



St. Joseph's
Catholic Primary School

ICT CURRICULUM

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confidently
Grow Learn spiritually
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LOVE LEARN GROW

ICT CURRICULUM – TOPIC OVERVIEW

	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Year 1	DL 1.3 We are painters	CS 1.1 We are treasure hunters	Esafety/ DL 1.4 We are collectors	DL 1.2 We are TV chefs	DL 1.5 We are storytellers	DL 1.6 We are celebrating
Year 2	DL 2.4 We are researchers	CS 2.2 We are games testers	CS 2.1 We are astronauts	DL 2.3 We are photographers	DL 2.5 We are detectives	DL 2.6 We are zoologists
Year 3	CS 3.1 We are programmers	CS 3.2 We are bug fixers	DL 3.3 We are presenters	CS 3.4 We are Vloggers	CS 3.5 We are communicators	CS 3.6 We are opinion pollsters
Year 4	CS 4.1 We are software Developers	CS 4.2 We are toy designers	DL 4.5 We are co-authors	CS 4.4 We are HTML editors	DL 4.3 We are musicians	DL 4.6 We are meteorologists
Year 5	DL 5.5 We are bloggers	CS 5.1 We are game developers	CS / DL 5.4 We are web developers	DL 5.6 We are architects	DL 5.2 We are cryptographers	DL 5.3 We are artists
Year 6	CS 6.2 We are computational thinkers	CS 6.4 We are network technicians	CS 6.1 We are adventure gamers	DL 6.3 We are advertisers	DL 6.6 We are publishers	DL 6.5 We are travel writers

ICT CURRICULUM OVERVIEW – YEAR 1

Unit	Expectations	Computing PoS	Software/Apps	Hardware
1.1 We are treasure hunters Using programmable toys	<ul style="list-style-type: none"> • Understand that a programmable toy can be controlled by inputting a sequence of instructions. • Develop and record sequences of instructions as an algorithm. • Program the toy to follow their algorithm. • Debug their programs. • Predict how their programs will work. 	<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. 	Software: Programming interface for programmable toy Scratch Bee-Bot simulator Apps: Bee-Bot app; Daisy the Dinosaur; Blue-Bot app.	Programmable toy, such as a Bee-Bot or Roamer Too. Audio recorders are needed for the first step (your phone may be sufficient)
1.2 We are TV chefs Filming the steps of a recipe	<ul style="list-style-type: none"> • Break down a process into simple, clear steps, as in an algorithm. • Use different features of a video camera. • Use a video camera to capture moving images. • Develop collaboration skills. • Discuss their work and think about how it could be improved. 	<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. • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use logical reasoning to predict the behaviour of simple programs. 	Software: Microsoft Paint, Microsoft Windows Live Movie Maker®/iMovie for OS X Apps: Brushes Redux, iMovie	Computers, cameras with movie mode/tablets
1.3 We are painters Illustrating an eBook	<ul style="list-style-type: none"> • Use the web safely to find ideas for an illustration. • Select and use appropriate painting tools to create and change images on the computer. • Understand how this use of ICT differs from using paint and paper. • Create an illustration for a particular purpose. • Know how to save, retrieve and change their work. • Reflect on their work and act on feedback received. 	<ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	Software: Tux Paint/ Microsoft Paint/2Simple 2Paint A Picture/Fresh Paint, MW software, Microsoft Word®, Microsoft PowerPoint® Apps: Brushes Redux, SketchBook Express, Fresh Paint	Laptop/desktop computers or tablets

