



Year 1 (Level 1)	Objective	Activities/ Units	Skills	Resources
<h1>CS</h1>	<ul style="list-style-type: none"> 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 	<p>Unit 1: Bee Bots (app)</p> <p>Unit 2: Bee Bots</p> <p>Unit 3: Daisy Dino/Bee Bots (app)</p>	<ul style="list-style-type: none"> Give and follow instructions, which include straight and turning commands, one at a time (with and without a computer) Discuss/explore what will happen when instructions are given in a sequence. Give a sequence of instructions to complete a simple task. Understand that instructions use both movement commands and additional commands. Make the Bee bot move one step at a time Make the Bee Bot follow a series of instructions to complete a task/route. Estimate where a Beebot will end up before giving instructions. Estimate lengths to plan a set of instructions. Record & Follow instructions. Describe instructions given and what has happened. Know and list objects in the home which follow instructions. Create and follow instructions to navigate toys around a course. Have experiences of controlling a range of devices e.g. mp3 players, sound recorders, CD players, video recording equipment and digital cameras. 	<p>iPads Daisy Dino App Beebot App BeeBots</p>
<h1>IT</h1>	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Text</p> <p>Write simple sentences for a purpose.</p> <p>i.e. Add captions to photographs, graphics and sounds</p>	<ul style="list-style-type: none"> Use a mouse to move items around the screen. Use the shift key for capital letters Use the delete key to delete letters and spaces Use the backspace key to delete Use the space bar Type letters and numbers to write sentences or draft ideas. Use the return key to start a new paragraph. Make choices Save, open, edit and print work with support. 	<p>Textease/word Book Creator App</p>



		<p>Pictures Making pictures and patterns using a paint package</p>	<ul style="list-style-type: none"> • Use the mouse • Use & select various tools including brushes, pens, lines, fill, spray and stamps. • Change colour • Undo an action • Communicate a theme or idea through images • Make choices • Save, open, edit and print work with support. 	<p>Paint Textease paint iPad paint Apps</p>
		<p>Music Composing musical phrases Use a range of sound recorders or players to record, select or playback music and sounds.</p>	<ul style="list-style-type: none"> • Use the mouse • Play and listen to musical phrases • Select or record sounds to add to work • Create simple musical phrases. • Make choices • Save, open & work with support. 	<p>2simple music toolkit Easi speaks Book Creator App Apps & iPad</p>
		<p>Combine images, text and sound i.e. Make an electronic class book to tell a story</p>	<ul style="list-style-type: none"> • Make choices • Use tools to change the appearance of my work • Save, open, edit and print work with support. • Combine text, sound and images on screen. • Save, open, edit and print work with support. 	<p>2create a story Textease presenter Clicker 5 Book creator App APPS</p>
		<p>Data: Pictograms: ~ Look at pictograms ~ Answer questions from pictograms ~ Make Pictograms ~ Use a simple website to find information</p>	<ul style="list-style-type: none"> • Use the mouse • Make choices • Understand that data can be collected and presented as graphs i.e. pictogram. • Understand that images can give information (i.e. pictograms) • Answer simple questions using pictograms to show they understand what a picture is showing them. • Know that pictograms can be changed. • Sort objects/shapes/pictures in lists and tables or creating patterns and sequences. • Put data into a programme (i.e. to create a pictogram) • Use the internet to find information. 	<p>My world 'chart' Textease databases? RM Maths</p>



<p>DL</p>	<ul style="list-style-type: none"> 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 	<p style="text-align: center;"><u>Online</u></p> <p>Explore websites and how to use them.</p> <p>Send an e card as a class.</p> <p style="text-align: center;"><u>ESafety</u></p> <p>Complete e-safety curriculum activities using Hector's World and recommendations for that year. Recommendations Can be found on the Esafety file on the server each year</p>	<p><u>Online</u></p> <ul style="list-style-type: none"> Talk about websites they have been on. Send an online ecard Explore a website by clicking on buttons, arrows, menus and hyperlinks. Navigate 'back' by clicking on the 'back' button. Complete a search under the supervision of adults. <p><u>ESafety</u></p> <ul style="list-style-type: none"> Make decisions about whether or not statements or images found on the internet are likely to be true. List different devices that can go on the internet, and separate those that do not. Understand what personal information is, online. Know what inappropriate content online might be and what to do if it is found. 	<p>Netty's world Hectors world Cbeebies</p>
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Year 2	Objectives	Activities	Skills	Software usage
<p style="text-align: center; font-size: 2em; font-weight: bold;">CS</p>	<ul style="list-style-type: none"> • 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 • recognise common uses of information technology beyond school 	<p><u>Coding: Daisy Dino:</u> Code a 'story' for a sprite. Then edit and improve this.</p> <p><u>Programming: Beebot</u> Generate a sequence of instructions to complete routes and create simple 2D shapes.</p>	<p><u>Coding: Daisy Dino</u></p> <ul style="list-style-type: none"> • Use the 'repeat' (loop) and 'when' command within a series of instructions. • Plan a short 'story' for a sprite and write the commands for this. • Edit/refine a sequence of commands. • Estimate distances and using ¼ and ½ turns on screen • Debug a programme designed by the teachers with errors, to solve a problem. <p><u>Programming:</u></p> <ul style="list-style-type: none"> • Make the floor robot make ¼ turns and ½ turns • Control Beebot around a planned route • Follow instructions • Plan instructions. Record instructions for someone else to follow. • Debug errors in peers' instructions. • Predict the results of a series of instructions. i.e. where will it end up? • Understand that the robots orientation is essential. • Be familiar with maps, plans and scales. • Estimate distances. • Explain why a robot moved in a particular way (in reference to how it was programmed) • Create a sequence of instructions to generate simple geometric shapes (oblong /square). • Discuss how to improve/change their sequence of commands 	<p style="text-align: center;">Beebot Textease turtle Daisy Dino iPad APP</p>
		<p><u>How Computers Work:</u></p> <ul style="list-style-type: none"> • Discuss how technology is used in the home & wider world. 		
<p style="text-align: center; font-size: 2em; font-weight: bold;">IT</p>	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p style="text-align: center;"><u>Text:</u> Use word or textease to present written information.</p>	<ul style="list-style-type: none"> • Know that sentences flow onto the next line automatically • Know that return moves to the next line for paragraphing. • Use the mouse and arrow keys to insert words and letters. • Save, Open, Edit & Print work. • Know where work was saved and can be found. • Check spellings using spell checker & edit appropriately. • Change the appearance of text (font, colour, size) • Use bold, italics and underline functions. • Begin to use two hands when typing. 	<p style="text-align: center;">Textease Clicker 5 Word iPad Apps</p>



