**Computing Learning Journey**

This document aims to track expectations for Computing at Marsh Gibbon Church of England School.

## What the National Curriculum says:

### Key stage 1

Pupils should be taught 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 material on the internet or other online technologies

### Key stage 2

Pupils should be taught 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

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|---|---|---|---|---|---|---|---|
| **Computer Science (CS)** | | • Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions<br>• Create and debug simple programs<br>• Use logical reasoning to predict the behaviour of simple programs | | • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts<br>• Use sequence, selection, and repetition in programs<br>• Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs | • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts<br>• Use sequence, selection, and repetition in programs; work with variables and various forms of input and output<br>• Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs | • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts<br>• Use sequence, selection, and repetition in programs<br>• Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs<br>• Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web<br>• Appreciate how [search] results are selected and ranked | • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts<br>• Use sequence, selection, and repetition in programs; work with variables and various forms of input and output<br>• Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs<br>• Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web |

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| **Information Technology (IT)** | | • Use technology purposefully to create, organise, store, manipulate and retrieve digital content | • Use search technologies effectively<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<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<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<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 |

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|---|---|---|---|---|---|---|
| Digital Literacy (DL) | • Recognise common uses of information technology beyond school<br>• 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<br>• 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 | • Be discerning in evaluating digital content<br>• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact | • Be discerning in evaluating digital content<br>• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact | • Understand the opportunities [networks] offer for communication and collaboration<br>• Be discerning in evaluating digital content<br>• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact | • Understand the opportunities [networks] offer for communication and collaboration<br>• Be discerning in evaluating digital content<br>• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact |