Computing Policy

Our Curriculum at Finchale

At Finchale Primary School we are proud of our curriculum and the range of experiences we provide for our children. Our curriculum is accessible to all children, irrespective of their ethnic background, gender, disability, religious or linguistic background. We strive to meet the needs of those pupils with additional needs, including special educational needs, those with disabilities, those who are more able, those with gifts or talents and the children who are learning English as an additional language. We provide a rich and challenging curriculum which aims to stretch our children. Staff monitor our children to ensure that they are supported in their learning, whatever their ability.

Statement of Intent for Computing

At Finchale Primary School, we aim to equip children to develop and use the computational thinking and creativity that will enable them to become active participants in the digital world. These skills support our children to problem-solve, investigate, and express themselves in a variety of ways, using a variety of forms. Online safety is embedded throughout the Computing curriculum and supports and consolidates the strong presence of Online safety within our RSHE curriculum. Whilst ensuring they understand the advantages and disadvantages associated with online experiences, we want children to develop as respectful, responsible, and confident users of technology, so they develop a safe and healthy relationship with technology. It is now more important than ever that children can use technology positively, responsibly, and safely, and that they see good models of this.

Our curriculum prepares children for participation in a rapidly changing world where work and leisure activities are increasingly transformed by technology. By the time they leave Finchale Primary School, children will have gained key knowledge and skills in the three main strands of the National Curriculum for Computing (2014): computer science, information technology and digital literacy. Our aim is to provide a computing curriculum that is designed to balance the development of deep knowledge alongside opportunities to apply skills in various contexts. Beyond teaching Computing discreetly, we will give pupils the opportunity to apply and develop what they have learnt across wider learning in the curriculum.

This Policy was agreed in January 2025 and will be reviewed in Autumn 2026.

Head Teacher: N Ward Date: 8th January, 2025

The Importance of Computing

The National Curriculum (DfE, 2014) states that ahigh-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

At Finchale our core curriculum covers those elements set out in the EYFS statutory framework, as well as the programmes of study for both Key Stage 1 and Key Stage 2 within the National Curriculum for England. In addition, our teaching goes beyond this to include a range of areas and activities which we believe equip our pupils not only with the skills and knowledge but also the confidence and resilience to be happy, productive members of our society today.

To ensure a smooth transition between what children learn in the Early Years and Key Stage 1, we have carefully structured our planning to ensure there are strong and purposeful links between what children learn and experience in Reception and what they go on to learn and experience in Year 1. This helps to build confidence, maximizes opportunities for learning and demonstrates how our staff have a good understanding of how children progress and develop within each subject.

Our starting point for teaching Computing at Finchale is within the EYFS. Although Computing does not feature in the new EYFS Framework, we recognise the importance of exposing our children to different technology and preparing them for a continuing changing modern world. We provide regular opportunities for children to explore different technology and to start understanding the importance of online safety through:

- ★ daily access to iPads and a variety of applications
- ★ interactive whiteboards
- ★ programmable toys including BeeBots

iPads are also used to enhance learning in other curriculum areas including Maths and Literacy.

Our pupils then move on to develop their computing knowledge, understanding and skills, as they study the attainment targets and programmes of study for Computing as set out in the National Curriculum. This 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.

What This Means at Finchale Primary

We believe Computing is a practical and engaging subject which motivates and inspires our pupils. At Finchale, we teach Computing as a standalone subject, which places emphasis on the skills our children need to become ‘computational thinkers.’ Where relevant, we make connections with other areas of our curriculum, to provide a wealth of enrichment activities to deepen children’s understanding of computing.

Computing begins within The Early Years, where our children have daily access to:

- ★ iPads and a variety of applications
- ★ interactive whiteboards
- ★ programmable toys including BeeBots

In Key Stage 1 and 2, the computing curriculum is split into 3 strands:

- ★ Computer Science- The study of computers as machines and how they operate including programming, algorithms, variables, sequence, selection and repetition.
- ★ Information Technology - The ability to create, retrieve, combine and manipulate digital content. The understanding of computer networks, the world-wide web and the internet and how they operate.
- ★ Digital Literacy- The skills needed to live, learn, and work in a society where communication and access to information is increasingly through digital technologies like internet platforms, social media, and mobile devices. This includes being knowledgeable and responsible users of technology, using the internet and other platforms safely and respectfully.