		<p>Image: Exploring and using artists' styles to create art work</p>	<ul style="list-style-type: none"> • Select appropriate paint tools • Select appropriate brush sizes • 'Undo' • Use lines, hollow and filled rectangles and circles • Take photos using a digital camera. • Save, Open, Edit & Print work. 	<p>Paint Textease paint iPad Art APPs</p>
		<p>Music: Create, edit & record sounds</p>	<ul style="list-style-type: none"> • Use sound records at (iPads, laptop mics) and away from a computer (easispeaks) to record sounds. • Change sounds they have recorded. • Create simple musical phrases • Use simple editing to alter phrases • Save, Open, Edit & Print work. 	<p>2Simple Music Toolkit Easispeaks Garage Band PhotoStory</p>
		<p>Animation: Make a 2D animation using images taken by a digital camera to tell a story.</p>	<ul style="list-style-type: none"> • Combine digital images to tell a story • Use different tools to change the appearance of my work • Save, Open, Edit & Print work. 	<p>Zu3D Photo Story Garage Band 2Create a story PowerPoint</p>
		<p>Sharing Become familiar with basic email features by participating in sending a class email.</p>	<ul style="list-style-type: none"> • With support write and send a short email from a class account. • Know importance of email address. • Share work online 	<p>Email</p>
		<p>Video: iMovie Create a simple movie for a purpose.</p>	<ul style="list-style-type: none"> • Pupils to learn how to use the iPad camera and in-app camera. • Discuss and choose which films to use and which to remove. • Arrange clips to create a movie. • Add simple tittles and credits. 	<p>iPad iMovie</p>
		<p>Data: ~ Use pictograms and bar charts to answer questions ~ Sort information electronically ~ Create bar charts & pictograms ~ Use key words to search for information ~ Use branching databases.</p>	<p>Data: • Understand that data can be collected and presented as a graph. • Answer questions form bar charts & pictograms to interpret data. • Change a graph from one type to another. • Use simple search tools in a prepared database to answer simple questions.</p>	<p>Textease spreadsheet Excel</p>



			<p>Searching:</p> <ul style="list-style-type: none"> • Sort and classify a collection of objects • Identify sorting criteria used in a branching database. • Create and search a Y/N branching tree diagram • Search using key words 	<p>Textease branch</p>
<p>DL</p>	<p>Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have</p>	<p>Online: Using email</p>	<p>Online:</p> <ul style="list-style-type: none"> • Understand the need for email addresses • Open & reply to a class message • Send a class message. • Find @ on a keyboard (and begin to understand how to type it using CTRL) • Discuss email as a use of online communication. Compare to letter writing. • Understand that online information isn't always confidential. 	<p>Hectors world. ESafety resources on server.</p>
		<p>ESafety: Complete e-safety curriculum activities using Hector's World and recommendations from the Esafety file on the server each year</p>	<p>ESafety:</p> <ul style="list-style-type: none"> • Know that not everyone is trustworthy online. • Discuss how ICT increases information sharing/access. • List a range of devices that connect to the internet (and realise this means the same rules apply) • Know that online communications are not always confidential. • Identify personal information that should be kept private. • Know SIDs top tips/SMART rules • Discuss websites used, favourites etc. and compare. • Know how to return home online. • Know how to use hector the protector. • Know what to do if I feel unsafe online. • Identify true and false information in a range of contexts. 	



