

# 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 as well as staying safe and making the correct choices. Computers, tablets, programmable robots, digital and video 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. 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
- 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 enjoyable curriculum for ICT and computing
- Meet the requirements of the national curriculum programmes of study for computing
- Find, explore, analyse, exchange and present information in a variety of ways across and engaging and inspiring curriculum
- Are given opportunities to apply their computing skills in different contexts and areas of the curriculum
- Respond to new developments in technology
- Are equipped with the confidence and capability to use computing throughout their later life.

Within this subject, we introduce, build upon and review disciplinary skills, which require the children to think like a computer scientist:



### Computing Overview

Theme Key:	
<span style="color: red;">■</span>	Coding and Computational thinking
<span style="color: blue;">■</span>	Spreadsheets
<span style="color: green;">■</span>	Internet and Email
<span style="color: orange;">■</span>	Art and Design
<span style="color: yellow;">■</span>	Music
<span style="color: purple;">■</span>	Databases and graphing
<span style="color: pink;">■</span>	Writing and Presenting
<span style="color: grey;">■</span>	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
YEAR 1	Unit 1.1 Online Safety & Exploring Purple Mash				Unit 1.2 Grouping & Sorting		Unit 1.3 Pictograms		Unit 1.4 Lego Builders		Unit 1.5 Maze Explorers		Unit 1.6 Animated Story Books				Unit 1.7 Coding			Unit 1.8 Spreadsheets		Unit 1.9 Technology outside school									
	Weeks - 4 Programs - Various				Weeks - 2 Programs - 2DIY		Weeks - 3 Programs - 2Count		Weeks - 3 Programs - 2DIY		Weeks - 3 Programs - 2Go		Weeks - 5 Programs - 2Create A Story				Weeks - 6 Programs - 2Code			Weeks - 3 Programs - 2Calculate		Weeks - 2 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 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 Programs - 2Code				Weeks - 3 Programs - Various			Weeks - 4 Programs - 2Calculate				Weeks - 5 Programs - 2Question, 2Investigate			Weeks - 3 Programs - Browser		Weeks - 5 Programs - 2PaintAPicture			Weeks - 3 Programs - 2Sequence		Weeks - 4 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 Main Programs - 2Code						Weeks - 3 Programs - Various			Weeks - 3 Programs - 2Calculate			Weeks - 4 Programs - 2Type			Weeks - 6 Programs - 2Email, 2Connect, 2DIY						Weeks - 4 Programs - 2Question			Weeks - 3 Programs - 2Simulate, 2Publish			Weeks - 3 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 Investigators						
	Number of Weeks - 6 Main Programs - 2Code						Weeks - 4 Programs - Various			Weeks - 6 Programs - 2Calculate						Weeks - 5 Programs - 2Email, 2Connect, 2DIY			Weeks - 4 Programs - Logo			Weeks - 3 Programs - 2Animate			Weeks - 3 Programs - Browser		Weeks - 2						

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 Main Programs - 2Code						Weeks - 3 Programs - Various			Weeks - 6 Programs - 2Calculate						Weeks - 4 Programs - 2Question, 2Investigate			Weeks - 5 Programs - 2DIY 3D			Weeks - 4 Programs - 2Design and Make			Weeks - 4 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 Main Programs - 2Code						Weeks - 2 Programs - Various			Weeks - 5 Programs - 2Calculate						Weeks - 5 Programs - 2Blog			Weeks - 5 Programs - 2Code, 2Connect			Weeks - 3			Weeks - 6 Programs - 2Quiz, 2DIY, Text Toolkits 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 a coherent knowledge and understanding of Technology and that within the wider world. They will have acquired the disciplinary skills by being able to ask perceptive questions, think critically, sift arguments and develop perspective and judgement. 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.