<p>1.4 We are collectors Finding images using the web</p>	<ul style="list-style-type: none"> • Find and use pictures on the web. • Know what to do if they encounter pictures that cause concern. • Group images on the basis of a binary (yes/no) question. • Organise images into more than two groups according to clear rules. • Sort (order) images according to some criteria. • Ask and answer binary (yes/no) questions about their images. 	<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. • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • 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. • Recognise common uses of information technology beyond school. 	<p>Software: Web browser, Microsoft PowerPoint® or IWB Software</p> <p>Apps: Web browser, Keynote or Explain Everything</p>	<p>Internet connection, laptop/desktop computers</p>
<p>1.5 We are storytellers Producing a talking book</p>	<ul style="list-style-type: none"> • Use sound recording equipment to record sounds. • Develop skills in saving and storing sounds on the computer. • Develop collaboration skills as they work together in a group. • Understand how a talking book differs from a paper-based book. • Talk about and reflect on their use of ICT. • Share recordings with an audience. 	<ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully ... 	<p>Software: Microsoft PowerPoint®/2Create A Story/IWB software</p> <p>Apps: Keynote/Explain Everything/Book Creator</p>	<p>Computers/tablets, MP3 recorders/microphones</p>
<p>1.6 We are celebrating Creating a card digitally</p>	<ul style="list-style-type: none"> • Develop basic keyboard skills, through typing and formatting text. • Develop basic mouse skills. • Use the web to find and select images. • Develop skills in storing and retrieving files. • Develop skills in combining text and images. • Discuss their work and think about whether it could be improved. 	<ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	<p>Software: Microsoft PowerPoint®/Microsoft Word®/Clicker 7</p> <p>Apps: Pages/Keynote, Brushes Redux/Sketchbook Express</p>	<p>Laptops/computers/tablets, printer</p>

ICT CURRICULUM OVERVIEW – YEAR 2

Unit	Expectations	Computing PoS	Software/Apps	Hardware
2.1 We are astronauts Programming on screen	<ul style="list-style-type: none"> • Have a clear understanding of algorithms as sequences of instructions. • Convert simple algorithms to programs. • Predict what a simple program will do. • Spot and fix (debug) errors in their programs. 	<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. 	Software: Scratch, Kodu, Snap! Apps: Hopscotch, Daisy the Dinosaur, Pyonkee	Programmable toy, such as a Bee-Bot or Roamer Too
2.2 We are games testers Exploring how computer games work	<ul style="list-style-type: none"> • Describe carefully what happens in computer games. • Use logical reasoning to make predictions of what a program will do. • Test these predictions. • Think critically about computer games and their use. • Be aware of how to use games safely and in balance with other activities. 	<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. • Use logical reasoning to predict the behaviour of simple programs. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private. 	Software: Scratch, Screencast-o-matic, web-based or open source games, pupils' games, Snap Apps: Pyonkee free game apps, Light-bot	Desktop/laptop computers, IWB, internet connection; optionally, MP3 recorders, pupils' own game consoles
2.3 We are photographers Taking better photos	<ul style="list-style-type: none"> • Consider the technical and artistic merits of photographs. • Use a digital camera or camera app. • Take digital photographs. • Review and reject or rate the images they take. • Edit and enhance their photographs. • Select their best images to include in a shared portfolio. 	<ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	Software: Picasa, Pixlr Apps: Photos (iOS), Snapseed	Desktop or laptop computers and digital cameras/tablets/ smartphones

<p>2.4 We are researchers Researching a topic</p>	<ul style="list-style-type: none"> • Develop collaboration skills through working as part of a group. • Develop research skills through searching for information on the internet. • Improve note-taking skills through the use of mind mapping. • Develop presentation skills through creating and delivering a short multimedia presentation. 	<ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	<p>Software: FreeMind, bubbl.us, Google Custom Search, web browser, Microsoft PowerPoint®</p> <p>Apps: iThoughtsHD, Safari, Keynote, Popplet Lite, bubbl.us</p>	<p>Laptop or desktop computers or tablets, internet connection</p>
<p>2.5 We are detectives Collecting clues</p>	<ul style="list-style-type: none"> • Understand that email can be used to communicate. • Develop skills in opening, composing and sending emails. • Gain skills in opening and listening to audio files on the computer. • Use appropriate language in emails. • Develop skills in editing and formatting text in emails. • Be aware of online safety issues when using email. 	<ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	<p>Software: Your school's email system, Microsoft Excel® Google Sheets</p> <p>Apps: Mail, Numbers, Google Sheets</p>	<p>Desktop or laptop computers or tablets; network access</p>
<p>2.6 We are zoologists Collecting data about bugs</p>	<ul style="list-style-type: none"> • Sort and classify a group of items by answering questions. • Collect data using tick charts or tally charts. • Use simple charting software to produce pictograms and other basic charts. • Take, edit and enhance photographs. • Record information on a digital map. 	<ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	<p>Software: Microsoft Excel®/Google Sheets/IWB software, Picasa/Photo Gallery, Google My Maps/Google Earth</p> <p>Apps: Numbers/Google Sheets, Snapseed, RunKeeper</p>	<p>Desktop or laptop computers with digital cameras/tablets, internet connection</p>