Year 3	Objectives	Activities/Units	Skills	Resources
<p style="text-align: center; font-size: 2em; font-weight: bold;">CS</p>	<ul style="list-style-type: none"> 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 	<p style="text-align: center;">Floor Robots</p> <p>Use Beebots/Probots to complete tasks such as drawing shapes or travelling specified routes.</p> <p style="text-align: center;">Coding Programmes</p> <p>Use coding software to design, write and correct code for a purpose.</p>	<p><u>Controlling a floor robot:</u></p> <ul style="list-style-type: none"> understand forward, backward and right angled turns record instructions follow a set of instructions give instructions to others identify problems with instructions & resolve these Solve open ended problems with the floor turtle. Create instructions for specific routes or tasks. <p><u>Controlling a screen turtle:</u></p> <ul style="list-style-type: none"> understand forward, backward and right angled turns record instructions follow a set of instructions give instructions to others Solve open ended problems. Use instructions to create shapes on screen using the pen up/pen down and repeat and end commands. <p><u>Coding:</u></p> <ul style="list-style-type: none"> Use a variety of inputs Use a variety of outputs Use the 'repeat' (loop) command within a series of instructions. Use the 'if... then' (conditional statement) command within a series of instructions Design a programme to accomplish a task (i.e. Whack a witch) Use pen down commands. Use code to draw 2D shapes on-screen. Know that computer algorithms (instructions) can be represented in a written language or as symbols and flow charts. Know that Algorithms have to be clear. Know that algorithms can included choices (if) and repetition (loops) Know that Algorithms must be tested and changed if wrong. Know that programmes on computers are just set of instructions to meet a task. 	<p>Textease Turtle Probot/Beebot Scratch Hopscotch</p>
		<p><u>Computer networks:</u></p> <ol style="list-style-type: none"> Understand that the computers in a school are connected together in a network Understand why computers are networked Understand the difference between the Internet and the World Wide Web (WWW) 		<p>Computing lesson plans and resources on server in ICT – Planning – year 3 – networks.</p>



IT	<ul style="list-style-type: none"> 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 	<p>Multimedia: Writing and editing a multimedia text presentation for a purpose using text, images & sound from a range of sources (different programmes and the internet)</p>	<ul style="list-style-type: none"> Use a digital template Combine text and graphics Be aware of audience and use layout, format and graphics appropriately Choose appropriate font, font size and font colour. Use cut, copy and paste Edit work using editing tools such as font colour, size, style, word art, text boxes, colour fill etc. Use a spellchecker Save, Open, edit and print work. Use text wrapping features around images. Improve typing with both hands. 	<p>Textease Word Book Creator on iPad</p>
		<p>Capturing images</p>	<ul style="list-style-type: none"> Acquire, store and combine images from cameras or the internet for a purpose. Use the print screen function to capture an image. Select certain areas of an image and resize, rotate an image. Edit pictures using various tools in paint or photo-manipulation software. 	<p>Microsoft Office Picture Manager Paint Word Online tool i.e. pixlr.com</p>
		<p>Music Composing and editing music to accompany an image or poem</p>	<ul style="list-style-type: none"> Create a short piece of music (could be linked to a poem, picture, theme) Use simple editing to alter the phrase Import music and sounds from their own recordings. Use music software to experiment with capturing, repeating and reordering sounds. Save, Open, edit and print work. 	<p>2simple music toolkit Audacity</p>
		<p>3D animation Use web cams to create a 3D animation (could be to sequence, a song or tell a story):</p>	<p>Animation/Combining digital images</p> <ul style="list-style-type: none"> Show awareness of audience Capture images using a webcam, digital camera or iPad Import still images and sound to create a movie Choose appropriate tools to enhance animation Amend work by editing and deleting scenes Add simple titles and credits to films 	<p>Webcams/tuff cams/ iPad Zu3D Modelling clay</p>



		<p>Data: I can collect data, enter it into a prepared database and use it to answer questions</p>	<p>Date Handling</p> <ul style="list-style-type: none"> • Choose what to investigate • Design a questionnaire to collect data • Enter numerical data and text into a spread sheet • Produce graphs and charts using a spread sheet • Use a spread sheet to calculate totals. • Decide which type of graph would display their information best. • Make conclusions from results • Know that data is content and information is the meaning of that content. 	<p>Textease database www.kidsbiology.com/animals-for-children.php</p>
<p>DL</p>	<ul style="list-style-type: none"> • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	<p>Blogging Contribute to a class blog on the VLE & understand that blogs can be updated</p> <p>Internet Research Find answers to straight forward lines of enquiry online through simple online searches using appropriate language.</p> <p>Email Open, send, reply and decide the validity of emails. Understand important email features.</p> <p>ESafety continue using the internet safety resources from the file each year. Create and safely use a learnanywhere profile</p>	<p>Blogging Contribute to a class blog on the VLE & understand that blogs can be updated</p> <p>Internet Research:</p> <ul style="list-style-type: none"> • Type in a URL to find a website. • Add websites to favourites. • Use a search engine to find a range of media, e.g. images, text. • Think of search terms to use linked to questions they are finding the answers for. • Make conclusions from results. • Use what they find to present information to an audience. • Talk about the reliability of information on the internet, e.g. the difference between fact and opinion (link to E-Safety). • Understand that some information online may be untrue • Know how to use the back and forward browser. <p>Email</p> <ul style="list-style-type: none"> • Using email safely and responsibly. • Log on, open emails and create and send emails to a partner selecting from a class address book. • Decide whether an email should be opened, replied to or deleted • Understand the nature of 'spam' emails 	<p>Online RM Easymail VLE Email Esafety files on server</p>



