



COMPUTING

Intent

At the Federation of Holy Trinity, we believe that computing plays a crucial role in our daily lives because today's society is rapidly evolving digitally. Our rich computing curriculum ensures that children are educated citizens within their own community and on a wider digital scale.

Technology continues to transform our lives, making all corners of the world accessible and enables us to communicate in ways we never thought possible. The importance of understanding and using technology safely and responsibly cannot be overstated, and the teaching of computing plays a vital role in preparing students for the challenges of a technology-driven world.

In our school, computing offers hands on, cohesive and challenging learning where pupils develop a range of investigative skills, including problem-solving, critical thinking, creativity, and logical reasoning. These skills are not only valuable in their own right, but they are also transferrable to other areas of life, helping pupils to flourish both personally and professionally in the future. For example, pupils are taught about different kinds of multimedia, which builds and develops through the year groups.

Computing opens a world of exciting possibilities, which inspire pupils to learn more about how technology is shaping our world and the possibilities for the future. By fostering a love and curiosity for computing, we can help cultivate the next generation of computer scientists and technology leaders.

Though Computing at The Federation of Holy Trinity Church of England School we want ...

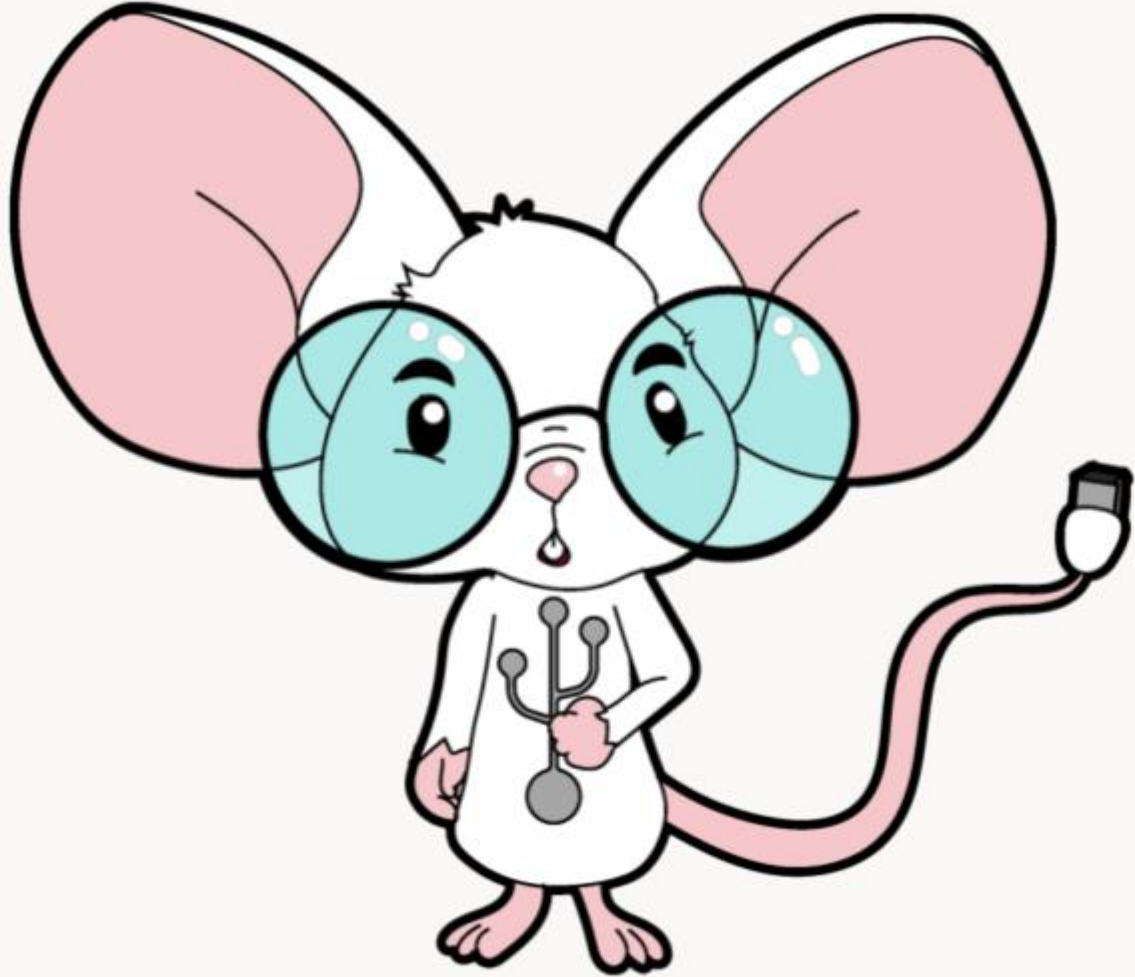
To help pupils to express themselves and develop their ideas through information and communication technology, at a level suitable for the future workplace and as active participants in a digital world.

