Being an IT specialist at St Chad's

What do we want Computing to look like at St Chad's?

"We need to embrace technology to make learning more engaging. Because when students are engaged and they are interested, that's where learning takes place."

As a school, we want the children of St Chad's to progress as masters of technology within this ever developing technological world. As children progress through their journey at school, they will develop a firm understanding of how computing can be used in a safe, responsible and positive manner.

At St Chad's, we want to enable our children to flourish and be equipped with the knowledge to develop and understand the rapidly changing digital world and community within the subject drivers of information technology, computer science and digital literacy. We want to develop the children's computational thinking and creativity ensuring they can create and use programs and systems. The children are immersed with computing technology around the school. Each child will have access to many differing technologies such as:

- interactive whiteboards in every classroom;
- laptops;
- programming technology such as beebots and probots;
- ipads;
- cameras;

To ensure computing knowledge is taught and revisited across year groups and phases, we want computing to be taught within our Connected Curriculum units as well as standalone subject units.

We endeavour to ensure the children of St Chad's are taught about the impact of the internet both in a positive and negative manner. Therefore, becoming responsible digital citizens now and in the future. We will consistently model the importance of online safety and how being safe and kind online can ensure we create a nurturing, safe and constructive community. We will support children in understanding the correct procedure to follow if they see or hear about something they deem unsafe online.

The computing curriculum is always evolving to meet with the needs of the developing technological world and is driven by the passions of the children. We hope this fully equips the children to act as IT specialists in their future. We promote the links between the local STEM businesses such as GKN, Aerospace and Hitachi, which we hope to continue over the years.

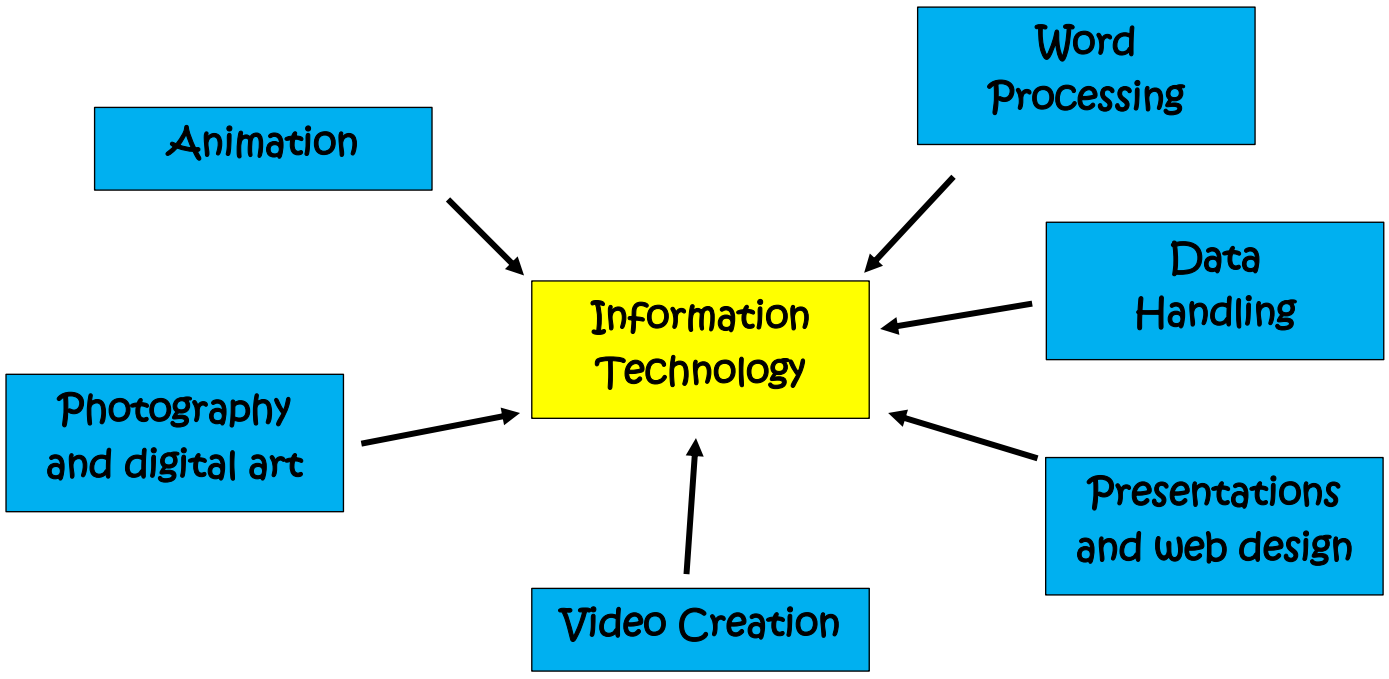
Alongside the school's vision and 5Vs, we aim to drive the teaching of the computing curriculum through 3 key areas, which act as drivers.

