St. Andrew's C of E (VA) Primary School

Computing Statement

"I have come that they may have life, and have it to the full. John 10:10"

Our vision for computing at St Andrew's

We want all the children at St. Andrew's to flourish today and in the future. We have planned a curriculum which is accessible to all, that will maximise the outcomes for every child so that they know more, remember more, apply more and understand more. Our aim is to have a creative computing curriculum that is progressive, builds on previous learning and encourages children to be responsible digital citizens. Our curriculum, linked with the objectives of the National Curriculum and enabled using the Teach Computing curriculum, will enable children to learn new skills, be fully inclusive and help to prepare them for secondary school and the world of employment.

Computer Science, IT and Digital Literacy

It is our intention at St. Andrew's to teach all three areas in stimulating and engaging ways, endeavouring to link to our creative curriculum topics each term. Furthermore, we will ensure there is clear progression in key concepts, vocabulary and skills for all children as they move up the school.
(See KS1 / KS2 progression spreadsheets)

Essential concepts and vocabulary - built upon each year

KS1	**KS2**	
Algorithm	Windows	Simulation
Programming	Sequence	Selection
Instructions	Digitised	Repetition
Execute	Input	Strings
Data	Output	Networks
Code	Fault	Routers
variables	Organising	Hubs
Log on	Storing	Servers
Digital information	Manipulating	HTML
Search engine	Logical reasoning	Python
bugs	Predict	Java
Debugging	Programming language	Processor
Internet	KB - kilobyte	
Software	MB - megabyte	
Hardware	GB - Gigabyte	
Memory	TB - Terabyte	
Mouse		
Storage		
Cloud		
e-safety		
World Wide Web		

Our Computer Science Intent

Key Stage 1	Key Stage 2
● 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	● 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 ● Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web ● Appreciate how [search] results are selected and ranked

Our Computer Science Implementation

YF	Introduction to algorithms			Beebots
Y1	Code.org - Course A			Beebots
Y2	Code.org - Course B			Beebots
Y3	Code.org - Course B/C			Crumbles
Y4	Code.org - Course C/D		python	Crumbles
Y5	Code.org - Course D/E		Html, python	Crumbles
Y6	Code.org - Course E/F		Java, html, python	Micro bits

Our Computer Science Impact

Evidenced through the improvement in children's knowledge and understanding of computational thinking and key concepts and ideas. They will be more able to discuss key vocabulary, using examples and curriculum links as they move up the school. Clear progress of computer science will be evidenced through the progression bars and individual child analysis on Code.org.

Our IT intent

Key Stage 1	Key Stage 2
● Use technology purposefully to create, organise, store, manipulate and retrieve digital content	● Use search technologies effectively ● 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

Our IT implementation

YF	Logging on. Using a mouse / touchpad and keyboard. Guided sessions
Y1	● Computing systems and networks – Technology around us ● Creating media – Digital painting ● Creating media – Digital writing ● Data and information – Grouping data ● Programming A – Moving a robot ● Programming B – Introduction to animation
Y2	● Computing systems and networks – IT around us ● Creating media – Digital photography ● Creating media – Making music ● Data and information – Pictograms ● Programming A – Robot algorithms ● Programming B – An introduction to quizzes
Y3	● Computing systems and networks – Connecting computers ● Creating media – Animation ● Creating media – Desktop publishing ● Data and information – Branching databases ● Programming A – Sequence in music ● Programming B – Events and actions
Y4	● Computing systems and networks – The Internet ● Creating media – Audio editing ● Creating media – Photo editing /Desktop publishing ● Data and information – Data logging ● Programming A – Repetition in shapes ● Programming B – Repetition in games
Y5	● Computing systems and networks – Sharing information ● Creating media – Vector drawing ● Creating media – Video editing ● Data and information – Flat-file databases ● Programming A – Selection in physical computing ● Programming B – Selection in quizzes
Y6	● Computing systems and networks − Communication ● Creating media − 3D Modelling ● Creating media − Web page creation ● Data and information − Spreadsheets ● Programming A − Variables in games ● Programming B − Sensing

Our IT impact

Children will become more confident in the use and tools of Google Apps for Education and MS Office as they progress through the school. They will see the benefits of using technology and in making the right choice of software to use. They will understand the relevance of IT in the modern world and how it can assist in statistics, employment, digital media, engineering and design.

Our Digital Literacy Intent

(What / When / Where / How / Why? - while keeping safe!)

Key Stage 1	Key Stage 2
Children recognise common uses of information technology beyond school Children use technology safely and respectfully, keeping personal information private Children identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	Understand the opportunities [networks] offer for communication and collaboration Be discerning in evaluating digital content Use technology safely, respectfully and responsibly Children recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Our Digital Literacy implementation

Teachers can use a variety of resources from the suggested materials below that fit the needs of the class and topic. Two digital safety days - St. Andrew's Internet Awareness Day and the national Safer Internet Day provide special focus. The class digital mascots provide weekly awareness of the needs to keep safe and provide an opportunity for the children to reflect and improve upon their online habits and behaviours. An oracy approach to resolving an E Safety issue is promoted at the start of any computing lesson.

YF	Jessie & Friends	Code.org - Course A - unplugged SWGfL lessons - YF	Technology Turtle
Y1	Jessie & Friends	Code.org - Course A - unplugged SWGfL lessons - Y1	Technology Tiger
Y2	Smart Crew Jessie & Friends	Code.org - Course B - unplugged SWGfL lessons - Y2	Webby Wolf
Y3	Jessie & Friends Smart Crew	Code.org - Course C- unplugged SWGfL lessons - Y3	Coding Cat
Y4	Play Like share Smart Crew BandRunner Goggle Legends Live Skills	Code.org - Course D - unplugged SWGfL lessons - Y4	Appy Alligator Firewall Fox
Y5	Play Like Share BandRunner Smart Crew Goggle Legends Live Skills	Code.org - Course E - unplugged SWGfL lessons - Y5	Password Parrot
Y6	Play Like Share Band Runner Smart Crew Goggle Legends Live Skills	Code.org - Course F - unplugged SWGfL lessons - Y6	Social Media Snake

Our Digital Literacy impact

Children will have the knowledge and resilience to deal with situations as they arise in the online world. They will be able to share their online habits and learn and reflect upon this. They will be able to create a set digital rules that will help to keep them safe online, both at school and at home. As evidenced in surveys, oracy based discussions, assemblies and competitions, children will have become more aware of how to keep safe and use their real life skills and values in the online world.

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