



St. Augustine of Canterbury Catholic Primary School

“Created by God to love and learn”

Our Computing Curriculum

Our Core Values:

St Augustine of Canterbury Catholic Primary School provides an education that inspires and nurtures God’s children to succeed to their full potential as we are **Created by God to love and learn.**

We believe in the concept of lifelong learning, and in the idea that both adults and children learn new things every day. We maintain that learning should be a rewarding and enjoyable experience for everyone. Through our teaching we strive to equip children with the skills, knowledge and understanding necessary to make informed choices about the important things in their lives. We believe that effective and stimulating teaching will lead to consistent and quality learning experiences to help children to lead happy and rewarding lives.

We consider the following ten values as instrumental when framing the life of the school.

- **Respect:** of ourselves and our neighbour both near and far from every culture and faith.
- **Love:** of everyone and everything God created.
- **Humility:** knowing that we are one of many and avoid selfishness
- **Courage:** in the face of the unknown or meeting a new challenge or just having a go!
- **Responsibility:** for our actions or inaction
- **Compassion:** showing care and support to others
- **Perseverance:** never giving up
- **Service:** supporting others by giving of our time, organising charitable activities
- **Honesty:** in thought and deed
- **Curiosity:** a pre-requisite for learning about the world about us

Our Approach, Aim, and Curriculum

Our key curriculum drivers are determined by our values and the needs of our learners:

Inclusivity Creativity Curiosity Oracy

Area of learning	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Computing systems and networks</p>	<ul style="list-style-type: none"> - To be able to understand what a computer keyboard is and recognising some letters and numbers. - To know that a mouse can be used to click, drag and create simple drawings. - To know that to use a computer you need to log in to it and then log out at the end of your session. - To know that different types of technology can be found at home and in school. - To know that you can take simple photographs with a camera or iPad. - To know that you must hold the camera still and ensure the subject is in the shot to take a photo. 	<ul style="list-style-type: none"> - To know that "log in and log out" means to log in and add 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. 	<ul style="list-style-type: none"> - To know the difference between a desktop and laptop computer. - To know that people control technology. - To know that buttons are a form of input that give a computer an instruction about what to do (output). - To know that computers often work together. 	<ul style="list-style-type: none"> - To know what a tablet is and how it is different from a laptop/desktop computer. - To understand what a network is and how a school network might be organised. - To know how the internet uses networks to share files. - To know what a packet is and why it is important for website data transfer. - To know the roles that inputs and outputs play on computers. - To know what some of the different components inside a computer are e.g. CPU, RAM, hard drive, and how they work together. 	<ul style="list-style-type: none"> - To understand that software can be used collaboratively online to work as a team. - To know that you can use images, text, transitions and animation in presentation slides 	<ul style="list-style-type: none"> - To know how search engines work. - To understand that anyone can create a website and therefore we should take steps to check the validity of websites. - To understand what copyright is. - To know the difference between ROM and RAM. 	<ul style="list-style-type: none"> - To understand the importance of having a secure password and what "brute force hacking" is. - To know that the first computers were created at Bletchley Park to crack the Enigma code to help the war effort in World War 2. - To know about some of the historical figures that contributed to technological advances in computing. - To understand what techniques are required to create a presentation using appropriate software. - To know that AI is artificial intelligence and is used in everyday life. - To know that AI is trained on data to recognise patterns and generate outputs. - To know that AI can be used to

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							<p>generate written content.</p> <ul style="list-style-type: none"> - To know that there are ethical issues surrounding AI, including data privacy, bias and responsible use.
<p>Programming</p>	<ul style="list-style-type: none"> - To know that being able to follow and give simple instructions is important in computing. - To understand that it is important for instructions to be in the right order. - To understand why a set of instructions may have gone wrong. 	<ul style="list-style-type: none"> - 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'. - 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. 	<ul style="list-style-type: none"> - 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. - 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. That 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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. - 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. 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - To know that there are text-based programming languages such as Logo and Python. - To know that nested loops are loops inside of loops.

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			programming a computer or device involves giving it instructions to perform specific tasks.				
Creating media	N/A	<ul style="list-style-type: none"> - To understand that holding the camera still and considering angles and light are important to take good pictures. - To know that you can edit, crop and filter photographs. - To know how to search safely for images online. 	N/A	<ul style="list-style-type: none"> - To know that different types of camera shots can make my photos or videos look more effective. - To know that I can edit photos and videos using film editing software. - To understand that I can add transitions and text to my video. 	N/A	<ul style="list-style-type: none"> - 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. 	N/A

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<p>Data handling</p>	<ul style="list-style-type: none"> - To know that sorting objects into various categories can help you locate information. - To know that using yes/no questions to find an answer is a branching database. 	<p>N/A</p>	<ul style="list-style-type: none"> - To understand that you can enter simple data into a spreadsheet. - To understand what steps you need to take to create an algorithm. - To know what data to use to answer certain questions. - To know that computers can be used to monitor supplies. 	<p>N/A</p>	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - To know that Mars Rover is a motor vehicle that collects data from space by taking photos and examining samples of rock. - To know what numbers using binary code look like and be able to identify how messages can be sent in this format. - To know what simple operations can be used to calculate bit patterns. 	<ul style="list-style-type: none"> - To know that data contained within barcodes and QR codes can be used by computers. - To know that Radio Frequency Identification (RFID) is a more private way of transmitting data. - To know that data is often encrypted so that even if it is stolen it is not useful to the thief.
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