Year 4	Objectives	Activities/Units	Skills	Resources
<p style="text-align: center; font-size: 2em; font-weight: bold;">CS</p>	<ul style="list-style-type: none"> 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 	<p style="text-align: center;">Coding</p> <p>Use visual coding programmes to create virtual worlds and games for a specific purpose.</p> <p style="text-align: center;">Unit 1: Scratch Racing Car</p> <p style="text-align: center;">Unit 2: Kodu</p> <p><i>* Could use the Probots to explore some of these objectives also – especially relating to repeat commands and pen up/pen down commands</i></p>	<p>Unit One: Scratch Racing Car</p> <ul style="list-style-type: none"> Know where to find tools in Scratch, to programme Create a <i>background</i> and sprite for a game. Add inputs to <i>control</i> their sprite. Use conditional statements (<i>if... then</i>) within their game. Create a racing car game. <p>Unit Two: Kodu:</p> <ul style="list-style-type: none"> Single player - free to navigate and avoid danger Create a 3D <i>digital world</i> for a game with land, water and scenery. Add a sprite to their world. <i>Program</i> their <i>sprite</i> to navigate their 3D world with an <i>input</i>. Use conditional statements (<i>if...then</i>) to create dangerous items in their world. <p>Know that:</p> <ul style="list-style-type: none"> Algorithms can include <i>selection (if)</i> and <i>repetition (loops)</i>. <i>Algorithms</i> may be broken down into parts (procedures), and that each part contains its own algorithm (instruction). It can be easier to plan, test and correct parts of an algorithm separately. A program is a sequence of statements written in a programming language. Programs can be created using visual tools. 	<p style="text-align: center;">Kodu Scratch</p>
	<p style="text-align: center;">Computer Networks:</p> <ol style="list-style-type: none"> Understand that servers on the Internet are located across the planet Understand how email is sent across the Internet Understand how the Internet enables us to collaborate 	<p style="text-align: center;">Computer Networks:</p> <ol style="list-style-type: none"> Understand that servers on the Internet are located across the planet Understand how email is sent across the Internet Understand how the Internet enables us to collaborate 	<p>Resources on server in ICT – Planning – year 4 – networks.</p>	
<p style="text-align: center; font-size: 2em; font-weight: bold;">IT</p>	<ul style="list-style-type: none"> 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 	<p style="text-align: center;">Multimedia Text Presentation</p> <p>Creating a multimedia text presentation for a purpose i.e. Writing and editing a story for younger children using text and images</p>	<p>Text:</p> <ul style="list-style-type: none"> Insert and edit simple tables select different page orientations/sizes Use columns, centring, tabs, block fill and highlighting to change text style and position. Use thesaurus, spell checker and find and replace to edit work. Know how to wrap text and change the position of objects. 	<p style="text-align: center;">Word Book Creator on the iPad</p>



			<p>Combining text and graphics:</p> <ul style="list-style-type: none"> • Use graphics from a file • Put graphics and writing together • Put a border around a piece of work 	
		<p>Animation Use web cams to create an animation (could be to sequence, a song or tell a story):</p>	<p>Animation/Combining digital images</p> <ul style="list-style-type: none"> • Plan animations • Capture images using a webcam, digital camera or iPad • Import still images and sound to create a movie • Choose appropriate tools to enhance animation • Amend work by editing and deleting scenes • Add simple titles and credits to films 	<p>Webcams/tuff cams/ iPad Zu3D Modelling clay</p>
		<p>Digital Video Use digital video to create an advert/film/trailer</p>	<p>Video: Combining Video images to create a point of view i.e. adverts:</p> <ul style="list-style-type: none"> • Record appropriate film and sound • Show awareness of camera position and image composition • Use appropriate tools to enhance presentation such as trim and cut. • Evaluate which film to use and which to reshoot. • Trim, arrange and combine clips to convey meaning. • Add titles, credits, slide transitions, special effects and talk about the effect these have on the audience. 	<p>Window movie maker Textease movies Digiblue movie creator Movie star / iMovie on iPads</p>
		<p>Databases Collect, enter and interrogate data to answer questions</p> <p>Data Handling Collect and enter data into a Spreadsheet to look for patterns and answer questions</p>	<p>Branching Databases:</p> <ul style="list-style-type: none"> • Create and search a branching database. • Sort and organise information to use in other ways. • Create a database from information I have collated/selected. • find answers to specific questions from a simple database. • think of appropriate questions to ask a database <p>Data Handling</p> <ul style="list-style-type: none"> • Collect data • Enter data on a spreadsheet • Present data using graphs and charts • Examine findings and identify patterns • Identify the appropriate graph/table/chart to portray information. • Draw conclusions and explain findings 	<p>Textease databases Excel www.mape.org.uk/activities/sorting_games/index.htm Textease spreadsheets Excel</p>



