</p> <p>Peer assess learning</p> <p>Email teachers the powerpoint presentations before presenting to class</p> <p>Class research project-linked to topic, each group contribute to one working document</p> <p>Powerpoint presentations (linked to email)</p> <p>Creating a presentation related to topic</p> <p>Photos from Educational visit, exciting lesson, class assembly or other experience, choose 3 to put into own file and import into a word document, eg news report, leaflet, poster or letter.</p> <p>Create and edit a movie using imovie on ipads.</p> <p>Create a piece of music using Garage Band for a specific audience and purpose.</p>	<p>School Jotter</p> <p>PowerPoint</p> <p>I-Pads- Stop Motion, ,</p>

Computing Scheme of Work



	<ul style="list-style-type: none"> Can they create a stop motion animation using ICT software? 	istopmotion and Lego Movie Maker software on ipads	Garage Band, 2animate
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Year 5 – Autumn			
Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>E-Safety</p> <p>This forms a critical part of the curriculum, which should link through all your sessions. This could be linked to your PSHCE.</p>	<ul style="list-style-type: none"> Do they understand the need for privacy settings in social networking sites? Can they judge when to answer a question online and when not to? Can they recognise the specific dangers associated with online gaming? Can they understand that information found on the internet should be viewed critically? Can they use various sources to double check information found? Can they discuss the positive and negative impacts of using ICT? Can they recognise that some material on the internet is copyright and may not be copied or downloaded? Can they understand that they should not publish other people's picture or tag them on the internet? Do they know that content put online is extremely difficult to remove? Can they create a strong password and recognise the need to regularly update them? Do they know where they can access support surrounding incidents online? 	<p>Facebook privacy video to be viewed by pupils.</p> <p>Cyber Café (thinkuknow)</p> <p>All about explorers – Fake information website.</p>	<p>www.allaboutexplorers.com</p> <p>http://www.allaboutexplorers.com</p> <p>www.thinkuknow.co.uk (Cyber café)</p> <p>CEOP</p> <p>CLC workshops</p>

Computing Scheme of Work



<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<ul style="list-style-type: none"> • Do they know how to download a document and save it to a computer or given device? • Can they decide which sections are appropriate to copy and paste from a variety of web pages? • Can they explain the meaning of different domain names and common website extensions? E.g. .co,.uk,;.com;.ac; .sch; .org; .gov; .net. to support validation of information • Do they know how a variety of information is stored and can describe why information is useful to be stored in this way, e.g remote access and collaborative working. • Do they know what a variety of file formats are and can they save an image document as a gif or jpeg file format using the save as command? 	<p>Pupils access an appropriate document to download and save into their own, or a shared, folder.</p> <p>Pupils use the internet to locate relevant information, copying and pasting to create their own document. They then use this as a source to create their own document, using the information they collated. Include discussion around the importance of copywrite, plagiarism and the need to cross-check with a variety of different sources to validate information.</p> <p>Pupils to identify different file formats, then use 'Save as' command to save documents in these formats eg. PDF, gif jpeg etc</p>	
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Computing Scheme of Work