ICT CURRICULUM OVERVIEW – YEAR 3

Unit	Expectations	Computing PoS	Software/Apps	Hardware
3.1 We are programmers Programming an animation	<ul style="list-style-type: none"> • Create an algorithm for an animated scene in the form of a storyboard. • Write a program in Scratch to create the animation. • Correct mistakes in their animation programs. 	<ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts. • Use sequence ... in programs; work with variables and various forms of input and output. • Use logical reasoning to detect and correct errors in algorithms and programs. • Select, use and combine a variety of software ... to design and create ... content that accomplish(es) given goals, including ... presenting ... information. 	Software: Scratch (recommended), Snap!, Microsoft PowerPoint®, Tux Paint, Scratch Jnr Apps: Pyonkee	Laptop or desktop computers (recommended) or tablets, cameras (optional), microphones (optional)
3.2 We are bug fixers Finding and correcting bugs in programs	<ul style="list-style-type: none"> • Develop a number of strategies for finding errors in programs. • Build up resilience and strategies for problem solving. • Increase their knowledge and understanding of Scratch. • Recognise a number of common types of bug in software. 	<ul style="list-style-type: none"> • Debug programs that accomplish specific goals. • 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. 	Software: Scratch, Snap!, Screencast-o-matic (if appropriate) Apps: Snap! in the web browser (Scratch requires Adobe Flash® Player, which is not available on iPad), Pyonkee	Laptop/desktop computers, microphone (if appropriate)
3.3 We are presenters Videoing performance	<ul style="list-style-type: none"> • Gain skills in shooting live video, such as framing shots, holding the camera steady, and reviewing. • Edit video, including adding narration and editing clips by setting in/out points. • Understand the qualities of effective video, such as the importance of narrative, consistency, perspective and scene length. 	<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. • Work with various forms of input and output. • Use technology safely, respectfully and responsibly. 	Software: Microsoft Windows Movie Maker® or iMovie, Kinovea/Dartfish Apps: iMovie/Coach's Eye	Digital cameras, flip cameras (or similar), tablet computers/iPod Touch or similar

<p>3.4 We are vloggers Making and sharing a short screencast presentation</p>	<ul style="list-style-type: none"> • Use a search engine to learn about a new topic. • Plan, design and deliver an interesting and engaging presentation. • Search for and evaluate online images. • Create their own original images. • Create a video slidecast of a narrated presentation. • Develop understanding of how the internet, the web and search engines work. 	<ul style="list-style-type: none"> • Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web. • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of content that accomplish given goals, including collecting, analysing, evaluating and presenting information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<p>Software: Google, creative commons search engines, PowerPoint / Google Presentation, screencast-o-matic / QuickTime Player Apps: Safari, Explain Everything, Adobe Voice</p>	<p>Laptops/desktop PCs with microphones/tablet computers</p>
<p>3.5 We are communicators Communicating safely on the internet</p>	<ul style="list-style-type: none"> • Develop a basic understanding of how email works. • Gain skills in using email. • Be aware of broader issues surrounding email, including 'netiquette' and online safety. • Work collaboratively with a remote partner. • Experience video conferencing. 	<ul style="list-style-type: none"> • 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. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<p>Software: Email system (your school's own system, Gmail or another system), video conferencing software (Skype, Google Hangouts or Janet video conferencing), presentation software Apps: Skype, FaceTime, Hangouts</p>	<p>Webcam and speakers</p>
<p>3.6 We are opinion pollsters Collecting and analysing data</p>	<ul style="list-style-type: none"> • Understand some elements of survey design. • Understand some ethical and legal aspects of online data collection. • Use the web to facilitate data collection. • Gain skills in using charts to analyse data. • Gain skills in interpreting results. 	<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. • 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>Software: Web browser, Google Forms, Google Sheets and Google Slides/ InspireDataTM/Microsoft Excel[®] and Microsoft Word[®]/Freemind Apps: Google Drive/web browser</p>	<p>Laptop or desktop computer with internet connection</p>

