



St Barnabas

Church of England Primary Academy

A member of **CDARI**

**'That they shall have life,
life in all its fullness!'** John

10:10

**'Achieving great things through
learning and growing together
in a love-filled Christian family'**

Computing Curriculum Overview 2024-2025

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<p>iMedia-iJam Lite 1 - iLoop</p> <p>Pupils will become confident in use of the app Garage Band. Pupils will learn how to use its simple functions like 'Live Loops' and begin to understand Smart instruments. To know all parts of the songs and be able to recognise them.</p> <p><u>Key Vocabulary:</u></p> <p>Tempo, Structure, Introduction, Verse, Chorus; Breakdown/Bridge, Outro, Duplicate, Critique,</p>	<p>iProgram - Lite L1 - iCode</p> <p>During iCode pupils will use games to learn key coding skills. Pupils will start by looking at everyday tasks and thinking about the thought behind a series of problems within the app 'Kids Coding'. This will culminate in students learning how to use more complex coding apps for their age like Hopscotch and using the word algorithm with ease.</p> <p><u>Key Vocabulary:</u></p>	<p>iMedia - iAnimate Lite L1 - iMovie</p> <p>During iMove pupils will learn the fundamentals of 'Stop Motion' animation and how to produce one. Pupils will learn how to animate characters, how to get 'clean shots' and to avoid 'earthquakes'.</p> <p><u>Key Vocabulary:</u></p> <p>Stop Motion, Animation, 2D/Hand-drawn, Frame, Quality control, Movement.</p>	<p>iMedia - iCreate - Lite L1- iPhotograph</p> <p>Pupils will learn about the basic principles of photography such as focal point, foreground and background, and the importance of light. Pupils will also learn about photo editing using apps such as Adobe Photoshop Express.</p> <p><u>Key Vocabulary:</u></p> <p>Focus, Focal Point, Background, Foreground, Light, Rule of thirds, Limb chop, Perspective.</p>	<p>iMedia - iCommunicate - Lite L1 - iSecure</p> <p>Pupils will learn how to keep themselves safe whilst on digital devices. They will learn about trusting the internet, both with things they see and people they may encounter. They will be taught what classes as personal information and why they should not share this with anyone else. Pupils will also critically learn who they can speak</p>	<p>iMedia - iTech - Lite L1- iInvent</p> <p>Pupils will learn about the history of the invention and how it has changed from the date of its invention to now, both in appearance and in its capabilities. Pupils will also look at why some of these inventions have become obsolete. Pupils will look at the advantages each invention brought at the time of its invention, and up to the present if it is still used.</p> <p><u>Key Vocabulary:</u></p>

