Our Computing vision

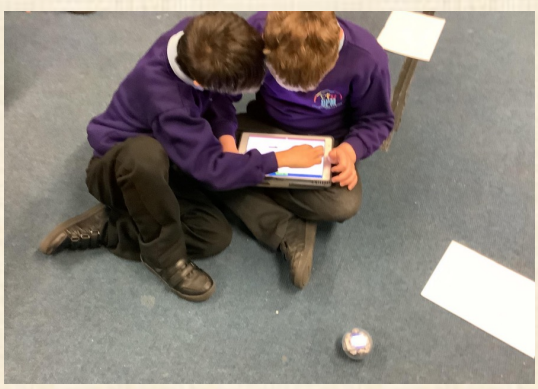
Our GEM threads

Values: Our children will adopt and celebrate the schools GEM powers
Knowledge: Our children will learn an enriched and ambitious curriculum
Progression: Our children will 'do more, know more and remember more'
Language and vocabulary: Our children will use oracy to be confident communicators
Experience rich: Our children will receive culturally diverse opportunities to thrive

Why is it important to teach Computing?

"Whether you want to discover the secrets of the universe, or you just want to pursue a career in the 21st century, basic computer programming is an essential skill to learn."

Stephen Hawking



Intent

In Computing we aim for all pupils to:
Gain a sense of enjoyment around using technology and develop pupil appreciation of its capabilities and the opportunities technology offers to, create, manage, organize and collaborate.
'Tinkering' with software and programs forms a part of our ethos as we want to develop pupils' confidence when encountering new technology, which is a vital skill in the ever evolving and changing landscape of technology.
Through our curriculum, we intend for pupils not only to be digitally competent and have a range of transferable skills at a suitable level for the future workplace, but also to be responsible online citizens.

Implementation

Knowledge and skills-based implementation:
Across CPMF, the implementation of the Kapow Primary Computing scheme ensures a broad and balanced coverage of the National curriculum requirements, and the 'Skills showcase' units provide pupils with the opportunity to learn and apply transferable skills. Where meaningful, units have been created to link to other subjects such as science, art and music to enable the development of further transferable skills and genuine cross-curricular learning. In the Foundation Stage, Computing is taught through carefully planned adult-focused activities, centered around play-based, unplugged (no computer) activities that focus on building children's listening skills, curiosity and creativity and problem solving, alongside a continuous provision approach based upon the relevant Early Learning Goals. In Years 1 – 6, Lessons incorporate a range of teaching strategies from independent tasks, paired and group work to unplugged and digital activities. This variety means that lessons are engaging and appeal to those with a variety of learning styles. The scheme is organized into five key areas, creating a cyclical route through which pupils can develop their computing skills by revisiting and building on previous learning.

- Computing systems and networks
- Programming
- Creating media
- Data Handling
- Online safety

Implementation

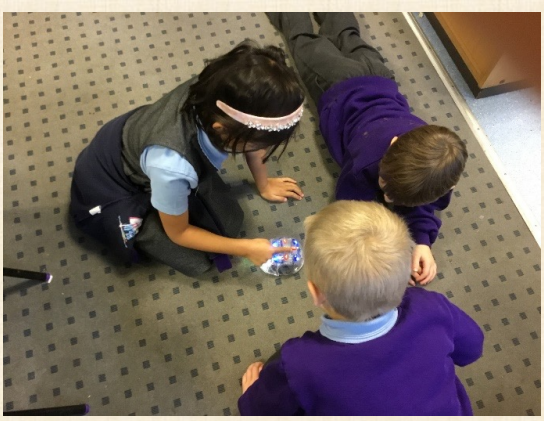
Progression led implementation:
As children move from EYFS through KS1 and KS2, they will have opportunities to gain a broader experience of computing focusing on the key concepts in computing: *Problem solving and logical thinking, Creative Content* and *Digital literacy.* The road map outlines the progression pupils will take throughout the key stages and continue to develop their skills in the 5 key areas whilst building on previous learning.

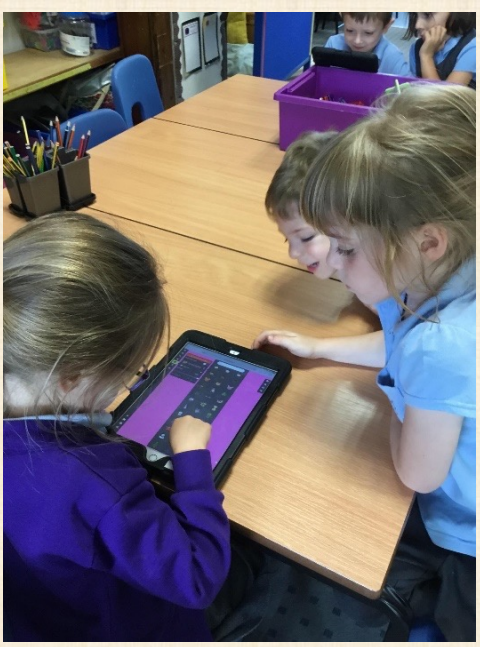
Language and Vocabulary rich implementation:
Throughout the computing curriculum, children will use Oracy to be confident communicators and knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary. Explicitly taught subject specific vocabulary will be introduced in each lesson, pupils will ask and answer questions about the key concepts and use specific vocabulary to communicate with each other.

Experience rich implementation:
Many Computing topics are introduced with a launch activity which may include an experience of the end goal of a unit: for example, a game made with coding, a video or introduction to a new piece of technology such as Ohbots. We also have visitors coming into school to teach new skills whilst also stretching foundation knowledge learnt in previous lessons. There are lots of opportunities for children to learn complicated concepts through hands on and visual examples whilst making them contextual to their real-life environment and where they might see these processes and ideas.

Impact

During the year, the subject leaders meet to discuss the progress and learning being undertaken throughout the school. In addition, they carry out monitoring days with learning walks, book looks, pupil conferences and then report findings to the Senior Leadership Team and class teachers, celebrating good practice and actioning areas for improvement if required.
At the end of each term, teachers assess individual children's progress against the appropriate National Curriculum statements for the aspects that have been taught.
Our children, using our Gem Threads and computational thinking, will receive a high quality Computing curriculum that will enable them to be more knowledgeable and excited about the world they live in.





Pupil Voice

"Computing is done on a device, often computing and science are connected."

"Computing is a subject where you can use codes and control things." (Year 4 Pupils)

"You make the BlueBot do what you want it to. If it goes wrong, you debug it and try again." (Year 2)

Our Computing curriculum in the Infants

Develop fine motor skills

Experimenting with colour, design, texture, form and function

Use a range of tools competently, safely and confidently

Creating media: Digital imagery

Computer systems and Networks: Improving mouse skills

Programming: Algorithms unplugged

Online safety

Programming: Algorithms and debugging

Computer systems and Networks: what is a computer?

Programming: Blue-bots

Online safety

Programming: Scratch jnr

Data Handling: International space station

EYFS

Year 1

Year 2

Our Computing curriculum in the Juniors

Computer systems and Networks: Networks and the Internet

Computer systems and Networks: Journey inside a computer

Creating media: Video trailers

Programming: Scratch

Online safety

Computer systems and Networks: Collaborative Learning

Programming: Further coding with Scratch

Computing systems and Networks: Search Engines

Online safety

Programming: Computational thinking

Data Handling: Investigating weather

Data Handling: Mars Rover

Creating media: Stop motion animation

Programming: programming music

Online safety

Programming: Intro to Python

Online safety

Creating media: History of computers

Data Handling: Big Data

Computing systems and Networks: Bletchley Park

Year 3

Year 4

Year 5

Year 6