FULFEN Primary School

Leading the way to a brighter future

Love of Learning... Encouraging... Adaptable... Determination...

Computing Policy

Date Written: **January 2024**

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Curriculum Aims

Through our computing curriculum at Fulfen, we aim to give our pupils the life-skills that will enable them to embrace and utilise new technology in a socially responsible and safe way in order to flourish in an ever-changing digital world.

> *"Computing is like glitter. It gets everywhere. It's in every part of life from our democracy to entertainment. Its sparkle lures us in. It's found in the places you'd least expect and it's almost impossible to get rid of."*
> *Julia Adamson 2022*

Through our computing lessons, pupils will develop creativity, resilience, problem-solving and critical thinking skills. Teachers provide pupils with a breadth of experiences and knowledge to support and enhance learning across the curriculum whilst developing skills to utilise different applications for a range of purposes and audiences. Our pupils will become autonomous, independent learners in this subject, gaining confidence to become creators of content who will increasingly be able to choose the best tool for a given challenge.

Curriculum Organisation and Planning

Our carefully sequenced curriculum ensures that our pupils will be equipped with the knowledge, skills and understanding that they need to thrive in the digital world of today and the future.

Early Years Foundation Stage

Even though 'technology' has been removed from the EYFS curriculum, our Early Years pupils still build vital skills to lay the foundations for the computing curriculum in Key Stage one. The EYFS curriculum ensures that pupils build problem solving and critical thinking skills, are familiar with technological language and online safety. Their learning underpins the skills required in the computing curriculum as children move into year 1. They do this in a variety of ways including:

- increasingly following rules and understanding why they are important
- exploring how things work
- showing resilience in the face of challenge
- explain the reasons for rules and understand factors that can affect their well-being.

Pupils in the foundation stage have the opportunity for roleplay with a variety of equipment; they use listening stations and have regular opportunities to develop their use of programmable toys such as Beebot and Indie.

Key Stages 1 & 2

The computing curriculum in key stages one and two have been developed from a range of resources including the "Teach Computing" curriculum, Apple "Everyone Can Create", "Swift Playgrounds" and "Sphero" to create a bespoke curriculum that meets the needs of our pupils and provides a clear and ambitious progression of learning in computer science, information technology and digital literacy. This curriculum is regularly updated to include new technology to keep up-to-date and prepare our pupils for the future world of industry.

All children have access to iPads (with Key Stage 2 children using their own personal device). A class set of spheros is utilised across the school to develop coding, problem solving and physical computing skills as well as engaging children in STEAM activities.

Discrete lessons to learn specific skills are planned every half term as well as opportunities to utilise technology (and the skills they have learnt) in other subjects across the curriculum. Opportunities are provided to support children with their learning where needed and also to ensure that all children are challenged appropriately.

A range of pedagogical approaches are utilised to support children in their learning. These include:

- The opportunity to use and explore an existing template; modify it and then create their own example.
- PRIMM – predict, run, investigate, modify, make;
- Utilise unplugged activities to introduce a new idea;
- Paired and group work to solve problems;
- Reading code before 'writing' code.
- Explicit links are made to previous learning to ensure that progression is secure.

Work is recorded on Seesaw for all individual pupils from Year 1-6.

Online Safety

In conjunction with using Project Evolve in our PSHE lessons to tailor to the needs of each class, Fulfen follow the Common Sense online safety curriculum, which is aligned with Education for a Connected World. These lessons offer a comprehensive yet balanced approach in addressing safety and security concerns, including ethics and behaviour issues, as well as digital literacy skills.