Being Safe, Responsible and Secure

Within this ever-changing world, it is a firm belief of the school that through the world of social media and technology, our children need to be correctly educated on the use of a range of different platforms. We recognise that the best prevention for a range of different issues we currently see with technology and social media is through educating our children. Children will have many opportunities to develop their understanding of digital literacy throughout the computing curriculum. Regular digital literacy learning opportunities will occur throughout the year to support developing, deepening and embedding important knowledge.

Working Cross-Curricular

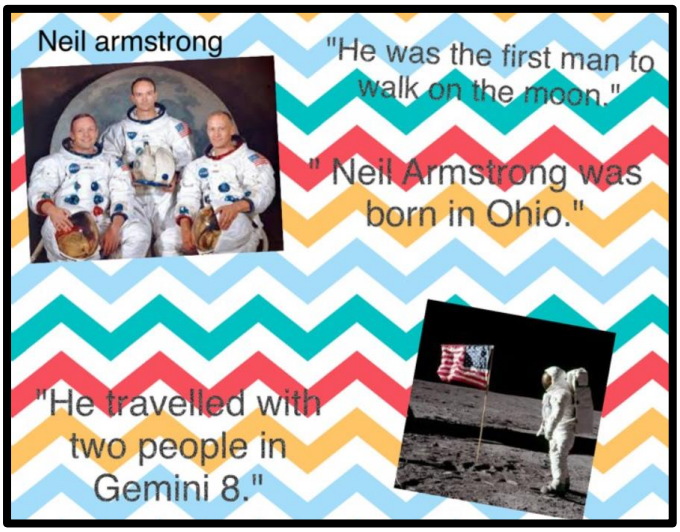
Whilst studying information technology, it is important that children understand that digital technology is everywhere. As children progress through their time at St Chad's, they will have the opportunity to access a range of different apps which they can use to support project work within the wider connected curriculum.



We strongly believe that children must be provided with creative opportunities to use devices and programs throughout our connected curriculum which are accessible and are going to have a positive impact on learning outcomes. Children will use technology in creative ways to support project work within the connected curriculum. It is important that children begin to develop the confidence to create and manipulate digital content throughout project work in innovative ways to express and convey their learnt knowledge from that particular Curriculum unit.

Being a Programmer

Children will develop their understanding of computer networks and programming. Throughout their time in KS1, children will understand that an algorithm is a set of instructions and that programs work by following sets of different instructions. Children also have opportunities to create and debug simple programs. As children move into KS2, they further develop their knowledge of using logical reasoning to explain how simple algorithms work. Children will also be introduced to new concepts such as sequence, selection and repetition within programs. Throughout their time at St Chad's, children develop their understanding of computer networks. Within these sessions, children progress their knowledge of how computers can be linked together to allow them to 'talk' to each other.



How do we achieve our aims in Computing at St Chad's?

Computing in the EYFS Curriculum

Learning in the EYFS classroom is the starting point for children when developing their initial understanding of Computing. There are a variety of 'inventuring' opportunities for children to explore computing devices within continuous provision, such as using ipads to explore a range of apps to support learning. The use of beebots are also used to teach children about direction, position and for cross-curricular learning.

