

Pennine Way Primary School



Computing Curriculum and Skills Plan

National Curriculum Objectives and skills

| Computing National Curriculum Expectations Year 1 | | Year 1 | | | |
|---|--|---|-----|-----|--|
| | | Aut | Spr | Sum | |
| 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. | | | | |
| | Create and debug simple programs. | | | | |
| | Use logical reasoning to predict the behaviour of simple programs. | | | | |
| | C1.1 | Understand and explain what algorithms are. | | | |
| | C1.2 | Understand where algorithms are used. | | | |
| | C1.3 | Understand what debugging is. | | | |
| Information technology | Use technology purposefully to create, organise, store, manipulate and retrieve digital content. | | | | |
| | Recognise common uses of information technology beyond school. | | | | |
| | C1.4 | Switch on and log in to a variety of devices. | | | |
| | C1.5 | Create a document and save it. | | | |
| | C1.6 | Reopen saved document and be able to make changes. | | | |
| 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. | | | | |
| | C1.7 | Understand the importance of passwords and keeping them safe. | | | |
| | C1.8 | Understand that not everything on the internet is appropriate for me. | | | |

| Computing National Curriculum Expectations Year 2 | | Year 2 | | | |
|---|--|---|-----|-----|--|
| | | Aut | Spr | Sum | |
| 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. | | | | |
| | Create and debug simple programs. | | | | |
| | Use logical reasoning to predict the behaviour of simple programs. | | | | |
| | C2.1 | Create simple programs using a set of instructions / algorithms. | | | |
| | C2.2 | Identify problems and solve them. | | | |
| | C2.3 | Predict what will happen in simple programs. | | | |
| | C2.4 | Explain and justify predictions. | | | |
| Information technology | Use technology purposefully to create, organise, store, manipulate and retrieve digital content. | | | | |
| | Recognise common uses of information technology beyond school. | | | | |
| | C2.5 | Create a simple blog. | | | |
| | C2.6 | Create and send an email. | | | |
| 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. | | | | |
| | C2.7 | To use passwords and keeping them safe. | | | |
| | C2.8 | To explain what is and is not appropriate to look at on the internet. | | | |

| Computing National Curriculum Expectations Year 3 | | Year 3 | | | |
|---|---|--|-----|-----|--|
| | | Aut | Spr | Sum | |
| 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. | | | | |
| | Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | | | | |
| | Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. | | | | |
| | 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. | | | | |
| | C3.1 | Create a simple program that accomplishes a specific goal. | | | |
| | C3.2 | Identify simple problems and debug them. | | | |
| | C3.3 | Be able to sequence instructions in a variety of simple programs. | | | |
| C3.4 | Create a simple repeated pattern to complete a goal. | | | | |
| C3.5 | Use a variable to change an outcome. | | | | |
| Information technology | 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. | | | | |
| | C3.6 | Understand how to use a search engine. | | | |
| | C3.7 | Understand and explain the pros and cons of using a search engine. | | | |
| Digital Literacy | Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | | | | |
| | C3.8 | Know what is acceptable when using my iPad. | | | |
| | C3.9 | Know who to report concerns to about my iPad. | | | |

| Computing National Curriculum Expectations Year 4 | | Year 4 | | | | |
|---|---|--|-----|-----|--|--|
| | | Aut | Spr | Sum | | |
| 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. | | | | | |
| | Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | | | | | |
| | Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. | | | | | |
| | 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. | | | | | |
| | C4.1 | Create a program that accomplishes a specific goal. | | | | |
| | C4.2 | Identify problems and debug them. | | | | |
| | C4.3 | Create a program that controls a physical system. | | | | |
| | C4.4 | Be able to sequence instructions in a variety of programs. | | | | |
| | C4.5 | Create repeated patterns to complete a goal. | | | | |
| | C4.6 | Use variables to change outcomes. | | | | |
| | C4.7 | Collect data effectively. | | | | |
| C4.8 | Analyse data collected. | | | | | |
| C4.9 | Present data digitally in an appropriate format. | | | | | |
| C4.10 | Evaluate data. | | | | | |
| Information technology | 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. | | | | | |
| | C4.11 | Find information using a search engine. | | | | |
| | C4.12 | Choose a reputable website based on the information needed. | | | | |
| Digital Literacy | Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | | | | | |
| | C4.13 | Know what is acceptable when using my iPad and playing games online. | | | | |
| | C4.14 | Know who to report concerns to about when using my iPad and online gaming. | | | | |

| Computing National Curriculum Expectations Year 5 | | Year 5 | | | | | |
|---|---|--|-----|-----|--|--|--|
| | | Aut | Spr | Sum | | | |
| 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. | | | | | | |
| | Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | | | | | | |
| | Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. | | | | | | |
| | 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. | | | | | | |
| | C5.1 | Create complex program that accomplish specific goals. | | | | | |
| | C5.2 | Break a program down into smaller parts (decompose) in order to debug them. | | | | | |
| | C5.3 | To be able to create complex sequences to form a program. | | | | | |
| | C5.4 | Create a variety of repeated patterns to complete a goal. | | | | | |
| | C5.5 | Use a variety of variables to change outcomes. | | | | | |
| | C5.6 | Collect a variety of data effectively. | | | | | |
| C5.7 | Analyse a variety of data collected. | | | | | | |
| C5.8 | Present a variety of data digitally in an appropriate format. | | | | | | |
| C5.9 | Evaluate a variety of data. | | | | | | |
| Information technology | 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. | | | | | | |
| | C5.10 | Find information quickly and efficiently using a search engine. | | | | | |
| | C5.11 | Choose from a variety of reputable website based on the information needed and justify why they were chosen. | | | | | |
| Digital Literacy | Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | | | | | | |
| | C5.12 | Know what is acceptable to do with my iPad, online gaming and whilst using the internet. | | | | | |
| | C5.13 | Know who to report concerns to about my iPad, online gaming and whilst using the internet. | | | | | |

| Computing National Curriculum Expectations Year 6 | | Year 6 | | | |
|---|---|---|-----|-----|--|
| | | Aut | Spr | Sum | |
| 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. | | | | |
| | Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | | | | |
| | Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. | | | | |
| | 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. | | | | |
| | C6.1 | Create complex programs that accomplish specific goals. | | | |
| | C6.2 | Break programs down into smaller parts (decompose) in order to debug them. | | | |
| | C6.3 | Create complex programs that control physical system. | | | |
| | C6.4 | To be able to create complex sequences to form programs. | | | |
| | C6.5 | Create a variety of complex repeated patterns to complete a goal. | | | |
| | C6.6 | Use a variety of complex variables to change outcomes. | | | |
| | C6.7 | Collect a variety of complex data effectively. | | | |
| C6.8 | Analyse a variety of complex data collected. | | | | |
| C6.9 | Present a variety of complex data digitally in an appropriate format. | | | | |
| C6.10 | Evaluate a variety of complex data. | | | | |
| Information technology | 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. | | | | |
| | C6.11 | Find specific information quickly and efficiently using a search engine. | | | |
| | C6.12 | Find a reputable website based on the information needed and justify why they were chosen. | | | |
| | C6.13 | Understand the opportunities the world wide web offers and how it can help us in a variety of ways. | | | |
| C6.14 | Use computer networks as a form of communication. | | | | |
| Digital Literacy | Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | | | | |
| | C6.15 | Know what is acceptable to do with my iPad, online gaming, whilst using the internet and social media technology. | | | |
| | C6.16 | Know who to report concerns to when using my iPad, online gaming, using the internet and social media technology. | | | |