DL	<ul style="list-style-type: none"> • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	Searching Online	Searching online: <ul style="list-style-type: none"> • Navigate using the Forward and Back buttons • Enter a web address • Print work from online (known how to preview) • Know how a hypertext link works • Know how to make notes from the internet and select relevant information • Understand safe searching online. • Search for different types of media online. • Understand that the Internet contains fact, Fiction and opinion and begin to develop the ability to distinguish between them. • Develop strategies for Internet research by checking websites for accuracy. 	Websites Word Textease Spoof Website www.allaboutexplorers.com SMART Rules www.kidsmart.org.uk/beingsmart/ Real websites to compare & discuss: www.bbc.co.uk/cbeebies www.schoolshistory.org.uk www.childnetint.org/KIA/primary/smartadventure
		Online Communication: Investigate a range of online communication tools.	Emails: <ul style="list-style-type: none"> • Log in to emails, open emails, create emails, reply to emails (including subject, email address, BCC and CC) • Attach files to emails. • Download files from an email. • Take part in group emails by 'replying all' and understand the difference between reply and reply all. Video Conferencing: <ul style="list-style-type: none"> • Take part in a class video conference. • Make and receive Skype calls (video and voice). • Adjust settings. • Add a contact to Skype. • Understand that there are a range of online communication methods (email, blogs, personal online space, online chat, instant messaging) • Begin to explore the benefits and risks of online communication tools • Know how to use an online communication method safely and responsibly • Know what to do with unwanted communication 	Skype RM Easymail



		<p style="text-align: center;">ESafety</p> <p>continue using the internet safety resources from the file each year. Create and safely use a learnanywhere profile</p>	<ul style="list-style-type: none"> • Know how to deal with any unwanted communication. • Know the SMART rules • Identify the dangers online and how to deal with them. • Articulate safe and unsafe online behaviours. • Know what makes something a social network and that social networking can be built into gaming. 	<p>ESafety resources on the server CEOP Resources www.thinkuknow.co.uk www.childnet-int.org/kia/ www.bbc.co.uk/chatguide/</p>
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Year 5	Objectives	Activities/Units	Skills	Software usage
CS	<ul style="list-style-type: none"> • 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 	<p><u>Coding</u></p> <p><u>Unit 1: Scratch: The Ghostly Woods</u></p> <p><u>Cargo Bots App</u></p> <p><u>Unit 2: Scratch Robot Wars</u></p>	<p><u>Unit 1: Scratch: The Ghostly Woods</u> Use external triggers and infinite loops to control sprites.</p> <p style="padding-left: 40px;">Create and edit variables</p> <p style="padding-left: 40px;">Use conditional statements.</p> <p style="text-align: center;"><u>Cargo Bots App</u></p> <p style="padding-left: 40px;">Use loops and conditions to create games.</p> <p style="text-align: center;"><u>Unit 2: Scratch Robot Wars</u> Use variables to configure external outputs within scratch</p> <p style="padding-left: 40px;">Use external inputs to control external outputs</p> <p style="padding-left: 40px;">Use conditional statements and infinite loops.</p> <p><u>Pupils should know that:</u></p> <ul style="list-style-type: none"> * algorithms can be split (decomposed) into parts (called procedures) each of which has its own algorithm. * algorithms can include selection (if) and repetition (loops) * programmes are planned * values (variables) can select which procedure is performed. 	<p>Scratch Cargo Bots App Probots</p>
	<p><u>Computer networks</u></p> <ol style="list-style-type: none"> 1. Understand how we view web pages on the Internet 2. Use search technologies effectively 3. Understand that web spiders index the web for search engines 4. Appreciate how pages are ranked in a search engine 	<p>Computing Resources & Plans on the server in ICT – Planning – year 5 – networks.</p>		



IT	<ul style="list-style-type: none"> 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 	<p style="text-align: center;"><u>Books</u></p> <p>combine text and graphics from a range of different sources for an intended audience and purpose i.e. non-fiction book possibly extending on to create an interactive eBook.</p>	<p><u>Text:</u></p> <ul style="list-style-type: none"> Carry out a safe search on the Internet Copy and paste text and images from the Internet Combine text and graphics in a Desktop Publishing (DTP) package and APP e.g. word, publisher, book creator Edit text to suit the audience and Purpose Edit text to suit the audience and Purpose Use the full range of tools identify the features of good page layout combine text, images, video and sounds put digital photos or scans into a document demonstrate quality in the presentation of their work choose an appropriate font for the job Use reviewing tools in editing all work to assist in peer assessment i.e. spelling, thesaurus etc. Use the editing and refining skills taught in year 4 with consideration of the audience and purpose and to evaluate work. 	<p>Word Publisher Book creator.</p>
		<p style="text-align: center;"><u>Graphics:</u></p> <p>design and make a label which makes good use of colour, text and graphics appropriate for a purpose i.e. Christmas or a product.</p>	<p>Graphics:</p> <ul style="list-style-type: none"> Use the full range of tools Select an area and tile, copy and scale Save a sequence of pictures for Storyboarding <p>Combining:</p> <ul style="list-style-type: none"> Combine graphics and text using a template. 	<p>Paint Textease paint Dazzle Revelation Natural Art</p>
		<p style="text-align: center;"><u>Sound</u></p> <p>Recording and editing sound to accompany a story/presentation</p>	<p>Sounds:</p> <ul style="list-style-type: none"> record digital sound effects using audacity. manipulate digital sound effects using reversing sounds, adding echo, altering speed link words and sounds using hyperlinks 	<p>Sound Recorder (MS Windows application) Audacity Easispeaks</p>



		<p><u>Multimedia Presentations:</u> communicate ideas using text, images and sound which are suited to the purpose and audience.</p> <p>i.e. a PowerPoint slide for a purpose or an animation for buddies.</p>	<p>Combining & presenting:</p> <ul style="list-style-type: none"> • identify the features of good page layout • produce a slide as part of a larger presentation • combine text, images and sounds • create own images, videos and sounds to be included • create purposeful presentations that make use of animations and transitions (i.e. PowerPoint) • introduce use of hyperlinks. <p>Animation:</p> <ul style="list-style-type: none"> • Plan and create a short animated sequence to show a specific idea using a storyboard and timeline. • Use Transitions and special effects when editing videos. 	<p>Microsoft PowerPoint Animation software – ZU3D Muvizu</p>
		<p><u>Data Handling:</u></p> <p>CHARTS & GRAPHS: present information using charts and graph and explain findings.</p> <p>DATABASES: Create a database structure with help and use it to answer questions and present information</p> <p>ONLINE DATABASES: search and filter results from a large database</p> <p>SPREADSHEETS: Use spreadsheets and their key features effectively.</p>	<p><u>Charts & Graphs: Excel</u></p> <ul style="list-style-type: none"> • enter data accurately • draw conclusions from a database • put graphs and text together • construct, edit and interpret frequency tables, bar charts, line graphs and pie charts. <p><u>Databases: textease databases</u></p> <ul style="list-style-type: none"> • choose appropriate questions and design a data collection form • make decisions about types of answer • Design a database using fields and features appropriately. • enter data accurately in to a database <p><u>Searching online databases:</u></p> <ul style="list-style-type: none"> • search and filter results from a large database • make decisions as to the best strategy/location to finding the answer • Develop strategies for finding the most appropriate information i.e. site choice, key words, • draw conclusions from a database • choose appropriate questions to ask to find out information. <p><u>Spreadsheets: Excel</u></p> <ul style="list-style-type: none"> • use a spreadsheet to carry out calculations; • know which formulas to use to change a spreadsheet model • use the SUM and other functions with assistance; • know that a spreadsheet can be used to help solve problems; • change some of the data/variables and discuss effects on results. 	<p>Excel Textease databases Online shopping sites i.e. amazon.</p>



		<p><u>Using ICT:</u> Use ICT across the curriculum i.e. oximeters, data loggers etc. for a purpose.</p>	<p>Data-logging:</p> <ul style="list-style-type: none"> • Know that physical data can be recorded by the computer • Know that information can be recorded over a period of time • Know that several sets of data can be collected at once • Use the pre-programmed features to set up specific data capture over time i.e. overnight. • Use a range of sensors to collect data (i.e. heart monitor, light gates, sounds) for scientific investigation (into Y6) 	<p>Data Loggers & Oximeters</p>
<p>DL</p>	<ul style="list-style-type: none"> • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	<p><u>Internet Research:</u> Use the Internet to safely undertake independent and purposeful research</p>	<p><u>Searching:</u></p> <ul style="list-style-type: none"> • Use child-friendly search engines to find information • Search by changing questions into key words • Avoid copying lots of text from websites and claiming as your own work • Add websites to favourites • Use advanced Google functions such as quotations • Know how to check the validity of information i.e. reliability of website (from domain names) and cross-checking with books. • Know that websites such as Wikipedia are made by users (link to safety) 	<p>Children’s search engines such as: http://www.kidsclick.org/ http://kids.yahoo.com/ http://www.askforkids.com/</p> <p>Google tips</p>
		<p><u>Publish Work Online</u> Email work as part of a class project/ pen pals link.</p>	<p>Share and publish work online:</p> <ul style="list-style-type: none"> • share work on a learning platform (learn anywhere), via email as an attachment and via the cloud (dropbox) • understand the cloud as a virtual storage space. 	<p>Learnanywhere RM easymail – Year 5, pass</p>