Year 5 – Spring

Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>Algorithms and Programs.</p> <p>This area of the curriculum is a main area of the new curriculum. Children should be taught this strand discreetly in order to fulfil the new requirements.</p>	<ul style="list-style-type: none"> • Can they understand that software relies on codes to run and that a range of different coding languages exist? Can they name some? • Can they explore different ways in which computer software can be created? • Using software can they control the movement and responses of different commands on screen? • Can they explore a range of increasingly complex simulations, exploring the effect of changing variables and recording the results? • Can they use a range of assisted programming software to plan, design and create basic software (for example a simple game), which interact with external controllers (e.g. keyboard and/or mouse)? 	<p>Continue to teach algorithms via Purple Mash 2code. Explore Gibbon from Vehicles 2 to Free Code Gibbon as appropriate. Show children code using “see code”. Explore how written code relates to block instructions.</p> <p>Discuss that this is written in Java script. Tell children other coding languages exist.</p> <p>Explore games on Sketch Nation. Children to create their own game using Sketch Nation.</p>	<p>Purple Mash – 2 Code</p> <p>Sketch Nation (www.sketchnation.com)</p>
<p>Data Retrieving and Organising</p>	<ul style="list-style-type: none"> • Can they create their own data collection sheet using data validation? • Can they search spreadsheets using symbols =<>? • Can they create a formula in a spreadsheet and check for accuracy and plausibility? • Can they interrogate their data to create graphs and tables which they can copy and paste into other documents? 	<p>Using an appropriate topic, e.g. weather, pupils collect and validate data, using it to create their own spreadsheet.</p> <p>Pupils use their spreadsheet to create graphs and tables, using these to demonstrate and present their findings.</p>	<p>Excel</p>
<p>Communicating / Presentation.</p> <p>-Video Chat</p>	<ul style="list-style-type: none"> • Can they conduct a video chat with someone elsewhere in school? 	<p>Reading stories / Buddies with another year group</p> <p>Webcam chat-linked to topic</p>	<p>Face time (iPads)</p>

Computing Scheme of Work



Year 5 – Summer

Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>Communicating / Presentation.</p> <p>-Multimedia presentation.</p>	<ul style="list-style-type: none"> • Can they use a range of presentation applications, using a range of digital devices? • Can they use a range of software to create/manipulate music and sound samples and sequence these? • Can they create a film for a given audience incorporating a range of different scenes and carefully selected effects? • Can they locate and download royalty free music and sound effects for use in presentations? • Can they use layering to arrange images in a presentation? 	<p>Introduction to the school for new parents.</p> <p>Class web pages</p> <p>Pupils use this music/sound to incorporate into multi-media presentation.</p> <p>Create a video animation using clay/lego/play doh</p>	<p>Garage Band</p> <p>I-Pads- Stop Motion</p>

Year 6 – Autumn

Computing Scheme of Work



Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>E-Safety</p> <p>This forms a critical part of the curriculum, which should link through all your sessions. This could be linked to your PSHCE.</p>	<ul style="list-style-type: none"> • Can they use and amend their own privacy settings to keep themselves safe on social networking sites? • Can they understand that some malicious adults may use various techniques to make contact and elicit personal information? • Can they understand the dangers of chatting or meeting up with an online friend? • Can they share their own knowledge of e-safety with others? • Can they understand the term peer pressure and how powerful an emotion of feeling left out can be? • Can they explain why people may publish content on the internet that is not accurate? • Can they identify and recognise the potential risks of scamming and phishing? • Do they understand the concept of being an appropriate digital citizen? • Do they know where they can access support surrounding incidents online? 	<p>Jigsaw video (other equivalent concept videos). Fictional Facebook profile and privacy settings video.</p> <p>Make their own presentations, ebook, comic strip, video about keeping themselves, and others, safe.</p> <p>Pupils create & publish their own fake website</p> <p>Formal school-wide e-Safety events.</p>	<p>CEOP</p> <p>http://www.thinkuknow.co.uk</p> <p>Weebly (for creating fake websites)</p> <p>LADO inset</p> <p>Crucial Crew</p>
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<ul style="list-style-type: none"> • Can they use tabs to make a comparison of a website? • Can they use a variety of symbols such as + and – and "" to refine and scale down internet searches. 	<p>Learn how to use google to create shortcuts to a website.</p> <p>Pupils add and remove tabs during web searches.</p>	<p>Google Search 'search operators google'</p>
<p>Data Retrieving and Organising</p> <p>Main teaching strands:</p> <p>Create a simulation in excel</p> <p>Data logging</p>	<ul style="list-style-type: none"> • Can they collect live data using data logging equipment and present this data in different ways? • Can they identify data error, patterns and sequences? • Can they use the formula bar to explore mathematical scenarios. For example, that quick and easy changes can be made to different variables once the spreadsheet is set up? 	<p>Pupils to use Loggit tools to collect data relating to a topic, e.g. temperature, sound etc. They then use this data to create presentations, graphs and spreadsheets.</p> <p>Pupils identify and de-bug errors within spreadsheets.</p> <p>Pupils add, edit and change formulae within their spreadsheets.</p>	<p>Loggit</p> <p>Excel</p> <p>Publisher, Word, Google Docs,</p>

