

Computing Curriculum Statement

How is Computing a Sacred Subject?

Computer science opens up for the learners the possibility of being key influencers and transformational leaders at a local, national and global level. The development of computational thinking and operational skills calls for the formation of learners who prioritise the importance of justice, equality, truth and the common good of all people at a global level.

Intent

At St Mary's Catholic Primary School, Computing plays an integral part in the curriculum and is a key skill for everyday life alongside creating aspirational and knowledge-rich pupils.

- Pupils will secure an understanding of the use of technology, becoming confident, safe, creative users.
- Children will value the importance of staying safe and making the correct choices, understanding risks and how to act on them.
- Children will be exposed to a wider range of technology including: computers, tablets, programmable robots, digital cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. We recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively.
- Children will understand the three strands of computing, why each is important and how they can be applied to real-world situations.
- As a result of the accumulation of essential knowledge, pupils' cultural capital and understanding of computing disciplines will be substantial and will provide a secure foundation that will enable them to succeed in the next stage of their education.

Implementation

Our Computing curriculum aims to ensure that all children:

- Have a secure understanding of how to stay safe online and in the real world, implementing guidance that has been taught. This guidance is embedded throughout the curriculum, not a stand-alone unit.
- Are exposed to a progressive curriculum, building on prior learning, supported by the PurpleMash programme.
- Gain a coherent knowledge and understanding of technology and how to use it effectively
- Have a concrete understanding of programming and how programs are written, refined and developed
- Are equipped with the skills and understanding to live in an ever-increasing technological world
- Are provided with a relevant, challenging and exciting curriculum for ICT and computing
- Meet the requirements of the national curriculum programmes of study for computing
- Are supported for their individual needs through a variety of applicable strategies
- Are given opportunities to apply their computing skills in different contexts and areas of the curriculum
- Are offered extra-curricular opportunities such as joining a computing club and taking part in competitions to inspire and excite them in their learning.

The diagram illustrates the six stages of the computational thinking process, arranged in a circle around the St. Mary's Catholic Primary School Newcastle logo. The stages are:

- Create and debug** (Yellow circle with a gear icon)
- Use algorithms** (Orange circle with a person at a computer icon)
- Manage content** (Red circle with a computer monitor icon)
- Explain** (Purple circle with a person talking icon)
- Research** (Blue circle with a globe and book icon)
- E-safety** (Teal circle with a key icon)

Theme Key:															
	Coding and Computational thinking		Spreadsheets		Internet and Email		Art and Design		Music		Databases and graphing		Writing and Presenting		Communication and networks

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
YEAR 2	Unit 2.1 Coding				Unit 2.2 Online Safety				Unit 2.3 Spreadsheets				Unit 2.4 Questioning				Unit 2.5 Effective Searching		Unit 2.6 Creating Pictures				Unit 2.7 Making Music		Unit 2.8 Presenting Ideas							
	Weeks - 5				Weeks - 3				Weeks - 4				Weeks - 5				Weeks - 3		Weeks - 5				Weeks - 3		Weeks - 4							
	Programs - 2Code				Programs - Various				Programs - 2Calculate				Programs - 2Investigate				Programs - 2Questions		Programs - 2Browser		Programs - 2PaintAPicture				Programs - 2Sequence		Programs - Various					

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
YEAR 3	Unit 3.1 Coding						Unit 3.2 Online safety			Unit 3.3 Spreadsheets			Unit 3.4 Touch Typing			Unit 3.5 Email (including email safety)				Unit 3.6 Branching Databases			Unit 3.7 Simulations			Unit 3.8 Graphing						
	Number of Weeks - 6						Weeks - 3			Weeks - 3			Weeks - 4			Weeks - 6				Weeks - 4			Weeks - 3			Weeks - 3						
	Main Programs - 2Code						Programs - Various			Programs - 2Calculate			Programs - 2Type			Programs - 2Email, 2Connect, 2DIY				Programs - 2Question			Programs - 2Simulate, 2Publish			Programs - 2Graph						

