# St. Gabriel's CE Primary School
# Computing Yearly Overview 2023-24
# National Curriculum Objectives

| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|---|
| **Aims:**<br>• Under the EYFS new framework 'Understanding the world' no longer contains the 'technology' strand. However, we ensure that Reception children continue to develop their computing skills: | | | | | | |
| **Year R** | • Online safety is covered through PSHE and discussion about personal boundaries<br>• Complete a simple program on the computer and / or perform simple functions on ICT equipment.<br>• Know how to operate simple equipment.<br>• To show an interest in Computing.<br>• Find out about and identify the uses of everyday technology and use information and communication toys to support their learning. | | | | | |

| Year 1 Computing coverage | | | | | | |
|---|---|---|---|---|---|---|
| **Year 1** | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Aims**<br>• **The national curriculum for computing aims to ensure that all pupils:**<br>• **can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation**<br>• **can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems**<br>• **can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems**<br>**are responsible, competent, confident and creative users of information and communication technology.** | | | | | | |
| **Computer Science** | | ● understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. | ● understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions<br><br>● create and debug simple programs.<br><br>● use logical reasoning to predict the behaviour of simple programs | ● understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions<br><br>● create and debug simple programs.<br><br>● use logical reasoning to predict the behaviour of simple programs | | |
| **Information Technology** | •*use technology purposefully to create, organise, store, manipulate and retrieve digital content* | | | | •*use technology purposefully to create, organise, store, manipulate and retrieve digital content* | |
| **Digital Literacy** | ● *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.* | | | | ● recognise common uses of information technology beyond school. | |

| Year 2 Computing coverage | | | | | | |
|---|---|---|---|---|---|---|
| | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| Aims<br>• The national curriculum for computing aims to ensure that all pupils:<br>• can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation<br>• can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems<br>• can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems<br>are responsible, competent, confident and creative users of information and communication technology. | | | | | | |
| **Year 2** | **Online safety<br>Coding** | **Online safety<br>Spreadsheets and questioning** | **Online safety<br>Effective searching** | **Online safety<br>Creating Pictures** | **Online safety<br>Making music** | **Online safety<br>Presenting ideas** |
| **Computer Science** | ● understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.<br><br>● create and debug simple programs.<br><br>● use logical reasoning to predict the behaviour of simple programs | •*use technology purposefully to create, organise, store, manipulate and retrieve digital content.*<br><br>● recognise common uses of information technology beyond school. | ● recognise common uses of information technology beyond school. | •*use technology purposefully to create, organise, store, manipulate and retrieve digital content.* | ● recognise common uses of information technology beyond school. | •*use technology purposefully to create, organise, store, manipulate and retrieve digital content.* |
| **Information Technology** | | | •*use technology purposefully to create, organise, store, manipulate and retrieve digital content* | | •*use technology purposefully to create, organise, store, manipulate and retrieve digital content* | |
| **Digital Literacy** | | ● *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.* | | | | |

| Year 3 Computing coverage | | | | | | |
|---|---|---|---|---|---|---|
| | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| Aims - The national curriculum for computing aims to ensure that all pupils:<br>• can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation<br>• can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems<br>• can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems are responsible, competent, confident and creative users of information and communication technology. | | | | | | |
| **Year 3** | **Online safety/Coding** | **Online safety/Touch typing and Spreadsheets** | **Email and online safety** | **Online safety/Branching databases** | **Online safety/Simulations** | **Online safety/Graphing** |
| **Computer Science** | ● design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts<br><br>● use sequence, selection, and repetition in programs; work with variables and various forms of input and output<br><br>● 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<br><br>● 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 | | | |
| **Information Technology** | | ● 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 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 | | |
| **Digital Literacy** | | | | ●use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | | |

| Year 4 Computing coverage | | | | | | |
|---|---|---|---|---|---|---|
| | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| Aims - The national curriculum for computing aims to ensure that all pupils:<br>• can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation<br>• can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems<br>• can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems are responsible, competent, confident and creative users of information and communication technology. | | | | | | |
| **Year 4** | **Online Safety<br>4.1 – Coding** | **4.2 – Online Safety** | **Online Safety<br>4.3 - Spreadsheets** | **Online Safety<br>4.4 – Writing for different audiences** | **Online Safety<br>4.5 - Logo** | **Online Safety<br>4.6 - Animation** |
| **Computer Science** | ● design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts<br><br>● use sequence, selection, and repetition in programs; work with variables and various forms of input and output<br><br>● 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 | | | ● *design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts*<br><br>● use sequence, selection, and repetition in programs; work with variables and various forms of input and output<br><br>● use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs | |
| **Information Technology** | | | ● 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 | | ● 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 |
| **Digital Literacy** | | ●use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact | | | | |

| Year 5 Computing coverage | | | | | | |
|---|---|---|---|---|---|---|
| | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| Aims - The national curriculum for computing aims to ensure that all pupils:<br>• can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation<br>• can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems<br>• can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems are responsible, competent, confident and creative users of information and communication technology. | | | | | | |
| **Year 5** | **Online Safety<br>Coding** | **Online safety<br>Spreadsheet/** | **Online safety<br>Databases** | **Online safety<br>Game creator** | **Online safety<br>3D Modelling** | **Online safety<br>Concept Maps** |
| **Computer Science** | ● Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.<br><br>● Use sequence, selection and repetition in programs; work with variables and various forms of input and output.<br><br>●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. | | ● Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. | | ●*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.* |
| **Information Technology** | | 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. | | | ●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. | |
| **Digital Literacy** | | | ●Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | | | |

| Year 6 Computing coverage | | | | | | |
|---|---|---|---|---|---|---|
| | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| Aims - The national curriculum for computing aims to ensure that all pupils:<br>• can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation<br>• can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems<br>• can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems are responsible, competent, confident and creative users of information and communication technology. | | | | | | |
| **Year 6** | **Online Safety**<br>**Coding** | **Online safety**<br>**Spreadsheet/ Conducting research** | **Online safety**<br>**Blogging** | **Online safety**<br>**Text adventures** | **Online safety**<br>**Networks** | **Online safety**<br>**Quizzing** |
| **Computer Science** | ●Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts<br><br>● Use sequence, selection and repetition in programs; work with variables and various forms of input and output.<br><br>● 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. | ●Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts<br><br>● Use sequence, selection and repetition in programs; work with variables and various forms of input and output.<br><br>● 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. | |
| **Information Technology** | | ●Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.<br><br>● 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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.<br><br>● 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. |
| **Digital Literacy** | | ● acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | ● acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact | | | |