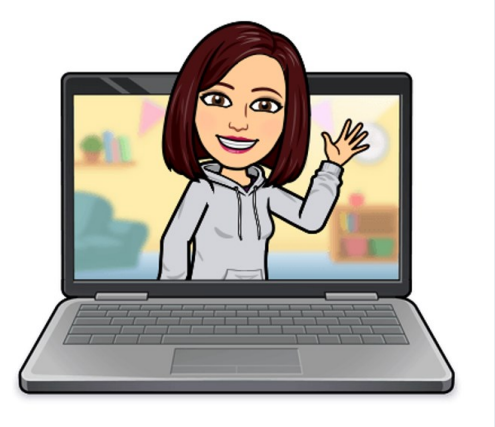
Computing at Meir Heath



Intent

At Meir Heath Academy, we aim to prepare our pupils to thrive in the digital world of today and the future by providing them with the opportunities and skills that will prepare them for an ever-changing digital world. This will enable the children to have an impact on the world around them, instilling confidence that they can alter their own path. Our computing curriculum focuses on a progression of skills to progressively build on the knowledge, skills, values, and attitudes of our pupils. We aim to develop critical thinking skills, creativity, curiosity, and independence.

Implementation

At Meir Heath Academy, our children have access to 1:1 iPads. We use a clear and progressive scheme of work that provides coverage in line with the National Curriculum. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children. Each lesson is designed to build on prior learning and develop a deep understanding of the concepts taught. Key vocabulary is also used throughout the lessons and shows clear progression. The curriculum is adapted where necessary, to meet the needs of all children whilst still being aspirational. At Meir Heath Academy, we give children access to a wide range of resources and provide cross curricular opportunities for children to apply their computing knowledge and skills. These cross curricular links motivate pupils and support them in making connections and remembering the steps they have been taught. We want our pupils to be fluent with a range of tools to best express their understanding and hope by UKS2, children have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers. We follow a broad and balanced curriculum that builds on previous learning and provides both support and challenges for learners. All classes have a scheduled computing lesson each week. Children's work will be stored on Showbie for reference and assessment. Online safety is a priority and is taught at the start of every half-term. Parents are informed when issues relating to online safety arise and further information/support is provided if required.

Computer Science – the understanding of coding and programming across a range of physical devices and digital resources

Information Technology – the range of skills required to operate and manipulate specific programs, systems and content

Digital Literacy – the knowledge required to use technology safely

Impact

- Our progressive curriculum will allow our children to become digital-literate.
- Children will learn key computing vocabulary.
- Children will become confident within a rapidly changing digital world.
- Children will know how to stay safe online.
- Children will know why they are doing things, not just how.
- Children will be enthusiastic and confident in their use of technology.

Aims

- Teach our children to use technology responsibly and carefully, being mindful of how their behaviour, words and actions can affect others.
- Develop a respectful and responsible attitude towards using information and computing technology.
- To provide our children with the skills to keep themselves safe online.
- Ensure a progression of skills.
- Gain experience and skills of a wide range of technology in a way that will enhance their learning opportunities.
- We want our pupils to discuss, reflect and appreciate the impact computing and technology has on their lives.
- Provide a broad and balanced curriculum.
- Meet the requirements of the National Curriculum.
- Develop an interest in technology.
- To encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible.

National Curriculum 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.

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.