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
YEAR 4	Unit 4.1 Coding					Unit 4.2 Online safety					Unit 4.3 Spreadsheets					Unit 4.4 Writing for different audiences					Unit 4.5 Logo			Unit 4.6 Animation			Unit 4.7 Effective Search			Unit 4.8 Hardware Investigator s			
	Number of Weeks - 6					Weeks - 4					Weeks - 6					Weeks - 5					Weeks - 4			Weeks - 3			Weeks - 3			Weeks - 2			
	Main Programs - 2Code					Programs - Various					Programs - 2Calculate					Programs - 2Email, 2Connect, 2DIY					Programs - Logo			Programs - 2Animate			Programs - Browser						

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			
YEAR 5	Unit 5.1 Coding					Unit 5.2 Online safety					Unit 5.3 Spreadsheets					Unit 5.4 Databases					Unit 5.5 Game Creator					Unit 5.6 3D Modelling					Unit 5.7 Concept Maps				
	Number of Weeks - 6					Weeks - 3					Weeks - 6					Weeks - 4					Weeks - 5					Weeks - 4					Weeks - 4				
	Main Programs - 2Code					Programs - Various					Programs - 2Calculate					Programs - 2Questions, 2Investigate					Programs - 2DIY 3D					Programs - 2Design and Make					Programs - 2Connect				

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
YEAR 6	Unit 6.1 Coding					Unit 6.2 Online safety					Unit 6.3 Spreadsheets					Unit 6.4 Blogging					Unit 6.5 Text Adventures					Unit 6.6 Networks			Unit 6.7 Quizzing &			
	Number of Weeks - 6					Weeks - 2					Weeks - 5					Weeks - 5					Weeks - 5					Weeks - 3			Weeks - 6			
	Main Programs - 2Code					Programs - Various					Programs - 2Calculate					Programs - 2Blog					Programs - 2Code, 2Connect								Programs - 2Quiz, 2DIY, Text Toolkit, 2Investigate			

EYFS

The teaching of Computing in EYFS is practical, playful and inclusive with support and challenge from adults in class sessions, small groups and work with individuals. There is a combination of adult-led, teacher taught sessions as well as a wealth of stimulating continuous provision opportunities when adults scaffold learning through skillful interactions and questioning.

Career Professional Development

We develop strong subject knowledge amongst all staff which is achieved through: comprehensive middle leadership development, a focus on developing all teachers' subject knowledge, computing pedagogy and the provision of high-quality planning resources. Links are made with Christ the King Catholic Collegiate to share resources and knowledge. CPD is delivered in conjunction with the Computing department at Saint John Fisher.

Cross Curricular

Wherever possible, the St. Mary's Catholic Primary School Computing Curriculum is enhanced by interweaving content through other subjects. To understand British Society today, pupils will have a secure understanding of how computing fits into and supports modern society.

Oracy within Computing

In our computing curriculum we ensure that all children:

- Use subject specific vocabulary
- Justify choices made on selected algorithms and data representation
- Comment on and evaluate computer programs and designs
- Communicate in pairs and small groups
- Find, analyse and present information
- Comment on how to stay safe online
- Analyse problems in computational terms and present a solution.

Impact

By the end of the curriculum, all pupils will:

- Have an increased independence and confidence
- Be able to accurately creating and debugging programmes
- Have an improved use of and understanding of computing vocabulary
- Adopt safe, sensible online behaviours
- Have been exposed to progressive skills across year groups
- Apply technology to the wider curriculum
- Have an excitement for the subject

This will be assessed through a multi-faceted approach including: skillful questioning lesson by lesson, retrieval practice and Purple Mash assessment tasks. Leaders will monitor the quality and impact of the Computing curriculum through regular pupil voice and assess the extent to which pupils know more and remember more.

The computing lead will:

- Identify future developments/improvements planned based on 2025/26 monitoring