A bespoke long-term plan has been created to ensure that the requirements of the National Curriculum are met in full. It also ensures that the teaching units are distributed across the key stages in a sequence which promotes curriculum continuity and progression, enabling the coordinator, to monitor the breadth and balance of the subject. Online safety is embedded in all the areas of Computing.

Teaching Computing Should Equip Children To:

- ★ Develop an understanding of problem solving and how to apply this to real life situations
- ★ Become digitally literate
- ★ Become active participants in a digital world
- ★ Increase their self-confidence, creativity and sense of achievement

Threads of Learning

We have identified the key concepts or 'threads', that children will repeatedly revisit throughout their time at Finchale. Our threads are: Computing Systems and Networks, Digital Media, Programming, Date & Information and Online Safety. Each unit will not include every 'thread' but over the course of their learning journey through school, children will visit each thread more than once. As children progress through school, they will begin to make links and connections between these threads to support them in developing as computational thinkers.

Online Safety

We firmly believe the importance of delivering a high-quality Online Safety curriculum, alongside the core values of the three stands. Online safety is embedded throughout the Computing curriculum and supports and consolidates the strong presence of Online safety within our RSHE curriculum. As technology develops, so does the need for a better understanding of how to use it in a responsible and healthy manner. We encourage all staff to model and educate our pupils on how to use technology positively, responsibly and safely. The education of online safety is therefore essential, to ensure pupils are equipped with the skills to recognise risks online, to be critically aware of the materials and content they access online, along with guidance on how to accurately validate information accessed via the internet.

More information about our Online Safety Policy and RSHE Policy can be found on our school website: www.finchale.durham.sch.uk .

Making Learning Memorable

At Finchale, we aim to make learning memorable through the careful planning and delivery of enriching activities. Learning is practical where possible, as we believe this helps learning 'stick'. Planning is carefully mapped across school to ensure that, when appropriate, links are made with

other subject areas to deepen children's understanding.

Children in Key Stage 2 have the opportunity to take part in a Computing Club, with a focus on developing programming skills, and STEM week is celebrated annually in school. As part of our Online Safety provision, the whole-school takes part in a 'Safer Internet' day in February to reinforce the importance of using technology responsibly.

Organisation

Computing is part of children's learning every week. At Finchale, we use Teach Computing to support our computing teaching and have adapted this to suit our school. Teach Computing provides a well-structured programme with lots of engaging, interactive resources, covering all areas of the computing curriculum and providing clear progression. The spiral curriculum means that each of the themes is revisited regularly (at least once in each year group), and pupils revisit each theme through a new unit that consolidates and builds on prior learning within that theme. This style of curriculum design reduces the amount of knowledge lost through forgetting, as topics are revisited yearly.

The long-term plan details the units taught and the sequence of learning through school and can be found on our school website: www.finchale.durham.sch.uk .

Resources

We use a range of resources to support our teaching within music which include the following:

- iPads (1/2 class set for KS1 and whole class set for KS2) with access to a variety of apps
- laptops (1/2 class set)
- BeeBots
- Micro:Bits
- Crumble kit
- Data loggers
- Scratch & Scratch Jnr
- SeeSaw

We are continually adapting and amending our resources to meet the needs of our children.

Assessment

Our subject leader for Computing will oversee the planning and monitoring of pupils' work.
SeeSaw is used to evidence work, alongside the pupil shared drive on the server. Teachers then use this to inform their own judgements about a pupil's progress and assess against the rubrics provided for each unit of work.
Other assessments will be 'high challenge and low threat' and can be undertaken using the following methods (this is not an exhaustive list):

- Quizzes
- Observation of pupils
- Talking with pupils
- Self-assessment
- Peer assessment
- Discussion and debates

"Computer science empowers students to create the world of tomorrow."
Satya Nadella, CEO of Microsoft