		<p><u>ESafety:</u> continue using the internet safety resources from the file each year</p>	<ul style="list-style-type: none"> • Understand that if they make their personal information available online it may be seen and used by others (even once deleted) • Understand some of the risk and rewards involved in publishing online and know how to keep safe • Recognise the effect that their writing or images may have on others. • Discuss issues such as cyber bullying • Respect the ideas and communications of others/ they encounter online • Know that need to have appropriate permission for use of images of friends or those they have found online • Know how to be a good friend and 'digital citizen' online • Identify safe and unsafe online behaviours. • know how to identify the URL of a website. • know what appropriate and inappropriate privacy settings on social accounts are; and how to set these. • use an online learning environment safely. 	
		<p><u>Emailing</u></p>	<p><u>Emailing:</u> Create, send and respond to emails.</p>	<p>RM EASYMAIL</p>



Year 6	Objectives	Activities	Skills	Software usage
<p>CS</p>	<ul style="list-style-type: none"> 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 	<p>Unit One: Python</p> <p>Unit Two: Scratch Temple Run</p>	<p>Unit One: Python:</p> <ul style="list-style-type: none"> navigate python programming environment Idle declare variables use a range of statements use selection algorithms use comparison and numerical operators. <p>Unit Two: Scratch Temple Run</p> <ul style="list-style-type: none"> design their own game using sprites, backgrounds, scoring and/or timers use conditional statements, loops variables and broadcast messages in their game. The game has a clear 'win' and 'lose' end. Evaluate and debug their game as required. <p>Know that:</p> <ul style="list-style-type: none"> algorithms can be symbolic flowcharts or in a defined language algorithms are created from a plan and tested algorithms are corrected if they fail testing algorithms can include selection (if) and repetition (loops) good code tells computers and humans how a programme works. computers can be programmed to make 'choices' but really the programmer has created the choice. Know that the computers can be programmed to make the outputs react to what the sensors detect. 	<p>Python</p> <p>Scratch</p>
		<p>Computer Networks</p> <ol style="list-style-type: none"> Understand what HTML is and recognize HTML tags Know a range of HTML tags and remix a web page Create a webpage using HTML 		<p>Computing Resources & Plans on the server in ICT – Planning – year 6 – networks.</p>
<p>ICT</p>	<ul style="list-style-type: none"> 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 	<p>Produce a range of multimedia combining different features for a purpose, such as posters, fact books, power points, videos, leaflets, music & animations.</p> <p>Unit One: Animation</p> <p>Unit Two: Video</p> <p>Unit Three: Data</p> <p>Then choose from posters, fact books, power points, videos, leaflets, music, animations etc.</p>	<p>Unit One: Animation: Monkey Jam or Unit One: ZU3D or Muvizu</p> <ul style="list-style-type: none"> Plan a multi-scene animation including characters, scenes, camera angles and special effects. Use stop-motion animation Adjust the number of photos taken and playback rate to improve the quality of the video. Combine stills, video, captions, titles and sound in video editing packages to edit. Export movies in different formats and export them into multimedia presentations. 	<p>Monkey Jam & Microsoft Movie Maker</p> <p>Or</p> <p>Zu3D</p> <p>Or</p> <p>Muvizu</p>



			<p>Unit Two: Video: iMovie or moviemaker</p> <ul style="list-style-type: none"> • Storyboard and capture videos for a purpose • Plan for the use of special effects and transition to enhance their video • Transfer videos to a laptop (i.e. via dropbox) for editing. • Trim, arrange and edit audio levels of their video. • Add titles, credits, transitions and special effects. • Export their video in different formats for different purposes. 	<p>iMovie Microsoft Movie Maker</p>
			<p>Unit Three: Data: (use Year 5 model)</p> <p>Data collection: Design and make a specific questionnaire including:</p> <ul style="list-style-type: none"> • Creating data collection forms and enter data from these accurately as a data table or a database. • Knowing that data can be collected and entered in different formats (i.e. numerically, textbased, dates etc.) <p>Excel: Create a spreadsheet to investigate costs and numerical patterns including:</p> <ul style="list-style-type: none"> • Using formula to create models including entering data, entering formulae, copying cells and simple formatting. • Knowing how to change formula to change models including (SUM, x ÷, average, mode) • Making (and choosing appropriately) graphs to represent calculations/data on spreadsheets • Understanding that changing a numerical field changes the data. • Using different views and tools to check for inaccuracies in data. • Making predictions about how changing the model will change the data to answer 'what if' questions. • Changing data in a spreadsheet to answer 'what if' questions and check predictions. <p>Databases (textease databases or Grubba):</p> <ul style="list-style-type: none"> • Search databases and refine their search, narrowing it each time i.e. using = and <> icons in a search. • Know that searching online uses the same techniques but with word choices and symbols i.e. 'and 'or' - use Google tips poster. • Sort information • Present information from databases and graphing in a report using other software, for a specific audience. 	<p>Google Search Tips Year 5 Model Planning Textease databases Excel www.grubba.net/index.php username: St Mewan password: PL267DPsch</p>