	<p>Producer, Music Production, Instrumentation, Texture, Fade and Editing.</p>	<p>Computer, Algorithm, Coding, Repeats, Conditional, Function</p>			<p>to regarding anything that is upsetting them.</p> <p><u>Key Vocabulary:</u></p> <p>E-safety, Cyberbullying, Passwords, Personal information, Trust, Pop-ups, Gaming, Private/Privacy, Avatar.</p>	<p>Technology, Camera, Phonograph, Morse Code, Telegraph, Television, Computer, ENIAC (Electronic Numerical Integrator and Computer), Telephone, Operator.</p>
<p>Year 2</p>	<p>iJam - Lite L2 - iGenre</p> <p>Pupils will be learning all about genre. They will be able to identify different genres throughout different times in history, and some will be able to give key characteristics from those genres. Pupils will also be able to use filter functions correctly to obtain specific samples. Some pupils by the end of the course will be able to mix samples from</p>	<p>iProgram Lite L2 - iBlockly</p> <p>Pupils will get introduced to the world of Blockly, a simple programming language. Pupils will learn how to use it to create their own code, whilst thinking about conditionals, functions and using randomisation. They will also be challenged on their accuracy in creating and copying code, as well as finding and fixing any errors.</p>	<p>iMedia - iAnimate Lite L2 - i2D</p> <p>Pupils will focus on 2D and hand drawn animation. Pupils will learn how to bring two dimensional drawings to life through use of the app 'Do Ink Animation'. They will animate a given story line on 'Scratch Jr', mixing coding into their creativity.</p>	<p>iMedia - iCreate - Lite L2 - iMagazine</p> <p>Pupils will create a school magazine using stock photos and original text. Pupils will be required to utilise the skills covered in Lite Levels 1's iPhotograph in order to create a marketable magazine. Pupils will also learn how to format text, textboxes, photos and other content within the app Strip Designer.</p>	<p>iMedia - iCommunicate - Lite L2 - iConnect</p> <p>Pupils will draw upon their design and composition skills from iCreate and iJam. They will learn about seven forms of digital communication: Emails, Texts, Voice notes, Pictures, Postcards, Video Calls and Music. Pupils will learn the advantages and disadvantages for using all</p>	<p>iMedia - iTech - Lite L2 - iFilm</p> <p>Pupils will use Scratch Jr as a method of storyboarding as well as learning how to use two new apps within this course, Toontastic and iMovie. While using those two apps, pupils will put storyline and arc knowledge together with their learning about new camera angles to create interesting cartoons and movie trailers.</p>

	<p>different genres with success.</p> <p>Key Vocabulary:</p> <p>Genre, Hip – Hop, Blue, Rock 'n' Roll, World, Filters</p>	<p>Key Vocabulary:</p> <p>Programming, Blockly, Algorithm, Conditional, Function, Random, Animation, Draw A Trail.</p>	<p>Key Vocabulary:</p> <p>Flip book, Animation, 2D/Hand-drawn, 3D/Computer-generated, Frame, Quality control, Movement.</p>	<p>Key Vocabulary:</p> <p>Magazine, Print, Front cover, Contents page, Fact file, News story, Copy, Paste.</p>	<p>seven forms and test some out themselves.</p> <p>Key Vocabulary:</p> <p>Communication, Connect/Connection, Emails, Voice note, Text message, Video call, Emotion, Digital.</p>	<p>Key Vocabulary:</p> <p>Film, Camera angles, Long shot, Medium shot, Close-up shot, Landscape, Group shot, Arc, Plot, Storyline, Three-point Arc (Beginning, Middle & End), Five-point Arc (Setup, Conflict, Challenge, Climax & Resolution), Cartoon, Trailer, Storyboard.</p>
<p>Year 3</p>	<p>iMedia - iJam L1 - iSong</p> <p>Pupils will create a full song in GarageBand including Intro, Verse, Chorus and a Breakdown. Pupils will have a good knowledge of how to use a mixture of 'Live Loops' and 'Smart Instruments'. Pupils will know keywords and phrases surrounding Music Production.</p> <p>Key Vocabulary:</p>	<p>iMedia - iProgram L1 - iLogic</p> <p>Pupils will use games to learn key coding skills. They will learn how to use the coding language 'Blockly' to introduce key programming elements such as functions, loops, conditionals and variables. This will progress into using code to create 'Spirograph' style artwork and creating a modern version of an Etch-A-Sketch.</p> <p>Key Vocabulary:</p>	<p>iMedia - iOffice L1 - iSafety</p> <p>Pupils will combine learning how to stay safe while on a digital device. Our E-Safety module covers Cyber Bullying, Online Gaming, Trust, Digital Reputation, Location Permissions, Online Contact and Social Media.</p> <p>Key Vocabulary:</p> <p>Recipient, Format, WAN, LAN, Network,</p>	<p>iMedia - iCreate L1 - iStop Motion</p> <p>Throughout iStop Motion, pupils will learn about five different types of animation before continuing the rest of the course using solely Stop Motion. Pupils will learn multiple techniques to complete a short animation by the end of the course. Pupils will learn about Chroma Key and Sound FX before adding these techniques to their animation to create a finished piece.</p>	<p>iMedia - iCollaboate L1</p> <p>Pupils will learn about Blogs, Vlogs and Podcasts. They will look in depth at these three forms of communication with a view to creating their own. Pupils will learn how to use more advanced functions of GarageBand such as the auto-bar, and copy and paste. Pupils will use writing skills to plan their work and learn how to structure each of these</p>	<p>iMedia - iControl</p> <p>Pupils will learn how robotics are used within industry and design a robot to fit certain specifications. Pupils must learn to use conditionals to be able to complete a physical maze built within the classroom and designed by the instructor. As they are coding on an external device pupils will also have to debug in real time and fix</p>