ICT CURRICULUM OVERVIEW – YEAR 4

Unit	Expectations	Computing PoS	Software/Apps	Hardware
4.1 We are software developers Developing a simple educational game	<ul style="list-style-type: none"> • Develop an educational computer game using selection and repetition. • Understand and use variables. • Start to debug computer programs. • Recognise the importance of user interface design, including consideration of input and output. 	<ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals. • 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. 	Software: Scratch/Snap! Apps: Pyonkee	Laptop/desktop computer, microphones (not essential)
4.2 We are toy designers Prototyping an interactive toy	<ul style="list-style-type: none"> • Design and make an on-screen prototype of a computer-controlled toy. • Understand different forms of input and output (such as sensors, switches, motors, lights and speakers). • Design, write and debug the control and monitoring program for their toy. 	<ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. • Use sequence, selection, and repetition in programs; work with 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. 	Software: Scratch/Snap! Apps: Pyonkee	Laptops/computers, microphones and speakers, BBC micro:bit and Raspberry Pi
4.3 We are musicians Producing digital music	<ul style="list-style-type: none"> • Use one or more programs to edit music. • Create and develop a musical composition, refining their ideas through reflection and discussion. • Develop collaboration skills. • Develop an awareness of how their composition can enhance work in other media. 	<ul style="list-style-type: none"> • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Understand computer networks including the internet; ... and the opportunities they offer for communication and collaboration. • Be discerning in evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour. 	Software: Isle of Tune, Audacity®, LMMS/ GarageBand, MuseScore (optional), SoundBox Apps: Isle of Tune, GarageBand	Computers or tablets, microphones, midi instruments, if available

<p>4.4 We are HTML editors Editing and writing HTML</p>	<ul style="list-style-type: none"> • Understand some technical aspects of how the internet makes the web possible. • Use HTML tags for elementary mark up. • Use hyperlinks to connect ideas and sources. • Code up a simple web page with useful content. • Understand some of the risks in using the web. 	<ul style="list-style-type: none"> • Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. • Use technology safely, respectfully and responsibly; know a range of ways to report concerns and unacceptable behaviour. • Use and combine a variety of software (including internet services) to accomplish given goals, including presenting information. 	<p>Software: Firefox, Brackets, Chrome developer tools Apps: Safari, Koder</p>	<p>Laptop/desktop computers</p>
<p>4.5 We are co-authors Producing a wiki</p>	<ul style="list-style-type: none"> • Understand the conventions for collaborative online work, particularly in wikis. • Be aware of their responsibilities when editing other people's work. • Become familiar with Wikipedia, including potential problems associated with its use. • Practise research skills. • Write for a target audience using a wiki tool. • Develop collaboration skills. • Develop proofreading skills. 	<ul style="list-style-type: none"> • Solve problems by decomposing them into smaller parts. • Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. • Use search technologies effectively. • Use ... a variety of software (including internet services) ... to ... create ... content ... including ... presenting information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<p>Software: Learning platform wiki tools/ MediaWiki/Google Sites/ other hosted wiki Apps: Web browser (e.g. Safari), Wikipedia app</p>	<p>Computers and internet connection, web server (if hosting MediaWiki)</p>
<p>4.6 We are meteorologists Presenting the weather</p>	<ul style="list-style-type: none"> • Understand different measurement techniques for weather, both analogue and digital. • Use computer-based data logging to automate the recording of some weather data. • Use spreadsheets to create charts • Analyse data, explore inconsistencies in data and make predictions • Practise using presentation software and, optionally, video. 	<ul style="list-style-type: none"> • Work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work. • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. 	<p>Software: Microsoft Excel[®]/Google Sheets, web browser, Microsoft PowerPoint[®]/IWB software Apps: Weather Station by Netatmo, Weather Station.UK, Numbers, Keynote/Explain Everything</p>	<p>Equipment for measuring weather</p>

