



Blessed is the one who trusts in the Lord, whose confidence is in him.
They will be like a tree planted by the water that sends out its roots by the stream.
It does not fear when heat comes; its leaves are always green.
It has no worries in a year of drought and never fails to bear fruit.

Jeremiah 17: 7 - 8

Computing Policy

“I think it’s fair to say that personal computers have become the most empowering tool we’ve ever created. They’re tools of communication, they’re tools of creativity, and they can be shaped by their use.”

Bill Gates

Introduction

Computing is changing the lives of everyone. The use of computing is an integral part of the National Curriculum and is a key skill for everyday life. Through teaching Computing, we equip children to participate in a rapidly-changing world where work and leisure activities are increasingly transformed by technology. We enable them to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way. Computing skills are a major factor in enabling children to be confident, creative and independent learners. At the Federation of Middleham (VA) & Spennithorne (VC) CE Primary Schools we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively.

The Federation of Middleham (VA) & Spennithorne (VC) CE Primary Schools follows the national curriculum and Early Years documentation to ensure knowledge; skills and understanding are taught throughout all key stages. The school has created its own long and medium term planning which details the topics, objectives, knowledge, skills and vocabulary which should be covered. Through this long term planning, the national curriculum breath of study for computing is fully covered.

Our core aims are to provide teaching and learning opportunities through the history curriculum that empowers the children to be:

**ASPIRATIONAL
RESPECTFUL
RESILIENT**

We believe that by having these three aims at the root, will equip our pupils to **LIVE FRUITFUL LIVES** and to **LEARN, LOVE and GROW**.

Curriculum Intent

At the Federation of Middleham (VA) & Spennithorne (VC) CE Primary Schools, we aim to provide a high-quality Computing curriculum that will equip children with the skills and knowledge they need to use technology safely, responsibly and creatively, in school and beyond.

Aims of the computing curriculum

We aim to support our children to become computer competent by:

- Developing their understanding of how to use computing safely and responsibly.
- Providing a broad, balanced, challenging and enjoyable curriculum for all children
- Providing an accessible, relevant, challenging and enjoyable curriculum in computing for all pupils.
- Meeting the requirements of the National Curriculum programmes of study for computing.
- Using and applying computing to enhance learning throughout the curriculum, especially deepening links with mathematics, science and design and technology.
- Responding to new developments in technology and understanding how it effects everyday life and beyond.
- Equipping children with the confidence and capability to use computing throughout their later life.
- Developing, using and understanding Computing technical language

With the federation's Christian ethos and values at its root in Computing, we want all children to become independent and to have fun with technology while developing 21st-century skills as today's children and young people are growing up in a digital world. As they grow older, it is crucial that they learn to balance the benefits offered by technology with a critical awareness of their own and other's online behaviour, and develop effective strategies for staying safe and making a positive contribution online. Online Safety is an integral part of our computing curriculum so that children focus on the key aspects of online education which will support our children to live knowledgeably, responsibly and safely in a digital world.

Implementation

Effective learning

We acknowledge that children learn in many different ways and we recognise the need to develop strategies that allow all children to learn in ways that best suit them most effectively. We take into account the different ways that children learn when planning and teaching in order to ensure all children access a full and varied curriculum. Children have opportunities to work independently, in pairs, small groups and larger groups in structured and unstructured ways. Our Computing curriculum has been structured to demonstrate a progression of skills and ensures that children can build on their understanding, as each new concept and skill is taught with opportunities for children to revisit skills and knowledge as they progress through school. We offer opportunities for all children to learn in different ways in computing as outlined in our teaching and learning policy.

Effective Teaching

Our long term plan ensures coverage of the National Curriculum and Key Stage expectations through using Teach Computing, a government recommended planning tool. The long term plan reflects the suggested activities to best deliver the National Curriculum statements. The order has been adapted to ensure mixed age group coverage as well interweaving deep links to Maths, Science and Design Technology, where cross curricular opportunities to revisit skills and knowledge are identified.

“Our vision is for every child in every school in England to have a world-leading computing education.” (Teach Computing).

Teach Computing supports our teachers own planning and workload with opportunities for continued professional development embedded. Learning is structured into learning units and by embedding this scheme into our long term plan we aim to cover three broad learning focus areas, including digital literacy, information technology and computer science, which are all underpinned by computational thinking. Online safety is also an integral part of the curriculum, with SMART rules embedded and tailored weekly safety starters from ProjectEVOLVE, which is linked to the government document “Education For A Connected World”. The Computing curriculum operates on a two year rolling cycle from Early Years to Year 6 and ensures full curriculum coverage of learning focuses and ensures vital knowledge is built upon. Tailored planning ensures all children's needs and abilities are catered for within their year groups and it is stored on Microsoft Teams, with annotation to show the progress of meeting the needs of our children. Planning specifies prior knowledge and teachers ensure children's prior knowledge is built up, whilst ensuring differentiation is evident.

Early Years Foundation Stage

In Early Years we use Development Matters to guide teaching and learning. By the end of each key stage, children are expected to know, apply and understand the matters, skills and processes associated with using a variety of media through a combination of child initiated and adult directed activities. It is important in the Early Years to give children a broad, play-based experience of IT and computing in a range of contexts, including unplugged computer activities and outdoor play, developing computational thinking.

The children will have opportunities to learn to:

- Safely use a range of technology for a purpose
- Use a camera on an iPad.
- Work a simple programmable toy.
- Select and use technology for particular purposes.
- Know how technology is used in my own home.

Learning will be documented in a variety of ways such as drawings, paintings, tables of results, digital photographs.

Key stage 1

Children are taught to:

- 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.
- 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

Key stage 2

Pupils are taught to:

- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
- 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

Resources

The children will have access to a range of Computing resources, including: laptops, tablets, mice, headphones, microphones, Scratch, Paint, Imovie, Beebots, Google Classroom, Microsoft Office, microbits, data loggers and crumbles.

Health and Safety

We must obviously be alert to any possible dangers when working in school. It is very important that children are aware of the safe handling and storage of any tools and equipment. Risk assessments are carried out prior to any visits or visitors attending the school.

Equal Opportunities and Special Education Needs and Inclusion

All children are given opportunities to access the National Curriculum requirement. All children regardless of ability, ethnicity, religion or gender, will be given equal opportunity to access all aspects of the Computing curriculum. Any child experiencing difficulty in accessing part, or all, of the curriculum, will be supported with the time, materials and equipment to access the activity at their own level where this is practically possible. Planning, resources and displays will reflect positive images of all communities represented in our society.

Impact

Assessment for Learning

At The Federation of Middleham (VA) & Spennithorne (VC) CE Primary Schools assessment is an integral part of the teaching process. The assessment of children's work is on-going to ensure that understanding is being achieved and that progress is being made. Teachers take time to review pupil knowledge, and take the time to use these assessments to inform and adapt future Computing planning. Opportunities for pupils to make connections to deepen understanding is central to learning and this is outlined in our curriculum maps for each subject.

Teachers assess children's knowledge, understanding and skills in Computing by making observations, giving live individual feedback and built into the activities are several points where the teacher has the opportunity to assess, through mini plenaries and verbal questions to extend and consolidate children's understanding and take stock of the children's progress. Peer to peer feedback and end of unit quizzes are also used as an essential part of assessment learning in Computing. The marking of work is guided by the school's Marking Policy. Teachers update the assessment tracker half termly following a topic to record progress and objectives covered.

Subject Leaders monitoring

The subject leader reviews standards and monitors the impact of the curriculum provision whilst also ensuring training and resources are up to date.

Monitoring and review

We are aware of the need to review the school teaching and learning policy regularly so that we can take account of new initiatives, pupil needs, changes in the curriculum, developments in technology or changes to the physical environment of the school.