

Computing Key Concepts

SEQUENCING (How are we piggybacking learning?)

Pathway 1 - Programming
Pathway 2 - Data handling
Pathway 3 - Multimedia
Pathway 4 - E-Safety
Pathway 5 - Technology in Our Lives

Knowledge is sequenced to ensure that learning is reviewed and built upon to enable gaps in understanding and experience to be closed.

KEY CONCEPTS (What is the subject Intent?)

Computing teaching aims to make concepts, hardware and software engaging and accessible to the pupils and enable them to progress. Teaching will rely on a good grasp of the architecture of the subject, its key concepts and big ideas. These are the concepts and ideas that are used to create the computing vision and are essential to effective teaching. Teachers will make these concepts transparent and help children to think logically and to develop transferable computing understanding. The intention is to take children beyond learning a set of isolated facts and move them into the realms of informed thinking through a clearly linked approach to teaching.

CURRICULUM DRIVERS – How?

AMBITION (Success) – Knowledge organisers will be in place to ensure learning outcomes are ambitious for all pupils. Key knowledge will be clearly established and linked to previous learning. Lessons will aim for a depth of understanding through the subject ‘deep ideas’ themes. Children will have a desire for success as a digital citizen and be excited to transfer knowledge into larger projects and collaborations.

BELIEF (Confidence) – All children will have the opportunity to reflect on learning and see how their knowledge is improving over time. Learning Logs and live screen recording will show pupils the progress they are making and give the self-belief that they can achieve well in computing. Children will have belief in their ability as a digital citizen, being able to show confidence in their understanding of computing concepts and their own innovation.

COMPASSION (Motivation) – Children will be encouraged to find out about the world they live in and ask appropriate questions to deepen their understanding. They will be motivated to seek out further knowledge and self-improvements through strategies such as trial and error, debugging, troubleshooting and critical evaluation of their own and others’ work. They will be motivated to show that they know more by the end of a topic. Children will be motivated by a ‘hands on’ approach to learning about computing.

PRIDE (Knowledge) – Knowledge will be shared with all children through knowledge organisers and good teaching. All staff will teach computing with a clear understanding of what has come before and how this links to today’s learning. Deep ideas will be developed for children on a regular basis.

RESPECT (Responsibility) – Children will develop a responsibility for learning about the world around them and the role they play as digital citizens. They will work with a range of resources respectfully.

DEEP IDEAS (Curriculum Depth)

Pupils will gain a deepening understanding of...

Programming and Debugging
Collecting and presenting data
A variety of artistic & communicative media
Staying safe on the internet
Safe and responsible use of technology

TESTING OUT KNOWLEDGE (Has it stuck? How do we know?)

Knowledge organisers established for each topic.

Exit activities and projects to ‘test out’ knowledge gained.

Ongoing teacher assessment of pupil achievements in lessons.

Pupil markbook to track all outcomes.