			<p>Posters/fact sheets/information books.</p> <ul style="list-style-type: none"> • Use justification features • Present information for a variety of audiences, such as a letter, poster, report etc. • Take pictures from a variety of sources, including the Internet. • Attach their work to email and send it independently <p>PowerPoint: To be able to:</p> <ul style="list-style-type: none"> • Identify the features of good page layout i.e. text boxes, columns etc. • Produce a presentation for a specific purpose and audience • Combine text, images and sounds • Create own images, videos and sounds to be included • Link pages together using hyperlinks and transition effects • Enhance existing presentations using images from different sources and locations. <p>Leaflet: Create a leaflet using layering and collage techniques with images from different sources:</p> <ul style="list-style-type: none"> • choose and use templates <p>Images:</p> <ul style="list-style-type: none"> • Choose the finished size of the picture • Use the full range of tools, including selecting areas • Send the picture over the Internet as an attachment • Create an image for a specific purpose/to solve a specific problem. <p>Music for purpose:</p> <ul style="list-style-type: none"> • Evaluate and compose music for use in a multimedia presentation • Create and combine musical elements to create short compositions • Edit and revise musical compositions to suit the content and purpose • Save, retrieve and print work • Add musical composition to a multimedia presentation • Select edit and combine sounds from different sources to create a podcast file. • Create sounds to accompany presentations. 	<p>Word Publisher Book creator Apps PowerPoint Paint Textease Paint Paint Apps Audacity Sound Recorder 2simple music toolkit</p>
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DL	<ul style="list-style-type: none"> • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	<p>Searching online: Search effectively and efficiently online</p> <p>Emailing: Email including replying, address books and attachments.</p> <p>Blogging: Use the online environment safely to share opinions and content.</p> <p>Copyright: Understanding the risk and legalities of sharing content online</p> <p>ESafety:</p>	<p>Searching online:</p> <ul style="list-style-type: none"> • Know that the choice of words used in a Search Engine can affect the number and range of sites listed including using OR for options, "" to quote exact phrases, - to exclude search, define: to define a word, numerical symbols for calculations % + - = • Type in key phrases for their search • Use the navigation tools on the web page • Refine their web search • Cut and paste information into a document • Understand that not all information online is true. • Understand that the web address/author/linked pages will indicate the reliability of information online. • Check a range of sources to ensure information is accurate. 	Google Search Tips
			<p>Emailing:</p> <ul style="list-style-type: none"> • Attach files to an email • Create their own address book/add to an existing one. • Use the address book • Reply to a message • Send one message to several recipients • Use class video conferencing • Produce formal and informal messages for a purpose. 	<p>RM Easy Mail Username: Year6 Password: pass Or Ask Miles/Anna for User profiles for individual accounts.</p>
			<p>Blogging:</p> <ul style="list-style-type: none"> • Use the LearnAnywhere, EPortfolio to create an individual blog, which can be commented on by others. • Use Eportfolio to share photos hyperlinks and videos. • Alter the theme and appearance of their Eportfolio. • Edit and control their pages; deleting and reorganising and archiving old content. • Like/follow other blogs and users. <p>Build Blog content throughout the year. Contribute to class blogs in the learnanywhere portfolio.</p> <p>Extension: register for your own blog at kiblog.org and customise this including theme, url etc.</p>	<p>Learnanywhere https://stmewan.learnanywhere.co.uk username: first name initial.surname (i.e. a.willcock) password: changeme (initially)</p>



			<p>Copyright:</p> <ul style="list-style-type: none"> • Identify whether a file has copyright or can be legally downloaded free of charge from the Internet and whether these can be used in their own work • Acknowledge sources used in their work • Know that need to have appropriate permission for use of images of friends or those they have found online • Understand copyright issues – what images / videos / sounds are legal and safe to use • Become aware that file sharing is usually illegal due to copyright laws and can also spread viruses. 	<p>Compare sights: http://www.tate.org.uk/ http://www.bbc.co.uk/doctorwho http://www.freefoto.com/</p>
			<p>ESafety:</p> <ul style="list-style-type: none"> • Understand that if they make their personal information available online it may be seen and used by others. • Understand some of the risk and rewards involved in publishing online and know how to keep safe • Discuss the potential benefits for communication and what the risks might be of sharing personal details online from mobile devices and consoles via Bluetooth and Internet (e.g. PSP, DS, smartphones, tablets etc.) • Be able to explain how they would respond to an online request for their personal details • Develop their own safety rules for using the internet. • Know how to create safe passwords • Know how to create a safe profile online and what makes it 'safe; or 'unsafe' • Know how to recognise and find the 'report' and 'flag' buttons on commonly used sites and name sources of help they could go to if they had a problem (i.e. child line, Cybermentors, Ceop) • Know what the 'click CEOP' button is and how/why/when to use it. • educate others including parents, peers and young pupils about safe internet use. 	<p>CyberQuoll Episode 4 – 'Puttin' stuff up' (cyber publishing) and lessons http://www.cyberquoll.com.au creating a safe on-line profile: http://www.thinkuknow.co.uk/8_10/cybercafe/ Think U Know http://www.thinkuknow.co.uk/8_10/fun/social.aspx has a simple guide to help young people know what they should and shouldn't put onto their profiles. Netsmartz has a promotional video about creating a safe on-line profile – the target audience is for teenagers but may be of value if the school needs to have a particular focus upon social networking sites. http://www.nsteens.org/videos/offline-consequences/</p>