To teach pupils how to flourish in a connected world, developing their sensitivity to others online, treating them with respect, and showing respect for their privacy.

To give pupils rapid access to ideas and experiences from a wide range of people, communities and cultures, for example through the use of the internet and email.

To develop pupils' skills in using technology to create, organise, store, manipulate and retrieve digital content.

Pupils to develop their critical thinking and analytical skills.



Today we are working with Claude who is a computer scientist. Computer scientists use technology to solve problems in our world. They develop computing techniques to provide innovative solutions using robots, drones and AI.

As *computer scientists* last term/lesson we ...

This term/lesson we are



The Four 'C's

- Communication
- Conflict
- Conservation
- Culture



KNOWLEDGE BUILDING

Digital citizenship

Computer science

Data

Information technology

Technical vocabulary

Multimedia

COMPUTER SCIENCE



Know how to follow and input simple instructions to control and operate devices



Understand the terms algorithm and program, and that they need to be clear and unambiguous



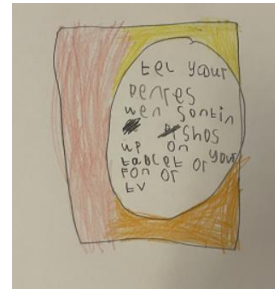
Know how to use repetition, loops and selection and how to decompose problems to create solutions



Know how to recognise, create and combine variables

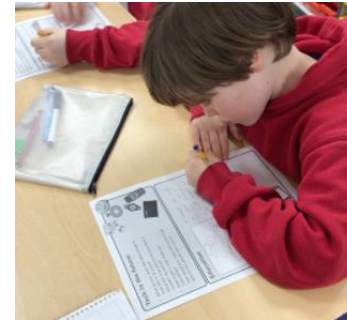
EVIDENCE OF WORK

Safer Internet Day - 06.02.24

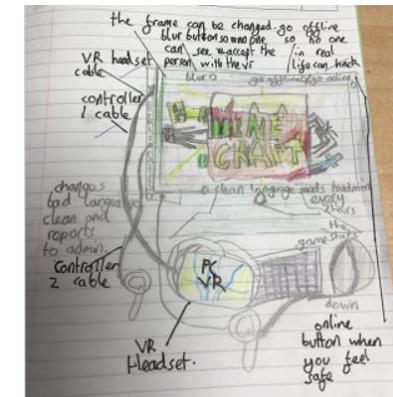
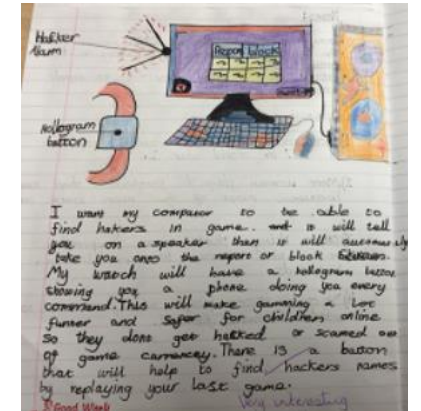
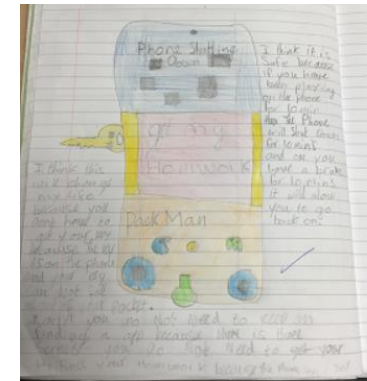


In Reception the children read the 'Digiduck' story and discussed the importance of staying safe. The children shared their responses.