	<p>Tempo, Structure, Introduction, Verse, Chorus, Breakdown/Bridge, Outro; Duplicate, Critique, Producer, Music Production.</p>	<p>Algorithm, Computer Science, Programming, Blockly, Conditional, Variable, Binary, Computer Scientist, LED, Repeat, Angle</p>	<p>Cyberbullying, Online Gaming,</p>	<p><u>Key Vocabulary:</u> Stop Motion, 2D, 3D, Computer-generated, Motion Capture, FPS (Frames per second), Frame, Green screen, Chroma Key, Sound FX, Foley/Foley Artist.</p>	<p>means of communication effectively for their audience.</p> <p><u>Key Vocabulary:</u> Podcast, Blog, Vlog, Auto-Bar, Collaboration/Collaborate, Content, Episodical, Channel, Audience, Viewers, Listeners Ident, Dead Air.</p>	<p>their code during their race time if it doesn't work. During the course pupils will learn about how the Sphero moves and begin to understand Pitch, Yaw and Roll axis.</p> <p><u>Key Vocabulary:</u> Robotics, Industry, External Device, Pitch, Yaw, Roll, Efficiency, Gyroscope, Motor, Ballast, Accelerate, Microprocessor, Conditionals, Interpret.</p>
<p>Year 4</p>	<p>iMedia - iJam L2 - iDance</p> <p>Pupils will learn; the characteristics of three sub genres within Dance Music; the importance of BPM; how to beat match samples; how to beat match self-composed melodies, and how to compose in a certain style. Pupils will understand elements such as dynamics and pitch will</p>	<p>iMedia L2- iFunction</p> <p>Pupils will learn how to understand each function and if they combine many of the functions, they can create a bigger, more powerful algorithm for many uses. They will learn about different types of functions and their role in an algorithm.</p> <p><u>Key Vocabulary:</u></p>	<p>iMedia - iOffice L2 - iSocial</p> <p>Pupils will then be tasked with designing and creating their own social media platform to fill the gap in the market. Pupils will learn how to present their work creating a keynote presentation collating all the work they</p>	<p>iMedia - iCreate L2 - iEdit</p> <p>Pupils will learn basic and advanced editing techniques and video effects to produce a music video. Pupils will edit, cut and splice footage supplied to them in order to create their final video. They will learn how to Splice, Cut, Trim, add sounds, record their own</p>	<p>iMedia - iCommunicate L2 - iPublish</p> <p>Pupils will learn the fundamentals of photography and editing before moving on to the uses for their photography. They will design and produce a magazine around a theme chosen by the pupils.</p>	<p>iMedia - iTech iControl</p> <p>Pupils will build upon their coding knowledge gained during Level 1 iProgram and learn how to control both simulated and external systems. Pupils will use computational thinking to plan, create and write a program to run an external device. This will involve writing code within the language</p>

