East Ayton Primary School

Traditional Values, Modern Vision

Computing Policy

Reviewed: December 2023

Next review due: December 2025

East Ayton Primary School

Computing

Intent

At East Ayton Primary School, we are committed to providing all children with learning opportunities to engage in computing. Computers and digital technologies are all around us. By the time children leave East Ayton Primary School, we want them to have a secure understanding of applications and the implications of computing in our ever-changing world.

The aims of computing at East Ayton Primary School are for the children to:

- Consolidate technical skills
- Achieve fluency with a range of applications
- Develop their knowledge and understanding of the principles that underpin digital technologies and the changing consequences of these for individuals and society
- Learn about and practise being safe online users.
- To enjoy computing

Implementation

The Computing Curriculum

The children undertake a broad and balanced programme that takes account of abilities, aptitudes and physical, emotional and intellectual development. The foundations, applications and implications of computing are taught and opportunities for creativity, collaboration and thinking skills are encouraged.

Curriculum Planning

At East Ayton Primary School, computing is taught using units of work taken from 'Switched on Computing.' Our curriculum is carefully planned to engage and excite all learners and provide them with learning experiences that enable them to consolidate their knowledge and understanding whilst developing their technical skills. Our long-term plan sets out the objectives and units of work clearly, ensuring coverage and progression over the years. The plan defines what we will teach and ensure an appropriate balance and distribution of work across each term. In each session taught at East Ayton Primary School, the children should know how the objectives they are being taught link with the real world and why it is important. Teachers are encouraged to use opportunities for cross-curricular learning so that learners can consolidate and utilise their computing knowledge, skills and understanding.

Teaching sequence

Each computing session should start with a recap of our East Ayton SMART Online Safety rules. Children should then have time to recap and discuss previous learning before the learning objectives for the session are shared. Each 'Switched on Computing' unit is structure as: ***Let's learn, Let's do, Let's review***.

Let's learn

Key vocabulary
Teacher modelling
Animation and videos
True or false questions
Discussion
Real life problems
Mind map – project page
Storyboard and sequencing
Generating own questions and predicting outcomes

Let's do

Use of hardware (not exhaustive):

- Beebots
- iPads
- Chromebooks
- BBC Microbits

Use of apps and software (not exhaustive):

- Scratch Junior
- iMovie
- Brushe Redux
- Google (Slides, Docs, Forms and Sheets)
- Trimble Sketchup
- Scratch

Programming. Where a unit covers the skills and knowledge for programming the following sequence of learning is used within the unit of work:
Plan → Program → Test → Debug.

Let's review

Using their new skill for a purpose
Revisit original task/question have the ideas changed?
Share learning with peers
Evaluate work
True/False statements
Quizzes

Online Safety

At East Ayton we take children's internet safety very seriously. We believe the internet provides us with a rich and diverse resource, but it must be treated responsibly and with great care. Children need to learn how to keep safe whilst using the Internet, understand the responsibility of becoming digitally active and how to access help should they need it.

We teach children to be **SMART** online which is an acronym to help them remember the key safety messages whilst using the Internet:

S Safe
Keeping personal information safe such as full name, address and passwords.
M Meet
The risks and dangers of meeting people in person who you have only ever had previous contact with online.
A Accepting
Thinking about opening links, adverts and friend requests.
R Reliable
Being aware and considering the validity of information available online.
T Tell

Talking about experiences with teachers, parents or carers about online experiences, particularly relating to something or someone who causes upset, worry or confusion.

Be Smart with a heart
Remembering to always be kind and respectful of others online.

Early Years
Elements of computing are taught in Reception as an integral part of the topic work through child-initiated and adult led activities. Using stories, children learn about how to stay safe online whilst using digital devices. The classroom Smartboard, big button mice and keyboards are all used routinely. In addition, Beebots, cameras, laptops and tablets are all used across all seven areas of learning.

Key Stage One
During Key Stage 1, the children will learn and apply a range of skills through the computing learning objectives. The children will use Beebots, iMovie and art related apps on iPads. As children move into Year 2, they will further their knowledge as they experience becoming photographers and begin to use animation on the iPads. Children will also experience programming using Scratch Junior and begin to practise their keyboard typing skills regularly.
Teachers should follow the learning objectives given on each planning session to ensure progression and coverage across the year groups.

Key Stage 1 units of work from Switched on Computing	
Year 1 Autumn	Unit 1.1 - We are treasure hunters (algorithm using Beebots)
Year 1 Spring	Unit 1.2 - We are TV chefs (instructions using iMovie video)
Year 1 Summer	Unit 1.3 - We are digital artists (art using Brushe Redux iPad app)
Year 2 Autumn	Unit 2.3 - We are photographers (iPad photo and editing apps)
Year 2 Spring	Unit 2.1 - We are astronauts (Scratch Junior app)
Year 2 Summer	Unit 2.5 - We are animators (Stop Motion app iPads)

Key Stage Two
During Lower Key Stage 2, pupils are introduced to Google Chromebooks. Google Draw, Slides, Docs, Forms and Sheets are all used. Children will develop their programming knowledge and skills through the use of Scratch.

In Upper Key Stage 2, children will revisit, deepen and extend their computing skills, knowledge and understanding. In addition to Scratch and Google applications, 3D design software is introduced as well as the use of BBC Microbits. As the children work through the year groups, they will become more independent and self-reflective as well as fluent in the use of key computing vocabulary.

Key Stage 2 units of work from Switched on Computing	
Year 3 Autumn	Unit 3.1 - We are programmers (Scratch)
Year 3 Spring	Unit 3.4 - We are who we are (Google Slides)
Year 3 Summer	Unit 3.6 - We are opinion pollsters (Google Forms)
Year 4 Autumn	Unit 4.1 - We are software developers (Scratch)
Year 4 Spring	Unit 4.5 - We are artists (Google Draw)
Year 4 Summer	Unit 4.6 - We are meteorologists (Google Sheets)
Year 5 Autumn	Unit 5.2 - We are cryptographers (Scratch)
Year 5 Spring	Unit 5.1 - We are game developers (Scratch)
Year 5 Summer	Unit 5.3 - We are architects (3D design software – Trimble Sketchup)
Year 6 Autumn	Unit 6.1 - We are toy makers (Scratch)
Year 6 Spring	Unit 6.2 - We are computational thinkers (Google Maps and Scratch)
Year 6 Summer	Unit 6.3 - We are publishers (Google Docs)

Teaching and Learning

The school uses a variety of teaching and learning styles in computing lessons. Our principal aim is to develop the children's knowledge, skills and understanding in computing, as well as giving them opportunities to investigate and explore. We use a variety of teaching and learning styles in our computing lessons based around steps to success: thinking, learning, exploring and finally applying their skills. We believe in whole-class teaching methods and combine these with collaborative enquiry-based activities. We believe children learn best when:

- Computing is fun, engaging and challenging.
- Children are given opportunities every lesson to think, discuss, learn and apply new and existing skills.
- Computing is linked with real life experiences and/or themed where possible.
- Lessons are practical and hands on.

We recognise the fact that we have children of differing ability in all our classes, and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies, which are differentiated by task, expected outcome and/or support from peers or adults.

Roles and Responsibilities

The subject is led by a specific staff member and each year time is set aside to review standards and monitor curriculum provision and ensure training and resources are up to date.
The subject leader is responsible for:

- Ensuring the intended impact of computing is achieved through robust monitoring and evaluation of teaching and learning in their subject.
- Management of computing hardware, software and the network.
- Continued professional development in regards to the teaching and learning of their subject, including their own development.
- Creating and maintaining links with the community in regards to their subject.
- Managing and monitoring budgets associated to their subject to impact on the teaching and learning of their subject. Research, invest and evaluate resources.
- Providing support and guidance to colleagues in regards to their subject specialism.

Impact

- Children will understand that computing affects almost every aspect of their lives and will make connections between the lessons and real-life experiences.
- Children will become increasingly aware of how computing has shaped the world that they currently live in and the future.
- Children are to retain prior-learning and explicitly make connections between what they have previously learned and what they are currently learning.
- Children will be excited about computing lessons and enjoy the content.