Computing Scheme of Work



<p>Communicating / Presentation.</p>	<ul style="list-style-type: none"> • Can they confidently use text formatting tools, including heading and body text? • Can they compare and contrast different image creation and editing tools across a range of platforms? • Can they explore the menu bar and experiment with images (colour effects, options, snap to grid, grid settings etc)? • Can they Save as gif or jpeg to make the file smaller for emailing or downloading? • Can they create a multimedia presentation that contains sound, animation, video and buttons to navigate taking into consideration good design principles, making independent choices about the best media to use and considering the needs of the audiences and the impact the presentation will have? • Can they regularly use word processing and desktop publishing to present their work, making choices about programs and features to use and justifying these choices to others? 	<p>Creating posters/ letters/non-chronological reports and presentations.</p> <p>Create presentation relating to topic</p> <p>Pupils create a interactive Yearbook, e.g using video.</p>	<p>Microsoft word, Microsoft Publisher</p> <p>Microsoft word, Microsoft Publisher, Powerpoint</p> <p>Microsoft Powerpoint, Prezi</p> <p>Microsoft Word, Microsoft Publisher</p>
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<h2 style="text-align: center;">Year 6 – Spring</h2>			
<p>Programme of Study</p>	<p>Knowledge, Skills and Understanding</p>	<p>Activity/ Link to scheme of work</p>	<p>Hardware/software suggestions</p>
<p>Algorithms and Programs.</p> <p>This area of the curriculum is a main area of the new curriculum. Children should be taught this strand discreetly in order to fulfil the new requirements.</p>	<ul style="list-style-type: none"> • Can they control an on-screen icon using text based controls, and respond to sensors and repeating written algorithms? 	<p>Continue to teach algorithms via Purple Mash 2code. Work through Gorilla level activities as appropriate.</p>	<p>Purple Mash 2 code</p>

Computing Scheme of Work



	<ul style="list-style-type: none"> • Can they use a range of more complex simulations, exploring the link to 'real life' and the impact of changing variables? • Do they know how to use a range of visual based programming software (e.g Scratch and Kodu) to plan and design basic software (for example a simple game), controlling the movement and responses of different elements on screen? • Can they use a range of visual programming software to plan and design a game? 	Use game activities on Purple Mash 2 code (Gorilla level) especially design mode option e.g. Driving Game, Football Game.	Purple Mash 2 code
Communicating / Presentation.	<ul style="list-style-type: none"> • Can they regularly use word processing and desktop publishing to present their work, making choices about programs and features to use and justifying these choices to others? 	<p>Creating posters/ letters/non-chronological reports and presentations.</p> <p>Create presentation relating to topic</p>	<p>Microsoft word, Microsoft Publisher</p> <p>Microsoft word, Microsoft Publisher, Powerpoint</p>

Year 6 – Summer

Programme of Study	Knowledge, Skills and Understanding	Activity/ Link to scheme of work	Hardware/software suggestions
<p>Using Technology</p> <p>Most of this strand can be linked in a cross curricular way across the curriculum.</p>	<ul style="list-style-type: none"> • Can they conduct a video chat with more than one person at a time? • Can they develop and use their own QR codes? 	QR Treasure Hunt, with each code giving them the next clue. Develop QR code to link to class webpage.	Facetime (iPads)

Computing Scheme of Work



			Geo-caching, QR apps, GPS.
Communicating / Presentation.	<ul style="list-style-type: none"> • Can they create a non-linear presentation? • Can they regularly use word processing and desktop publishing to present their work, making choices about programs and features to use and justifying these choices to others? 	<p>Pupils create a powerpoint with two different outcomes- adding hyperlinks. E.g 'Who wants to be a millionaire'</p> <p>Create presentation relating to topic</p> <p>Pupils create an interactive Yearbook, e.g using video.</p>	<p>Microsoft Powerpoint, Prezi</p> <p>Microsoft Word, Microsoft Publisher</p>