	<p>be explored and applied to the compositions. The concept of the 'Audio Spectrum'.</p> <p><u>Key Vocabulary:</u></p> <p>Genre, Dance (music), House (music), Dubstep (music), Drum and Bass (music), Drum Machine, BPM (Beats per minute), Synthesisers.</p>	<p>Programming, Swift, Blockly, Algorithm, Function, Variable, Random, Repeat, Computational Thinking, Decompose, Pattern, Abstraction, Conditional.</p>	<p>have done throughout the half term.</p> <p><u>Key Vocabulary:</u></p> <p>Word Processing, Edit, Highlight, Strikethrough, Centre, Align Left, Align Right, Centre, Justify, Target Market, Audience, Pitch, Presentation.</p>	<p>voice, add text over video and build in transitions.</p> <p><u>Key Vocabulary:</u></p> <p>Fast Cutting, Camera angles, Long/Mid/Close-up Shot, Cutting, Editing, Splicing, Cue sheets, Fan Video, Pre-Production, Post-production.</p>	<p><u>Key Vocabulary:</u></p> <p>Focal point, Focus, Rule of thirds, Perspective, Print media, Medium, Collaboration, Publishing, Distribution, Background, Foreground, Editing, Saturation, Sharpening, Filters, Cropping, Overlays, Rotation, Raw photos.</p>	<p>Blockly, stringing code together to make algorithms, solving and debugging any issues, and coding to achieve the goals set out by the instructor.</p> <p><u>Key Vocabulary:</u></p> <p>Robotics, Industry, External Device, Pitch, Yaw, Roll, Efficiency, Gyroscope, Motor, Ballast, Accelerate, Microprocessor, Conditionals, Interpret.</p>
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<p>Year 5</p>	<p>iMedia - iJam L3 - iHip-Hop</p> <p>Over the iJam module we will be looking at Hip-Hop. Pupils will learn the musical characteristics of the genre, as well as new sections of the style, such as hooks. Alongside learning about the music, we will also learn about the history of the genre; compose a rap to beat match their composition and compose in that style.</p> <p><u>Key Vocabulary:</u></p> <p>MC, DJ, DJ Kool Herc, Rap Nu Skool (New school) Old Skool (Old School) Synthesisers, Genre, GrandMaster, Flash, Sampling, Hook.</p>	<p>iMedia - iProgram L3 - iDebug</p> <p>Pupils will know how to effectively debug their own work, how to spot errors in the code and have enough knowledge to know how to change it. They will also have an understanding of real-world programming solutions. Pupils will create shapes to learn the basics of programming, then move onto fixing or 'debugging' existing computer programs.</p> <p><u>Key Vocabulary:</u></p> <p>Algorithm, Bug, Debug/Debugging, Branch, "Real-World Programming"; Conditional, Variable, Endless Runner.</p>	<p>iMedia - iOffice L3 - iCompany</p> <p>Pupils will learn how to create charts using both existing data and data they have inputted themselves. They will be taught how filter buttons can aid them in looking through spreadsheets, and how to use data to budget. Pupils will be expected to be using terminology to suit the program such as workbook and spreadsheet.</p> <p><u>Key Vocabulary:</u></p> <p>Workbook, Spreadsheet, Formulas/Formulae, Total/s, Cells, Rows, Column, Data, Inputting, Filter, Budget, Data Entry/Extraction.</p>	<p>iMedia - iCreate L3 - Advanced i2D</p> <p>Pupils will learn to refine the skills learnt in i2D. This course includes more detailed hand-drawn animation and teaches the pupils to create more rounded pieces including backgrounds and movement pathways. Pupils will focus on character design, plot development and how characters interact.</p> <p><u>Key Vocabulary:</u></p> <p>Flip book, Hand Drawn, Squash and Stretch, Motion Pathways, Composite, Two Dimensional, Vector Art.</p>	<p>iMedia - iCommunicate L3 - iAdvertise</p> <p>Pupils will learn to create Radio Broadcasts as well as learning about national and local distribution. They will be learning about TV adverts and how they tie in with other things such as Radio ads and print campaigns to create a full marketing strategy. Pupils will also learn about branding, both sonic and print, looking at colour, image and sound choices of different companies.