Use of Technology

iPads are used in lessons across the curriculum as a tool to make learning accessible, assist with learning and to make tasks more efficient or more effective. Pupils can creatively apply what they have learnt to enable them to know and remember more as well as develop critical thinking and creative skills. Technology is used to capture pupils' imagination; support learning by removing the cognitive load; and deepen understanding or scaffold learning within a lesson. Technology is used across the curriculum to:

- show understanding of the subject by:
  - completing a sorting/matching activity;
  - annotating and highlighting texts;
  - photographing and labelling;
  - recording verbal responses to remove the cognitive load of writing;
  - videoing practical activities and providing an explanation;
  - using annotated photographs of resources to explain a concept or demonstrate their understanding

- remove the fear of failure by:
  - allowing collaborative work or collection of ideas
  - manipulating language – 'having a go' and editing,
  - using voice to text to support with written work,
  - support with research, spellings and synonyms,
  - bridging the gap between concrete, pictoral and abstract work,

- use specific apps to practise skills and build confidence:
  - online games to build fluency and skills,
  - help videos provided for those that need them,
  - resources to support understanding (e.g. fraction walls or base ten equipment)

- become creators (not consumers) of content:
  - creating digital content as a final outcome (e.g. a narrative over a video, explanation of a process, animation to show understanding, creating emotive videos etc)
  - producing creative outcomes to tasks to deepen learning and help children remember more.

In addition to all of the above, technology is a requirement for the computing curriculum and iPads allow children to access and refine skills in computer science, information technology and digital literacy.

Assessment and Feedback

Assessment

Assessment of pupils is at the heart of our planning, teaching and learning.
Teachers triangulate evidence to make judgements about where children are at with their learning and how to move their learning on. Within computing lessons, teachers use a range of formative assessment techniques (such as questioning, observation, analysis of lesson outcomes, exit tickets, mini quizzes, ect) to identify what pupils understand and to ensure that all pupils are supported and challenged appropriately. Children are given opportunities to apply their skills learnt in discrete lessons within the wider curriculum, which gives teachers

further opportunity to assess their understanding. When carrying out practical activities, children explain their understanding of the task on Seesaw, which helps to demonstrate the depth of their learning.

For each area of computing, teachers use their judgements from lessons to identify those children who are emerging or exceeding in their understanding and skills.

Feedback

Feedback is given to pupils in order to further their learning and improve their thinking. Our regular, timely feedback has an impact on pupils' future performance and gives children the responsibility for improving their own work. Some of the ways in which pupils receive feedback:

- Verbal comments and questions;
- Up to three misspellings of age-related words and homophones are indicated by the teacher for children to correct;
- Comments left by teachers on Seesaw to move learning on →, which are responded to with a comment from the pupil;
- Peer and self-assessment are utilised within lessons.

Monitoring and Evaluation

The Senior Leadership Team and Computing Lead manage a programme of monitoring and evaluation of the teaching and learning in the school through:

- implementing of a monitoring cycle
- Seesaw monitoring
- learning walks

Our computing curriculum is also regularly reviewed for effectiveness by class teachers to see if children have learnt what was intended. For example, if an end of unit test showed that children had a misconception about the content of that lesson, then they would modify the way in which that concept would be taught for the next cohort of children. This results in us constantly adapting to improve our curriculum to ensure it evolves and keep it ambitious. The computing lead also adapts the curriculum regularly to ensure that it is up-to-date and relevant for the world of today.

Roles and Responsibilities

Governing Board

The governing board will monitor the effectiveness of this policy and hold the headteacher to account for its implementation.

The governing board will also ensure that:

- A robust framework is in place for setting curriculum priorities and aspirational targets
- Enough teaching time is provided for pupils to cover the National Curriculum and other statutory requirements
- Proper provision is made for pupils with different abilities and needs, including children with special educational needs (SEN)
- The school implements the relevant statutory assessment arrangements
- It participates actively in decision-making about the breadth and balance of the curriculum
- It fulfils its role in processes to disapply pupils from all or part of the National Curriculum, where appropriate, and in any subsequent appeals

Headteacher

The headteacher is responsible for ensuring that this policy is adhered to, and that:

- All required elements of the curriculum, and those subjects which the school chooses to offer, have aims and objectives which reflect the aims of the school and indicate how the needs of individual pupils will be met
- The amount of time provided for teaching the required elements of the curriculum is adequate and is reviewed by the governing board
- The school's procedures for assessment meet all legal requirements
- The governing board is fully involved in decision-making processes that relate to the breadth and balance of the curriculum
- The governing board is advised on whole-school targets in order to make informed decisions
- Proper provision is in place for pupils with different abilities and needs, including children with SEN

Subject Lead

The computing lead will:

- produce an up-to-date curriculum map for staff to follow as well as a range of plans, keynotes, resources and tasks to be implemented by the teacher
- produce teacher 'knowledge-organisers' to support staff knowledge in weaker areas of knowledge
- provide extra resources needed to teach the subject
- provide training and support for staff in the implementation of the curriculum

- provide training and support for staff in their own understanding of the curriculum
- order resources as necessary
- monitor the implementation of the subject and impact of the lessons by iPad monitoring, questionnaires, pupil interviews and learning walks. Individual feedback will be given to staff.

Other Staff

Other staff will ensure that the school curriculum is implemented in accordance with this policy.

Scaffold and Challenge

Teachers set high expectations for all pupils. They will use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with SEN
- Pupils with English as an additional language (EAL)

Teachers will plan lessons so that pupils with SEN and/or disabilities are scaffolded in order that they can study computing wherever possible and ensure that there are no barriers to every pupil achieving.

Teachers will also take account of the needs of pupils whose first language is not English. Lessons will be planned so that teaching opportunities help pupils to develop their English, and to support pupils to take part in all subjects.

Further information can be found in our statement of equality information and objectives, and in our SEN policy and information report.

In planning (and teaching of) lessons, the teachers will aim:

- To provide breadth and balance of activities for all children;
- To provide a differentiated computing curriculum to meet the needs of all the children through the continuity of experiences;
- To set suitable learning challenges for individuals or small groups of children where necessary;
- To respond to pupils' diverse learning needs;
- To liaise with the SENCo to ensure that provision is made for all children with SEND;
- To relate activities for SEND children to their Personal Learning Plan targets;

- To overcome potential barriers to learning and assessment for individuals and groups of pupils;
- To provide scaffolding for pupils where necessary.

Spoken Language

The national curriculum for computing reflects the importance of spoken language in pupil's development across the whole curriculum - cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their technical vocabulary, their ability to explain their thinking as well as presenting their ideas through a variety of media. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion and carefully tailored questions to probe and remedy any misconceptions.

British Values & Culture

British Values

Our school reflects the British values in all that we do. We aim to support our children throughout their primary school journey so they can develop into safe and caring individuals who will become democratic, responsible and tolerant adults who will make a positive difference to the society they live in. Some of the ways in which British values are embedded within computing are:

- Working within a pair or team (particularly in coding and programming lessons) promotes being tolerant of others' ideas and building mutual respect;
- Discussion of online safety will often include consideration of the consequences, advantages and disadvantages of how technology is used, resulting in ethical debates;
- Application of online safety rules within the classroom and their lives beyond the classroom;
- The use of technology to produce digital artefacts that are responsible and respectful.

Culture & Diversity

Diversity within the digital industry has a definite gender imbalance. At Fulfen, we ensure that females are represented withing the industry within our computing lessons to promote the value of this (and other STEM subjects) for girls and boys alike. This is accomplished by regularly looking at jobs that use technology, with a particular focus on successful females.

Links to other policies

This policy links to the following policies and procedures:

- EYFS Policy
- SEND Policy

- Equality Information and Objectives

Legislation and Guidance

This policy reflects the requirements of the National Curriculum programmes of study, which all maintained schools in England must teach.

It also reflects requirements for inclusion and equality as set out in the Special Educational Needs and Disability Code of Practice 2014 and Equality Act 2010, and refers to curriculum-related expectations of governing boards set out in the Department for Education's Governance Handbook.