# Nine Acres Primary School Computing Curriculum

| | Autumn 1 E-Safety | Autumn 2 Programming | Spring 1 Handling Data | Spring 2 Multimedia | Summer 1 Technology in our lives | Summer 2 Consolidation/ Transition |
|---|---|---|---|---|---|---|
| EYFS | E-safety: Using the internet safely. (What you see) | Exploring technological toys such as Beebots. | Knows how to operate simple equipment, e.g. turns on CD player and uses remote control. | Using a computer/device for a given purpose. IWB | Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobiles. | |
| Year 1 | E-safety: Using the internet safely | Coding with Beebots/Beebot App Create a series of instructions/Plan a journey for a programmable toy. **Programming A** | Use a website/Create, store and retrieve digital content. **Data Information (link to Maths, no computer)** | Word processing Typing/Symbols and save/Editing **Digital Writing** | Use a camera/Record sound and playback. **Digital Painting** | Use taught skills within other subjects, e.g. publish a piece of work for History. |
| Year 2 | E-safety: Staying safe on the internet | Coding: Scratch Jnr - introduction and fundamentals Write a simple program and test it. Use a range of instructions e.g. directions. Test and amend a set of instructions. Find errors and amend (debug) **Programming B** | Understand digital content. **Pictograms – Linked to Maths** | Word processing Undo/redo/Select and format/formatting text | Navigate the web to complete simple searches/Retrieve and manipulate digital content. **IT Around Us** | Use taught skills within other subjects, e.g. |
| Year 3 | E-safety: Google (Internet Legends) Share with care | Coding: Animations – Scratch Jr Design a sequence of instructions, including directional instructions. Write programs that | Design and create content/Present information. Manipulate and improve digital images/Use a range of software for | Word processing Change case/Align text/bullets and numbering Advanced select and keyboard | Search for information on the web in different ways/Collect information. **Connecting Computers** | Use taught skills within other subjects, e.g. |

| | | accomplish specific goals.<br>**Scratch – Programming A** | similar purpose.<br>**Desktop Publishing** | shortcuts/Using text boxes and text wrap | | |
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| **Year 4** | E-safety: Google (Internet Legends) Don't fall for fake | Coding: Interactive – Give an on-screen robot specific instructions that takes them from A to B. Experiment with variables to control models.<br>De-bug a program.<br>**Programming A (iPads)** | Select and use software to accomplish given goals.<br>**Photo Editing (Chrombook App – Google Photos)** | Word processing Formatting images/create a layout/spellcheck | Collect and present data.<br>**Data Loggers** | Use taught skills within other subjects, e.g. |
| **Year 5** | E-safety: Google (Internet Legends) Secure your secrets | Coding: Scratch – Use technology to control an external device.<br>Combine sequences of instructions and procedures to turn devices on and off.<br>**Programming A (with kit)**<br>**Programming B (no kit)** | Analyse and evaluate information.<br>**Flat File Databases** | Word processing Insert a table/change the layout/create hyperlinks | Understand how search results are selected and ranked<br>**Vector Drawing (Scratch or Word)**<br>**Video Editing** | Use taught skills within other subjects, e.g. |
| **Year 6** | E-safety: Google (Internet Legends) It's cool to be kind | Information Technology: Word processing<br><br>This year start with elements of Year 1/3/4 planning<br><br>Long term plan to start google docs in this year | Use a range of technology for a specific project<br>**3D Modelling (sketch up)** | Word processing Select, use and combine software on a range of digital devices<br><br>Long term plan to introduce google drive/classroom this term | SATS<br>**3D Modelling** | Start/continue work on google drive/google classroom ready for secondary |

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**Purpose of study**

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

**Aims**

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- 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

**Attainment targets**

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Schools are not required by law to teach the example content in [square brackets].

**Subject content**

# 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 content or contact 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 contac