Saint Augustine Webster CVA's Subject Stories

Computing

"The computer was born to solve problems that did not exist before."
— Bill Gates

Intent

At Saint Augustine Webster Catholic Voluntary Academy, we aim to provide our children with the skills, knowledge and understanding of a wide range of technological areas. It is our intention to enable children to find, explore, analyse and present information using different media. We aim to provide the skills to enable them to embrace and utilise new technology which allows them to be socially responsible and safe.

Internet safety is a crucial aspect of computing at Saint Augustine Webster CVA and we prepare children for all situations involving technology. We teach our children to have mutual respect of each other and that this should be the same when accessing online activities. Through our computing teaching, we want our children to be ready for the 21st century and the rapidly-changing World. We want our children to be confident, independent users who develop their creativity, problem solving, resilience and critical thinking skills through their computing sessions.

We are considerate of cognitive load and represent our lessons in a way which will not overload the children working memory. Every topic in computing is built upon previous learning and is regularly reviewed and assessed. Vocabulary at Saint Augustine Webster CVA is extremely important and this is evident in our computing curriculum. We ensure children understand and use technical language when describing actions within their computing topic.

Overall, we believe that computing is an essential part of the curriculum that is taught stand alone as well as woven into all other curriculum areas ensuring it become an integral part of all learning.

Implementation

Our scheme of learning is based on the National Curriculum guidelines and has been adapted in conjunction with the Kapow Primary Scheme. Kapow Primary offers full coverage of the KS1 and KS2 computing curriculum, including EYFS. It is comprised of three aspects: Digital Literacy and Online Safety, Computational Thinking and Computers and Hardware. Across the whole school computing is taught as focused teaching sessions that sit within the curriculum sequence built around the principles of interleaving and spaced retrieval practice. The school utilises laptops and iPads to support the teaching of computing across the curriculum to enhance children's learning experiences. Each classroom has a Promethean panel, which are used as a teaching and learning resource. An immersive classroom further enhances the children's learning, emotive and language experiences and responses through cross-curricular exploration of ideas and themes.

Computing skills are taught both discretely and cross curricular, supporting other areas of learning across the school. Online safety is taught throughout the year and is an important part of every computing topic throughout the school.

Impact

The implementation of this curriculum ensures that when children leave Saint Augustine Webster CVA, will be digitally literate and able to join the rest of the world on its digital platform. They will be competent and safe users of ICT with an understanding of how technology works. They will have

developed skills to express themselves and be creative in using digital media and be equipped to apply their skills in Computing to different challenges going forward. As children become more confident in their abilities in Computing, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation become second nature.

We will measure the impact of the computing through:

- pupil achievement data
- pupil voice
- lesson observations
- learning walks
- work scrutiny

If you were to walk into computing lessons at Saint Augustine Webster CVA, you would see:

- Proficient users of technology who are able to work both independently and collaboratively.
- Computing hardware and software being utilised to enhance the learning outcomes of our children, across the curriculum.
- Clear progression in technical skills and vocabulary
- A learning buzz as children engage in programming, instruct floor robots, prepare online safety presentations and design body confidence video campaigns.
- Collaboration and support

Pupil Voice

Year 2 child *"I like learning new things in computing and then trying the same things at home like Sketchpad and MS Word."*

Year 4 child *"I love using computers at school. Mrs Stewart lets us explore new areas of computing before teaching us new things."*

Year 6 child *"I really enjoy using technology in school. My favourite thing to do is coding"*

An example of skills progression within our computing curriculum

Kapow Primary	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer science / Information technology / Digital literacy	**Hardware**						
	• Learning how to operate a camera to take photographs of meaningful creations or moments • Learning how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary • Learning how to operate a camera • Recognising that a range of technology is used in places such as homes and schools • Learning what a keyboard is and how to locate relevant keys • Learning what a mouse is and developing basic mouse skills such as moving and clicking	• Learning how to explore and tinker with hardware to find out how it works • Understanding that computers and devices around us use inputs and outputs, identifying some of these • Learning where keys are located on the keyboard • Learning how to operate a camera	• Understanding what a computer is and that it's made up of different components • Recognising that buttons cause effects and that technology follows instructions • Learning how we know that technology is doing what we want it to do via its output. • Using greater control when taking photos with tablets or computers • Developing confidence with the keyboard and the basics of touch typing	• Understanding what the different components of a computer do and how they work together • Drawing comparisons across different types of computers • Learning what a server does	• Learning about the purpose of routers	• Learning that external devices can be programmed by a separate computer • Learning the difference between ROM and RAM • Recognising how the size of RAM affects the processing of data • Understanding the fetch, decode, execute cycle	• Learning about the history of computers and how they have evolved over time • Using the understanding of historic computers to design a computer of the future • Understanding and identifying barcodes, QR codes and RFID • Identifying devices and applications that can scan or read barcodes, QR codes and RFID • Acknowledging that corruption can happen within data during transfer (for example when downloading, installing, copying and updating files)