Creating our Computing Curriculum

We believe that our computing curriculum encapsulates the three elements of computer science, digital literacy and information technology. In line with the national curriculum for computing, please see the documents below for how the subject drivers are progressed, and built upon from EYFS through to Year 6.

Being Safe, Responsible and Secure Progression

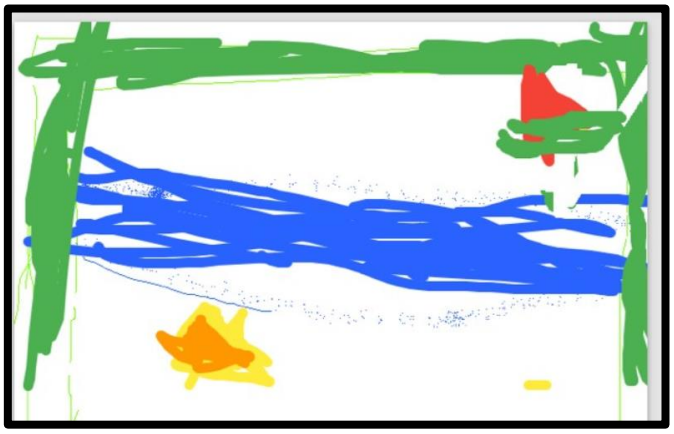
Being a Programmer Progression

Working Cross-Curricular Progression

Understanding Computer Networks Progression

Using the Teach Computing scheme of work as support, computing is taught every other term across the rolling programme with key vocabulary and knowledge repeatedly revisited and built upon to support children in retrieving and embedding knowledge within their long-term memory. In the terms when computing isn't taught specifically as a subject within the classroom, within knowledge retrieval sessions, children have the opportunity to retrieve knowledge from previous units, as well as previous units from other year groups.

Ensuring cross-curricular links with other subjects is important. Therefore, the use of computing devices within curriculum lessons happens within each curriculum unit of learning.



St Chad's Rolling Programme

When creating our computing curriculum, it is important that it links into our connected curriculum as closely as it can. Therefore, allowing links to be made across computing strands and with other academic subjects enabling knowledge to be sequenced and carefully mapped.

Follow this link to find out more about St Chad's Rolling Programmes.

Power through the 5C's of Learning

Alongside St Chad's vision of 'learning to love, loving to learn', St Chad's 5C's of learning drive the creation of our Curriculum. Further information as to how the 5C's of learning positively support the teaching of Computing can be identified in the table below.

St Chad's 5C's	Using our 5C's within Computing
Community	• Visits and Visitors • Sharing of computing projects with St Chad's community.
Communication	• Progression of Computing vocabulary • Oracy opportunities within lessons to demonstrate understanding of subject-specific vocabulary.
Curiosity	• Developing understanding of how different ipad apps work and how they can be used to demonstrate subject knowledge across the Curriculum. • Understanding of algorithms and how to de-bug different software.
Collaboration	• Working in groups when completing Computing projects across Curriculum units. • Self and peer-assessment within lessons. • Collaborative partner work within Computing lessons.
Creativity	• Make links with our connected curriculum. • Use of different ipad apps to demonstrate Curriculum knowledge through cross-curricular Computing projects.

Working Cross-Curricular at St Chad's

Digital devices are used frequently by children across curriculum subjects to support the learning outcomes that are produced within lessons. Whilst using specific digital devices, children develop their computing knowledge at the same time as further embedding Curriculum knowledge from the taught unit. A progression of apps and programs demonstrates the different apps that children use across their time at St Chad's within particular Information Technology strands.

Progression of Apps and Computer Programs across St Chad's

	Data Handling	Animation	Photography	Video Creation	Presentations
1	www.j2e.com	PuppetPals HD	Keynote PicCollage Powerpoint	Puppet Edu	
2	Numbers	PuppetPals HD Stop Motion Studio	Keynote PicCollage Powerpoint	iMovie Sketchpad	Powerpoint Word
3	Numbers Excel	Stop Motion Studio I Can Animate	Sketches Keynote Powerpoint	iMovie Clips	Powerpoint Word Pobble Book Creator
4	Numbers Excel	Stop Motion Studio I Can Animate	Sketches Keynote Powerpoint	iMovie Clips	Powerpoint Word Pobble Book Creator Microsoft Sway
5	Numbers Excel	Stop Motion Studio I Can Animate	TinkerCAD Sketches Keynote	iMovie Clips	Powerpoint Word Pobble Book Creator Microsoft Sway
6	Numbers Excel	Stop Motion Studio I Can Animate	TinkerCAD Sketches Keynote	iMovie Clips	Powerpoint Word Pobble Book Creator Microsoft Sway

Talking like an IT Specialist

It is important that children are able to demonstrate a growing understanding of subject-specific vocabulary. A progression of Computing vocabulary has been created to demonstrate vocabulary that is revisited before identifying the vocabulary that is introduced within a particular unit of learning.

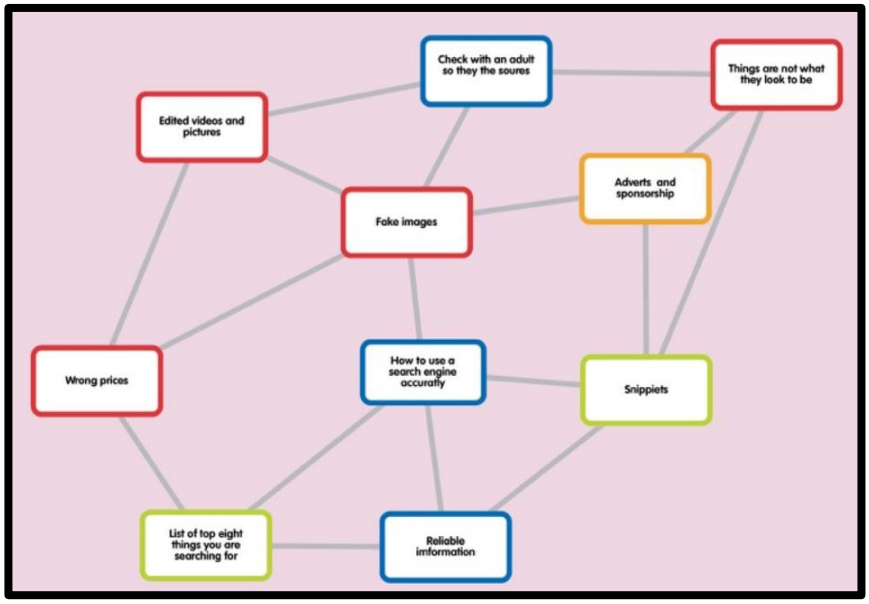
Click here to find out about the progression of Computing vocabulary.

Knowing More and Remembering More

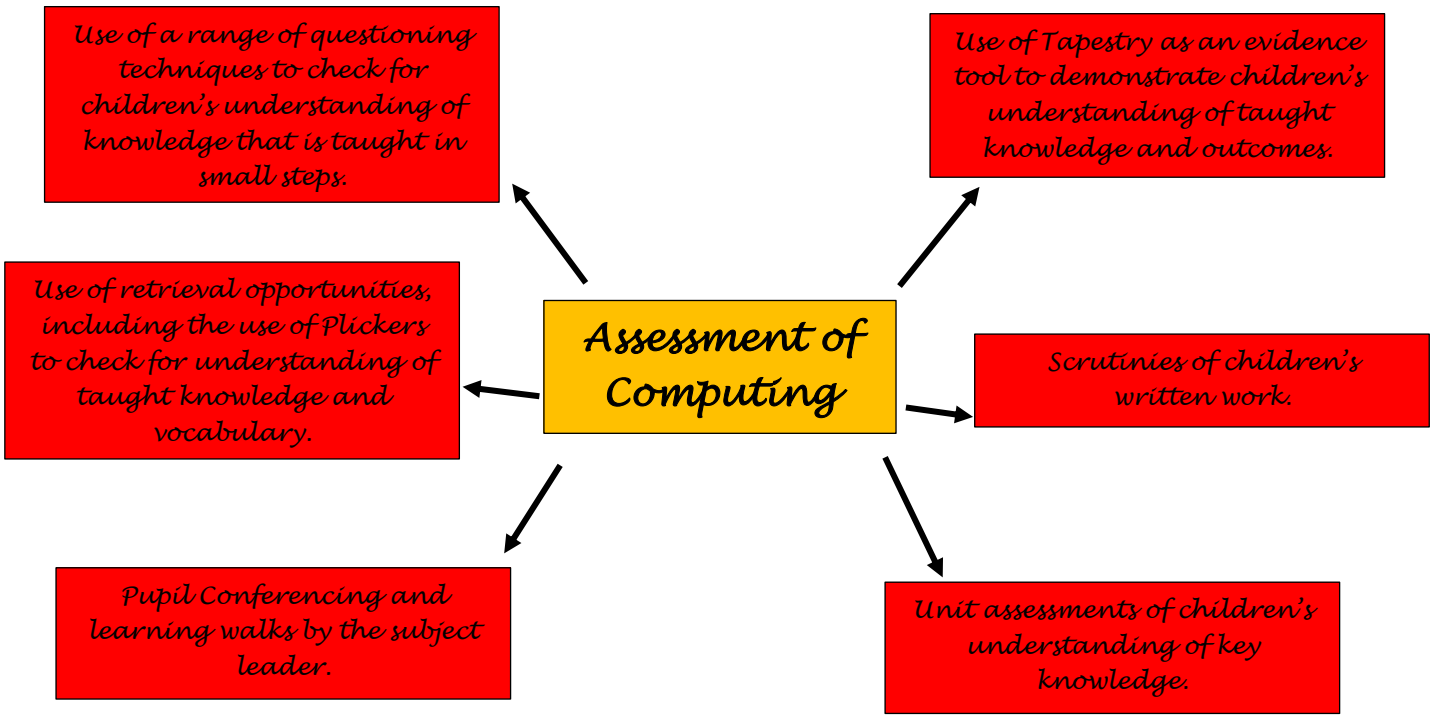
To ensure children are strengthening schemas within their memory, it is important that computing knowledge is constantly being developed and embedded within children's long term memories. Therefore, a computing knowledge progression has been developed to demonstrate how knowledge is introduced and then deepened throughout further units of learning.

Year 1 Computing knowledge to be taught	Key Vocabulary
Digital Literacy • Time spent on devices can be fun, helpful and educational. • There should be a limit on the amount of screen time. • Too much screen time can have a negative impact on your life. • Different activities can be used as alternatives to being on a screen. • **Computer Networks** • Technology is something that has been made with a specific purpose. • Children can classify what is technology and what is not technology. • Screen, base unit, mouse and keyboard are key components of a computer. • There is no base unit to a laptop because it has all of the components inside of the case. • The screen shows what the computer is doing. • A keyboard lets you type letters and numbers. • A mouse lets you select and move objects. • Base unit stores and processes information. • It is important to save your work so that it is easy to find it easily and carry on with your work. • It is important to have these rules to use technology effectively: 1) Hold your device carefully. 2) Stop using your device when someone is talking to you 3) Take turns with your partner 4) Use only the apps you have been asked to use 5) Don't share your passwords.	technology computer mouse keyboard screen double-click typing

Example of a Year 1 knowledge mat which identifies the key knowledge that children must know by the end of that taught unit. Future retrieval sessions are based around embedding this knowledge.



How is progress assessed in Computing?



Children's Voice

I liked when we drew pictures to help create algorithms.

I enjoy using iMovie to create videos within curriculum lessons.

I liked when we looked at inputs and outputs and what made up a computer.

I enjoy using learning all about programming.