

Gothic Mede Academy Computing Curriculum 2024-25

	30-50 months	40-60 months	Early Learning Goals
EYFS	To know how to operate simple toys and devices. To show interest in technological toys or real objects with knobs or pulleys. To show skill in making toys working by pressing or lifting to achieve effects such as sound, movement or new images. To know that computers can be used to retrieve information.	To complete a simple program on a computer. To interact with age appropriate computer software.	To recognise that a range of technology is used in places such as homes, work and schools. To select and use technology for particular purposes.
	Autumn	Spring	Summer
Year 1	Unit 1.1 Online Safety & Exploring Purple Mash (Programs – Various) 4 lessons Unit 1.2 Grouping & Sorting (Program – 2DIY) 2 lessons Unit 1.3 Pictograms Number (Program – 2Count) 3 lessons	Unit 1.4 Lego Builders (Program – 2DIY) 3 lessons Unit 1.5 Maze Explorers (Program – 2Go) 3 lessons Unit 1.6 Animated Story Books (Program – 2CreateAStory) 5 lessons	Unit 1.7 Coding (Program – 2Code) 6 lessons Unit 1.8 Spreadsheets (Program -2Calculate) 3 lessons Unit 1.9 Technology outside school (Programs – Various) 2 lessons
Year 2	Unit 2.1 Coding (Program – 2Code) 6 lessons Unit 2.2 Online Safety (Programs – Various) 3 lessons Unit 2.3 Spreadsheets (Program - 2Calculate) 4 lessons	Unit 2.4 Questioning (Programs – 2Question, 2Investigate) 5 lessons Unit 2.5 Effective Searching (Programs – Browsers) 3 lessons	Unit 2.6 Creating Pictures (Program 2PaintAPicture) 5 lessons Unit 2.7 Making Music (Program – 2Sequence) 3 lessons Unit 2.8 Presenting Ideas (Programs – Various) 4 lessons
Year 3	Unit 3.1 Coding (Program – 2Code) 6 lessons Unit 3.2 Online Safety (Programs – Various) 3 lessons Unit 3.3 Spreadsheets (Program – 2Calculate) 3 lessons	Unit 3.4 Touch Typing (Program 2Type) 4 lessons Unit 3.5 Email (including email safety) (Programs – 2Email, 2Connect, 2DIY) 6 lessons Unit 3.6 Branching Databases (Program – 2Question) 4 lessons	Unit 3.7 Simulations (Programs - 2Simulate, 2Publish) 3 lessons Unit 3.8 Graphing (Program – 2Graph) 2 lessons Unit 3.9 Presenting (with Google Slides) 6 lessons
Year 4	Unit 4.1 Coding (Program – 2Code) 6 lessons Unit 4.2 Online Safety (Programs – various) 4 lessons Unit 4.3 Spreadsheets (Program - 2Calculate) 6 lessons	Unit 4.4 Writing for Different Audiences (Programs – 2Email, 2Connect, 2DIY) 5 lessons Unit 4.5 Logo (Program – Logo) 4 lessons Unit 4.6 Animation (Program - 2Animate) 3 lessons	Unit 4.7 Effective Search (Programs – Browsers) 3 lessons Unit 4.8 Hardware Investigators 2 lessons Unit 4.9 Making Music (Program – Busy Beats) 4 lessons

For our computing curriculum, we follow the National Curriculum Programmes of Study. It is taught via *Purple Mash* and covers the above units.

National curriculum in England

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.

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 contact.