In Year 1 the children discussed the different ways we can stay safe online and then created their own posters.



In Year 3 the children looked at how technology has changed over time.



In Year 5 the children predicted what the different types of technology might be like in the future.

YEAR 3 - STOP-MOTION




	C ⁹	C ⁷				C ⁶	C ⁵
N	'Happy to Be Me'	'Let's Play'	'Come and Join the Celebration'	'Jurassic Park'	'Animal Crackers'	'No Place Like Home'	'Under the Sea'
R	'Tell Us a Story'	'Help is at Hand'	'Food Glorious Food'	'Way Back When...' Hats Had Brims	'If You Go Down to the Woods...'	'What On Earth...?'	'Come Fly <u>With</u> Me!'
		Multimedia					
Y1	' <u>Happily</u> Ever After'	'Unity in the Community'	'Royal Patrons'	'Never Eat Shredded Wheat'	'Children's Champion'	'Light Up the World'	'Come Fly <u>With</u> Me!'
	Multimedia - Computer Science	Computer Science				Data Handling	Multimedia
Y2	'Inter-Nation Media Station'	'Land Ahoy!'	'Dancing Spy'	'Paddington's Passport'	'Record Breaker'	'Going Wild!' All About Animals	'Zero to Hero'
	Multimedia	Computer Science				Multimedia	Research Multimedia
Y3	'That's All, Folks!'	'Athens v Sparta'	'Lindow Man'	'Rocky the <u>Elephant</u> '	Out and About	Under the Canopy'	'Come Fly <u>With</u> Me!'
	Animation	E-Safety				Computer Science	Multimedia
Y4	'Lightning Speed'	'Law and Order'	'Viking Warrior'	'May the Force Be <u>With</u> You'	'Saxon King'	Picture Our Planet	'Cry Freedom'
	Networks	Computer Science				Email	
Y5	'Mission Control'	'You're Not Invited'	'Fighting Footballer'	'Go With <u>The</u> Flow'	'Pharaoh Queen'	'Global Warning'	'Come Fly <u>With</u> Me!'
	Multimedia	Computer-Aided Design				Multimedia	Multimedia Data Handling
Y6	'A World of Bright Ideas'	'Wars of the World'	'True Crime'	'In Your Element'	'Time Team'	'Full of Beans'	'I Have a Dream...'
	Computer Science	Multimedia				Multimedia	Multimedia

	'Happily Ever After'
Y1	<p>CS1 <u>Recognise</u> and understand that algorithms are implemented as programs on digital devices, executing by following precise and unambiguous instructions</p> <p>CS2 Create and debug simple programs</p> <p>CS3 Use logical reasoning to predict the <u>behaviour</u> of simple programs</p>

	'A World of Bright Ideas'
Y6	<p>CS4 Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems</p> <p>CS5 Solve problems by decomposing them into smaller parts</p> <p>CS6 Use sequence, selection, and repetition in programs</p> <p>CS7 Work with variables and various forms of input and output</p> <p>CS8 Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>

Year 3 Planning

Session 6 - 25.09.23						
LO & SC	Script	Learning Experience	Big Questions Answered	Juicy Jargon Spoken	Assessment Notes	Evidence
 <p>I am learning to use computer software to create a moving image.</p> <p>To create an animation of a bouncing ball.</p>	<p>Today we are working with Claude who is a computer scientist. Computer scientists use technology to solve problems in our world. They develop computing techniques to provide innovative solutions using robots, drones and AI. As computer scientists this lesson we are making our own 2D animation.</p>	<p>Explain to the children that there are three main types of animation - 2D using a computer, or pencil and paper (like yesterday when we made our moving puppets), 3D using computers and stop-motion.</p> <p>Can you think of any 3D animations?</p> <p>In table teams on whiteboards create a list of Pixar and DreamWorks films. Read rest of scripts.</p> <p>Explain to the children that today we are creating an animated bouncing ball. Model finding the 2do on Purple Mash - 2Animate and model creating the bouncing ball.</p> <p>Children to independently create their own.</p> <p>After the lesson go into the children's profiles and export these to the evidence folder.</p>	<p>How to use a computer to make a moving image?</p>	<p>Animation Computer software Frame Moving image</p>	<p>Children very excited to learn about a computer scientist AAB - could create a bouncing ball ABM - experimenting with different colours FM - asked to challenge himself, not just a simple ball</p>	<p>Purple Mash folders and printed frames</p>