</p> <p><u>Key Vocabulary:</u></p> <p>Branding, Visual Branding, Jingle, Brief/Design Brief, Sonic Branding, Marketing, Distribution, Slogan, Customer, Consumer, Target Market, Select Targeting</p>	<p>iMedia - iTech iControl</p> <p>During this course pupils will learn to code an external device. They will have to learn that external factors can affect how their program runs, e.g. uneven flooring and compensate for this in their programming. Pupils will learn how robotics are used within industry and design a robot to fit certain specifications. Pupils must learn to use conditionals to be able to complete a physical maze built within the classroom and designed by the instructor.</p> <p><u>Key Vocabulary:</u></p> <p>Robotics, Industry, External Device, Pitch, Yaw, Roll, Efficiency, Gyroscope, Motor, Ballast, Accelerate, Microprocessor, Conditionals, Interpret.</p>
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<p>Year 6</p>	<p>iMedia - iJam L4 - iRemix</p> <p>Combining pupils' compositional and app skills from level 1, 2 and 3 the pupils will now be able to use the more advanced function to learn about sampling and remixing. Groups will explore three different types of remixing, know the difference between remixing and sampling, along with the legal implications of both, before composing some of their own.</p> <p><u>Key Vocabulary:</u></p> <p>Remix, Sampling, Royalties, Genre, Copyright, Song writing, Original, Vocal Stem, Beatboxing.</p>	<p>iMedia - iProgram L4 - iDevelop</p> <p>Pupils will be able to code their own programs, starting with simple shapes and art pieces to progressing to musical instruments and games. They will be able to code for an external object and feel confident in alternating between Blockly and written coding languages.</p> <p><u>Key Vocabulary:</u></p> <p>Blockly, Swift, Function, Algorithm, Conditional, Last Touch, Create A Clone, Variable, Check Once If, JavaScript.</p>	<p>iMedia - iOffice L4 - iCV</p> <p>Pupils will learn valuable skills to use throughout their academic and professional career during iCV. Pupils will be taught what a job advert looks like and how to pick out salient points that a candidate will need for the role. They will also learn how to construct a CV.</p> <p><u>Key Vocabulary:</u></p> <p>CV, Hyperlink, Extrapolate, Data, Build Order, Presentation, Data Bank, Candidate, Employer, Employee.</p>	<p>iMedia - iCreate L4 - iDigital</p> <p>Pupils will learn how to film from different camera angles and edit them together. They will learn about storyboarding and how vital they are to the planning process. They will learn how to create Cinemagraphs and 3D models. Pupils will also be expected to create a Digital Gallery of their work.</p> <p><u>Key Vocabulary:</u></p> <p>Fast Cutting, Storyboard, Multimedia, Content, Pathways, Anchor, Take, GIF (Graphic Interchange Format), Cinemagraph.</p>	<p>iMedia - iCommunicate L4 - iGraphics</p> <p>Pupils will learn the different ways websites can be designed to industry standards and learn to follow design briefs to create a finished product. They will also gain a basic understanding of how to code in HTML and use this to code their own website.</p> <p><u>Key Vocabulary:</u></p> <p>HTML – Hypertext Markup Language, Pixels, RGB colour, WYSIWYG, Design Brief, Target Audience, Header banner, Navigation bar, the four C's (Challenge, Choice, Change and Chance), Market research and Focus group.</p>	<p>iMedia - iTech</p> <p>During this course pupils will learn to code an external device. They will have to learn that external factors can affect how their program runs, e.g. uneven flooring and compensate for this in their programming. Pupils will learn how robotics are used within industry and design a robot to fit certain specifications. Pupils must learn to use conditionals to be able to complete a physical maze built within the classroom and designed by the instructor.</p> <p><u>Key Vocabulary:</u></p> <p>Robotics, Industry, External Device, Pitch, Yaw, Roll, Efficiency, Gyroscope, Motor, Ballast, Accelerate, Microprocessor, Conditionals, Interpret.</p>
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