



Bishop Ellis Catholic Voluntary Academy



Computing Intent

Ambition for Computing at Bishop Ellis

For all children to have a breadth of knowledge and experience to become competent end-users of technology.

At Bishop Ellis Catholic Primary School, we aim to provide a high-quality computing curriculum that enables all children to acquire a broad and deep knowledge of technology whilst providing them with opportunities to apply skills in various digital contexts. We want to ensure that our curriculum is accessible to every child. Our intention is to promote an enthusiasm and appreciation of computing through well-planned lessons, allowing all children to be digitally literate and develop their creativity, resilience, and problem-solving and critical thinking. As children progress, we aim for all children to become independent users of computing systems, with confidence and an enjoyment for their activities. Beyond teaching computing explicitly, we want to give children the opportunity to apply and develop use of technology to support learning across the curriculum.

Love of the subject

We want to inspire our pupils to become active participants in the digital world through their thinking and their creativity. It is important to us that the children understand how to use the ever-changing technology to express themselves, as tools for learning and as a means to drive their generation forward into the future. We want to enable all children to embrace and utilize technology in a responsible and safe way as we know that technology is everywhere and will play a pivotal part in their lives.

Curriculum Aims

- Understand and apply fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. (Computer Science)
- Analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. (Computer Science)
- Evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. (Information Technology)
- Be responsible, competent, confident and creative users of information and communication technology. (Digital Literacy)

Impact

In order to demonstrate that we have accomplished our aims, all children should:

- Be confident and enthusiastic in their approach towards computing.
- Present as competent and adaptable 'Computational Thinkers' who are able to use identify concepts and approaches in all of their learning.
- Be able to identify the source of problems and work with perseverance to 'debug' them.
- Have a secure understanding of the positive applications and specific risks associated with a broad range of digital technology.
- Transition to secondary school with a keen interest in the continuous learning of this subject.
- Enjoy and value Computing and know why they are doing things, not just how.

BISHOP ELLIS COMPUTING CURRICULUM PLAN

CYCLE A (2025 – 2026)

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
Reception JB / GS	Computer Systems and Networks – Using a Computer Online Safety Lesson 1		Programming 1 – All About Instructions Online Safety Lesson 2	Computing Systems and Networks – Exploring a Hardware Online Safety Lesson 3	Programming 2 – Programming Bee-Bots Online Safety Lesson 4	Data Handling – Introduction to Data Online Safety Lesson 5
Year 1 ST	Computing Systems and Networks- Mouse Skills Online Safety Lesson 1	Programming – Bee-Bot Online Safety Lesson 2	Data Handling – Introduction to Data Online Safety Lesson 3		Creating Media – Digital Imagery Online Safety Lesson 4	
Year 2 HJ	Programming – Algorithms Unplugged Online Safety Lesson 1	Programming – Bee-Bots Online Safety Lesson 2	Programming – Algorithms and Debugging Online Safety Lesson 3		Programming – Scratch Jr Online Safety Lesson 4	
Year 3 / 4 MP / LGo / LGu	Programming – Scratch Jr	Programming – Further Coding with Scratch	Programming – Computational Thinking		Data Handling – Investigating Weather	
Year 4 / 5 RF	Programming – Computational Thinking	Programming- Micro-bit (y5)	Creating Media – Website design (y4)		Creating Media- Stop Motion	
Year 5 /6 LB / SF	Programming – Music	Programming – Intro the Python	Creating Media – Stop Motion		Computing Systems and Networks - Bletchley Park and the History of Computers	

Online Safety for Yr 3 – 6 covered through TenTen (RSE/PSHE)

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YEAR GROUP. EYFS						
TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
UNIT OF WORK and KEY CONCEPTS	<p>Computer Systems and Networks – Using a Computer</p> <p>To be able to understand what a computer keyboard is and recognising some letters and numbers.</p> <p>To know that a mouse can be used to click, drag and create simple drawings.</p> <p>To know that to use a computer you need to log in to it and then log out at the end of your session.</p>		<p>Programming 1 – All About Instructions</p> <p>To know that being able to follow and give simple instructions is important in computing.</p> <p>To understand that it is important for instructions to be in the right order.</p> <p>To understand why a set of instructions may have gone wrong.</p>	<p>Computing Systems and Networks – Exploring a Hardware</p> <p>To know that different types of technology can be found at home and in school.</p> <p>To know that you can take simple photographs with a camera or iPad.</p> <p>To know that you must hold the camera still and ensure the subject is in the shot to take a photo.</p>	<p>Programming 2 – Programming Bee-Bots</p> <p>To know that being able to follow and give simple instructions is important in computing.</p> <p>To understand that it is important for instructions to be in the right order.</p> <p>To understand why a set of instructions may have gone wrong.</p>	<p>Data Handling – Introduction to Data</p> <p>To know that sorting objects into various categories can help you locate information.</p> <p>To know that using yes/no questions to find an answer is a branching database.</p>

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YEAR GROUP. YEAR 1

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
<p>Unit of work and key concepts.</p>	<p>Computing Systems and Networks- Mouse Skills</p> <p>To know that "log in and log out" means to begin and end a connection with a computer. To know that a computer and mouse can be used to click, drag, fill and select and also add backgrounds, text, layers, shapes and clip art. To know that passwords are important for security. To know that when we create something on a computer it can be more easily saved and shared than a paper version. To know some of the simple graphic design features of a piece of online software.</p>	<p>Programming – Beebot</p> <p>To understand the basic functions of a Bee-Bot. To know that you can use a camera/tablet to make simple videos. To know that algorithms move a bee-bot accurately to a chosen destination.</p>	<p>Data Handling – Introduction to Data</p> <p>To represent animal-themed data in different ways, using objects and technology. To log in and use mouse and keyboard skills to navigate the computer. To represent the same data as a pictogram and a table or chart. To collect data about minibeasts using a tally chart and represent data digitally. To Click and drag objects to sort data using a branching database. To consider the types of input used to gather different forms of data when designing an invention.</p>		<p>Creating Media – Digital Imagery</p> <p>To plan a pictorial story using photographic images in sequence. To explain how to take clear photos. To take photos using a device. To edit photos by cropping, filtering and resizing. To search for and import images from the internet. To explain what to do if something makes them uncomfortable online. To organise images on the page, orientating where necessary.</p>	

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YEAR GROUP. YEAR 2

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
Unit of work and key concepts.	<p>Programming – Algorithms Unplugged</p> <p>To understand that an algorithm is when instructions are put in an exact order. To understand that decomposition means breaking a problem into manageable chunks and that it is important in computing. To know that we call errors in an algorithm 'bugs' and fixing these 'debugging'.</p>	<p>Programming – Beebot</p> <p>To understand the basic functions of a Bee-Bot. To know that you can use a camera/tablet to make simple videos. To know that algorithms move a bee-bot accurately to a chosen destination.</p>	<p>Programming – Algorithms and Debugging</p> <p>To understand what machine learning is and how that enables computers to make predictions. To know that abstraction is the removing of unnecessary detail to help solve a problem. To know that coding is writing in a special language so that the computer understands what to do.</p>		<p>Programming – Scratch Jr</p> <p>To understand that the character in ScratchJr is controlled by the programming blocks. To know that you can write a program to create a musical instrument or tell a joke.</p>	

BISHOP ELLIS COMPUTING CURRICULUM PLAN

YEAR GROUP. YEAR 3 and 4

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
Unit of work and key concepts.	<p>Programming – Scratch Jr</p> <p>To know that Scratch is a programming language and some of its basic functions. To understand how to use loops to improve programming. To understand how decomposition is used in programming. To understand that you can remix and adapt existing code.</p>	<p>Programming – Further Coding with Scratch</p> <p>To understand that a variable is a value that can change (depending on conditions) and know that you can create them in Scratch. To know what a conditional statement is in programming.</p>	<p>Programming – Computational Thinking</p> <p>To understand that pattern recognition means identifying patterns to help them work out how the code works. To understand that algorithms can be used for a number of purposes e.g. animation, games design etc.</p>		<p>Data Handling – Investigating Weather</p> <p>To know that computers can use different forms of input to sense the world around them so that they can record and respond to data. This is called ‘sensor data’. To know that a weather machine is an automated machine that responds to sensor data. To understand that weather forecasters use specific language, expression and pre-prepared scripts to help create weather forecast films.</p>	

BISHOP ELLIS COMPUTING CURRICULUM PLAN

YEAR GROUP. YEAR 4 and 5

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
<p>Unit of work and key concepts.</p>	<p>Programming – Computational Thinking</p> <p>To understand that pattern recognition means identifying patterns to help them work out how the code works.</p> <p>To understand that algorithms can be used for a number of purposes e.g. animation, games design etc.</p>	<p>Programming – Micro-bits</p> <p>To clip blocks together and predict what will happen.</p> <p>To make connections with previous programming interfaces they've used, e.g. Scratch.</p> <p>To create their own images to make the animation and recognise the difference between 'on start' and 'forever'.</p> <p>To recognise blocks they've used previously, identifying inputs and outputs used and make predictions about how variables work.</p> <p>To choose appropriate blocks to complete the program and attempt the challenges independently.</p> <p>To break a program down into smaller steps, suggesting appropriate blocks and match the algorithm to the program.</p>	<p>Creating Media – Website Design</p> <p>To create a Sway with a title, image and a completed first header section.</p> <p>To create a clear plan for their web page and beginning to create it.</p> <p>To create a professional-looking web page with useful information and a clear style, which is easy for the user to read and find information from.</p> <p>To create a clear plan by referring back to their checklist to include a range of features.</p> <p>To create a web page with clear sections and with a range of features in.</p>		<p>Creating Media – Stop Motion</p> <p>To understand that stop motion animation is an animation filmed one frame at a time using models, and with tiny changes between each photograph.</p> <p>To know that decomposition of an idea is important when creating stop-motion animations. To know that editing is an important feature of making and improving a stop motion animation.</p>	

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YEAR GROUP. YEAR 5 and 6

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
MAIN TEXT	Jamie Drake Equation	War Horse Beowulf	The Silver Sword + WW2 poetry	The Nowhere Emporium – Ross McKenzie	The Tempest (including The Lighthouse)	Treason- Berlie Doherty
Unit of work and key concepts.	<p>Programming – Music</p> <p>To know that a soundtrack is music for a film/video and that one way of composing these is on programming software. To understand that using loops can make the process of writing music simpler and more effective.</p>	<p>Programming – Intro the Python</p> <p>To know that there are text-based programming languages such as Logo and Python. To know that nested loops are loops inside of loops.</p>	<p>Creating Media – Stop Motion</p> <p>To understand that stop motion animation is an animation filmed one frame at a time using models, and with tiny changes between each photograph. To know that decomposition of an idea is important when creating stop-motion animations. To know that editing is an important feature of making and improving a stop motion animation.</p>		<p>Computing Systems and Networks – Bletchley Park and the History of Computers</p> <p>To explain that codes can be used for a number of different reasons and decode messages. To explain how to ensure a password is secure and how this works. To explain the importance of historical figures and their contribution towards computer science. To present information about their historical figures in an interesting and engaging manner. To develop an idea for a computer of the future and create a simple design. To produce a simple audio advert with simple edits, which demonstrate an understanding of how to use the software.</p>	