Year 5 Planning

Session 11 and 12 9/10/23 and 10/10/23						
LO & SC	Script	Learning Experience	Big Questions Answered	Juicy Jargon Spoken	Assessment Notes	Evidence
I am learning to use vector graphics in a computer program to make digital images	Today we are working with Claude who is a computer scientist. Computer scientists use technology to solve problems in our world. They develop computing techniques to provide innovative solutions using robots, drones and AI.	<p>Phase 3 The Process Continue the PowerPoint to show the process of vector design that Michael Fugosa utilizes and the simpler example we have created. Explain to pupils that the designs are made up of simple shapes created in a vector design program such as Adobe Illustrator, Vectx or the Vectorpator app. <i>Please note; there are many examples of vector programs / software that can be used for these lessons - Vectx is a free web-based example that we recommend. However, feel free to use the one that best suits the needs of your setting/pupils.</i></p> <p>The process for creating vector artwork in this style can be broken down into these <u>steps</u>:-</p> <ol style="list-style-type: none"> 1. A sketch - create a rough sketch on paper (or digital drawing app if appropriate) that can be used as a basis for the final design. This sketch does not have to be detailed or neat, just enough to give a flavour of the final product. This image could be imported to the vector software to draw over or just used as a reference. 2. Flat vector shapes - using the draft sketch as a reference, create flat shapes using the pen and shape tools (and shape-builder if appropriate) in the vector program. 3. Create a 3D look - Add gradients, highlights and shadows to each shape object / layer in turn to create a more realistic look. 4. Pupils should <u>learn</u>:- <p>How the interface is set out To create and select objects To change the colour and style of objects To add gradients and shadows To create and edit paths (including shape builder options) To work with layers (including flipping and reordering)</p>	<p>What are vector graphics? How do computers generate images?</p>	<p>Graphics Image digital</p>		<p>Children's images printed and stuck into books</p>
Session 13 13/10/23						



<p>KS1</p> <p>National Curriculum Objectives</p> <p>Pupils should be taught to...</p>	Happily Ever After	Inter-National Media Station	Unity in the Community	'Land Aho-y'	Royal Patrons'	Dancing Spy'	Never Eat Shredded Wheat'	Paddington's Passport'	'Children's Champion'	Record Breaker'	Light Up the World'	'Going Wild!'	'Come Fly With Me!'	'Zero to Hero'	Safe Zone Lessons
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															
use technology purposefully to create, organise, store, manipulate and retrieve digital content															
recognise common uses of information technology beyond school															
use technology safely and respect, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies															

KS2 National Curriculum Objectives Pupils should be taught to	"That's All, Folks!	"Lightning Speed"	"Mission Control"	"A World of Bright Ideas!"	"Athens v Sparta"	"Law and Order"	"You're Not Invited"	"Wars of the World"	"London Man"	"Viking Warrior"	"Fighting Footballer"	"True Crime"	"Rocky the Dinosaur "	"May the Force Be With You!"	"Go With The Flow"	"In Your Element"	"Out and About"	"Saxon King"	"Pharaoh Queen"	"Time Team"	"Under the Canopy"	"Picture Our Planet"	"Global Warming"	"Full of Beans"	"Come Fly With Me!"	"Cry Freedom"	"Come Fly With Me!" <small>Matilda!</small>	"I Have a Dream..."	Safe Zone Lesson	
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 programmes; 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 worldwide web; and the opportunities they offer for communication and collaboration																														
use search technologies effectively, appreciate how results are selected unranked, and be discerning in evaluating digital content																														
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 accomplished given goals, including collecting, analysing, evaluating and presenting data and information																														
use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact																														

SUBJECT LEADERSHIP

- Structure and oversight – big picture

Monitoring:

- Books
- Planning
- Pupil Voice



Pupils

AR

CO

DE

DR

GE

HI

MU

SC

Year Five Average

3.9

3.8

3.8

3.8

3.7

3.7

3.8

3.7

NEXT STEPS

- Further personalise and develop.
- Challenge for greater depth and scaffolding/adaptations.
- Continue monitoring the subject.