



## St Blasius Shanklin CE Primary Academy – Computing Curriculum overview

### Intent

Through our Computing curriculum at St Blasius, children will be digitally literate using and selecting a range of different technologies to express themselves and develop ideas through technology. They will be able to create programmes, process information and process data. But, most of all, they will be able to keep themselves safe online.

### Implementation

Each lesson contains revision, analysis and problem-solving. Through the sequence of lessons, we intend to inspire pupils to develop a love of the digital world, see its place in their future and give teachers confidence. Cross-curricular links are also important in supporting other areas of learning. Our lesson plans and resources help children to build on prior knowledge at the same time as introducing new skills and challenges. In KS1, the focus is on developing the use of algorithms, programming and how technology can be used safely and purposefully. In KS2, lessons still focus on algorithms, programming and coding but in a more complex way and for different purposes. Children also develop their knowledge of computer networks, internet services and the safe and purposeful use of the internet and technology. Adult guides are offered, as well as end-of-unit assessments, enabling staff to feel confident in the progression of skills and knowledge and that outcomes have been met.

### Impact

The impact of the teaching of Computing will allow enjoyment of learning across the school. Teachers will have high expectations and quality evidence will be presented in a variety of forms. Children will use digital and technological vocabulary accurately, alongside a progression in their technical skills. They will be confident using a range of hardware and software and will produce high-quality purposeful products. Children will see the digital world as part of their world, extending beyond school, and understand that they have choices to make. They will be confident and respectful digital citizens going on to lead happy and healthy digital lives.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	E-safety: Using the internet safely	Digital Literacy & E-safety: using a computer/device	Coding with Codeapillars/Beebots	Digital Literacy: bug hunters	Digital Literacy: potty painters	Coding: Scratch Jnr - introduction and fundamentals
Year 2	E-safety: Staying safe on the internet	Digital Literacy & E-safety: using a computer/device	Coding: Scratch Jnr - introduction and fundamentals	Digital Literacy - using a computer	Digital Literacy: taking and using photos	Coding: Scratch Jnr - introduction and fundamentals
Year 3	E-safety: Google Share with care	Digital Literacy & E-safety: using a computer/device	Digital Literacy: Explore a Topic with Research and Collaboration	Coding: Animations - Space	Coding: Sound and music - Rock band	Coding: project

<b>Year 4</b>	E-safety: Google Don't fall for fake	Digital Literacy: Research and develop a topic	Coding: Interactive - Chatbot	Coding: Game - Boat race	Digital Literacy: Childnet video competition	Coding: project
<b>Year 5</b>	E-safety: Google Secure your secrets	Digital Literacy: Plan an event	Coding: Scratch - Space Junk Game	Coding: Catch the Dots Game	Digital Literacy: Childnet video competition	Coding: project
<b>Year 6</b>	E-safety: Google It's cool to be kind	Digital Literacy: Explore a Topic with Research and Collaboration	Coding: scratch maths Building with Numbers	Coding: Scratch Memory game	Digital Literacy: Childnet video competition	Coding: project

## Age-related Expectations and Coverage

### Early Years Foundation Stage (Early Learning Goals linked to Computing)

During the EYFS, the learning environment, adult-led activities and child initiated activities will be planned and supported to encourage progress in Computing. Children at the end of the EYFS who have reached the expected level of development will be able to:

- Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
- Explain the reasons for rules, know right from wrong and try to behave accordingly.
- Safely use and explore a variety of materials, tools and techniques and to experiment with colour, design, texture, form and function.
- To recognise that a range of technology is used in places such as homes and schools.
- To select and use technology for particular purposes.

The most relevant statements for Computing are also taken from the Computing age-related statements as below:

- To develop their small motor skills so that they can use a range of tools competently, safely and confidently.
- To know and talk about the different factors that support their overall health and well-being, for example, sensible amounts of screen time.
- To explore, use and refine a variety of artistic effects to express their ideas and feelings.

## Key Stage 1

By the end of Key Stage 1 pupils will be able to:

- 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 respectfully, 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.

## Key Stage 2

By the end of Key Stage 2 pupils will be able to:

- 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; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, 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 accomplish 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.

### Computing - Key Stage 1

National Curriculum Content	Year 1	Year 2
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	<ul style="list-style-type: none"> <li>To recognise common uses of information technology beyond school.</li> </ul>	<ul style="list-style-type: none"> <li>To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</li> </ul>
	<ul style="list-style-type: none"> <li>To use technology purposefully to create, organise and retrieve digital content.</li> </ul>	<ul style="list-style-type: none"> <li>To create and debug simple programs.</li> </ul>
	<ul style="list-style-type: none"> <li>To use technology safely and respectfully and identify where to go for help and support when they have concerns about content.</li> </ul>	<ul style="list-style-type: none"> <li>To use logical reasoning to predict the behaviour of simple programs.</li> </ul>
	<ul style="list-style-type: none"> <li>To understand what algorithms are</li> </ul>	<ul style="list-style-type: none"> <li>To use technology purposefully to create, organise and manipulate digital content.</li> </ul>

### Computing - Lower Key Stage 2

National Curriculum Content	Year 3	Year 4
	<ul style="list-style-type: none"> <li>To understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web</li> <li>To use search technologies effectively.</li> </ul>	<ul style="list-style-type: none"> <li>To design, write and debug programs that accomplish specific goals</li> <li>To appreciate how search results are selected and ranked.</li> <li>To understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web.</li> </ul>
	<ul style="list-style-type: none"> <li>To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in simple algorithms and programs.</li> <li>To use technology safely, respectfully and responsibly and identify a range of ways to report concerns about content and contact.</li> </ul>	<ul style="list-style-type: none"> <li>To select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of program and systems.</li> <li>To use technology safely, respectfully and responsibly and identify a range of ways to report concerns about content and contact.</li> </ul>

## Computing - Upper Key Stage 2

National Curriculum Content	Year 5	Year 6
	<ul style="list-style-type: none"> <li>• To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</li> <li>• To appreciate how search results are selected and ranked.</li> <li>• To design, write and debug programs that accomplish specific goals, including controlling or stimulating physical systems.</li> </ul>	<ul style="list-style-type: none"> <li>• To understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web.</li> <li>• To use sequence, selection and repetition in programs; work with variables and various forms of input and output.</li> <li>• To design, write and debug programs that accomplish specific goals, including controlling or stimulating physical systems; solve problems by decomposing them into smaller parts.</li> </ul>
	<ul style="list-style-type: none"> <li>• To select, use and combine a variety of software on a range of devices to design and create a range of systems and content that accomplish given goals including analysing and presenting data and information.</li> <li>• To use technology safely and responsibly and to recognise both acceptable and unacceptable behaviour.</li> <li>• To understand the opportunities networks offer for communication and collaboration.</li> </ul>	<ul style="list-style-type: none"> <li>• To select, use and combine a variety of software on a range of digital devices to design and create a range of programs and systems that accomplish given goals including collecting, analysing, evaluation and presenting data and information.</li> <li>• To understand the opportunities networks offer for communication and collaboration.</li> <li>• To be discerning in evaluating digital content.</li> </ul>