ICT CURRICULUM OVERVIEW – YEAR 5

Unit	Expectations	Computing PoS	Software/Apps	Hardware
5.1 We are game developers Developing an interactive game	<ul style="list-style-type: none"> Create original artwork and sound for a game. Design and create a computer program for a computer game, which uses sequence, selection, repetition and variables. Detect and correct errors in their computer game. Use iterative development techniques (making and testing a series of small changes) to improve their game. 	<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. 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... 	Software: Scratch/ Snap! (or Kodu) Apps: Pyonkee	Desktop/laptop computers, microphones
5.2 We are cryptographers Cracking codes	<ul style="list-style-type: none"> Be familiar with semaphore and Morse code. Understand the need for private information to be encrypted. Encrypt and decrypt messages in simple ciphers. Appreciate the need to use complex passwords and to keep them secure. Have some understanding of how encryption works on the web. 	<ul style="list-style-type: none"> Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	Software: Scratch 2.0/Snap!, The Black Chamber (website) Apps: The Black Chamber in the web browser, Pyonkee	Laptop/desktop computers
5.3 We are artists Fusing geometry and art	<ul style="list-style-type: none"> Develop an appreciation of the links between geometry and art. Become familiar with the tools and techniques of a vector graphics package. Develop an understanding of turtle graphics. Experiment with the tools available, refining and developing their work as they apply their own criteria to evaluate it and receive feedback from their peers. Develop some awareness of computer-generated art, in particular fractal-based landscapes. 	<ul style="list-style-type: none"> 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. 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. 	Software: Inkscape/ Adobe Illustrator/ CorelDRAW, Scratch/ Snap!, Terragen, Logo Apps: Adobe Ideas/neu. draw, Pyonkee, i-Logo	Laptop or desktop computers/tablets

<p>5.4 We are web developers Creating a website about cyber safety</p>	<ul style="list-style-type: none"> • Develop their research skills to decide what information is appropriate. • Understand some elements of how search engines select and rank results. • Question the plausibility and quality of information. • Develop and refine their ideas and text collaboratively. • Develop their understanding of online safety and responsible use of technology. 	<ul style="list-style-type: none"> • Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<p>Software: Google, Bing, Google Sites/wiki tool in the school's learning platform/WordPress/Adobe Slate</p> <p>Apps: Google Search app, Google Sites via browser/WordPress/Adobe Slate</p>	<p>Desktop or laptop computers/tablets</p>
<p>5.5 We are bloggers Sharing experiences and opinions</p>	<ul style="list-style-type: none"> • Become familiar with blogs as a medium and a genre of writing. • Create a sequence of blog posts on a theme. • Incorporate additional media. • Comment on the posts of others. • Develop a critical, reflective view of a range of media, including text. 	<ul style="list-style-type: none"> • 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. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. • ... be discerning in evaluating digital content. 	<p>Software: WordPress/ Blogger/learning platform blogging tool or similar, GIMP, Audacity®, Microsoft Windows Movie Maker®</p> <p>Apps: WordPress, Camera, Snapseed</p>	<p>Computers, digital cameras, audio recorders/tablets</p>
<p>5.6 We are architects Creating a virtual space</p>	<ul style="list-style-type: none"> • Understand the work of architects, designers and engineers working in 3D. • Develop familiarity with a simple CAD (computer aided design) tool. • Develop spatial awareness by exploring and experimenting with a 3D virtual environment. • Develop greater aesthetic awareness. 	<ul style="list-style-type: none"> • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. 	<p>Software: Trimble SketchUp (used for 3D modelling), Screencast-o-matic (for final screencast), Minecraft</p> <p>Apps: Home Design 3D/3dVAS, Sketchup Viewer</p>	<p>Laptops/ computers</p>

ICT CURRICULUM OVERVIEW – YEAR 6

Unit	Expectations	Computing PoS	Software/Apps	Hardware
6.1 We are adventure gamers Making a text-based adventure game	<ul style="list-style-type: none"> Learn some of the syntax of a text-based programming language. Use commands to display text on screen, accept typed user input, store and retrieve data using variables and select from a list. Plan a text-based adventure with multiple 'rooms' and user interaction. Thoroughly debug the program. 	<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. 	Software: Python (using the IDLE editor) or Trinket.io Apps: Pythonista or Python 3.4 for iOS (iOS), SL4A (Android), or Trinket.io via Safari or other browser Bluetooth keyboards are recommended for tablets	Laptop/desktop computers. Python is installed as standard on the Raspberry Pi.
6.2 We are computational thinkers Mastering algorithms for searching, sorting and mathematics	<ul style="list-style-type: none"> Develop the ability to reason logically about algorithms. Understand how some key algorithms can be expressed as programs. Understand that some algorithms are more efficient than others for the same problem. Understand common algorithms for sorting and searching. Appreciate algorithmic approaches to problems in mathematics. 	<ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals. 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. 	Software: Scratch and Snap! Apps: Pyonkee, and Snap! using Safari	Laptop/desktop computers; some 'unplugged' resources.
6.3 We are advertisers Creating a short television advert	<ul style="list-style-type: none"> Think critically about how video is used to promote a cause. Storyboard an effective advert for a cause. Work collaboratively to shoot suitable original footage and source additional content, acknowledging intellectual property rights. Work collaboratively to edit the assembled content to make an effective advert. 	<ul style="list-style-type: none"> Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	Software: Movie Maker®/iMovie Apps: iMovie	Desktop/laptop computers; digital video cameras/digital cameras/tablet computers.

<p>6.4 We are network technicians Exploring computer networks including the internet</p>	<ul style="list-style-type: none"> • Appreciate that computer networks transmit and receive information digitally. • Understand the basic hardware needed for computer networks to work. • Understand key features of internet communication protocols. • Develop a basic understanding of how domain names are converted to numerical IP addresses. 	<ul style="list-style-type: none"> • Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<p>Software: For <i>Extension</i> activities: the pupils could use the Command Prompt in Windows to access simple tools such as ping, ipconfig, nslookup, tracert. Open Visual Traceroute (or web-based equivalents) and/or a network emulator (GS3)</p> <p>Apps: Web-based equivalent tools via the browser, CISCO Packet Tracer Mobile.</p>	<p>Desktop/laptop computers; Raspberry Pi.</p>
<p>6.5 We are travel writers Using media and mapping to document a trip</p>	<ul style="list-style-type: none"> • Research a location online using a range of resources appropriately. • Understand the safe use of mobile technology, including GPS. • Capture images, audio and video while on location. • Showcase shared media content through a mapping layer. 	<ul style="list-style-type: none"> • Understand computer networks, including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<p>Software: Google Maps/Google Earth, Pixlr, Movie Maker*, Audacity, Google Sites</p> <p>Apps: Google Earth, Snapseed, iMovie, Garageband, TrackRec</p>	<p>Tablet computers and/ or smartphones, desktop/laptop computers, web server or online hosting.</p>
<p>6.6 We are publishers Creating a yearbook or magazine</p>	<ul style="list-style-type: none"> • Manage or contribute to large collaborative projects, facilitated using online tools. • Write and review content. • Source digital media while demonstrating safe, respectful and responsible use. • Design and produce a high-quality print document. 	<ul style="list-style-type: none"> • Understand computer networks including the internet and the opportunities they offer for communication and collaboration. • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • Use technology safely, respectfully and responsibly. 	<p>Software: Microsoft Publisher/Scribus/ iBook Author, Pixlr, Microsoft Word/ Google Docs, Adobe Acrobat, Google Drive</p> <p>Apps: Pages/Book Creator, Snapseed, Google Drive</p>	<p>Laptop/desktop computers, digital cameras, iPads.</p>