Computing Curriculum

Intent and Implementation



Our School Vision:

Recognising the unique light that shines in every individual, we strive to 'encourage one another and build each other up' (1 Thessalonians 5:11) to ensure that all can thrive. Through our core Christian values of Love, Hope and Justice, we inspire learning for life, empowering everyone to flourish and make a positive difference in the world.

Curriculum Intent:

- To develop articulate, resilient and empowered citizens who make a difference to others
- To provide a coherent and ambitious curriculum that leads to a greater depth of understanding for all
- To inspire pupils with purposeful and interconnected learning experiences

Intent

At Preston Candover C of E Primary School, we want pupils to become confident, articulate, resilient and empowered users and creators of technology. We want pupils to understand technology, rather than simply use it, and to develop the knowledge, skills and understanding needed to use technology purposefully, creatively, critically, safely and responsibly.

Our Computing curriculum is ambitious for every pupil and reflects the three areas of the National Curriculum:

- **Computer Science** – understanding how computing systems work, computational thinking, algorithms, programming and problem-solving.
- **Information Technology** – using technology to create, manipulate, store and communicate information.
- **Digital Literacy** – participating safely, responsibly and effectively in an increasingly digital world.

We use the Teach Computing Curriculum as the foundation for our curriculum, organised through four overarching themes:

- Computing Systems and Networks
- Creating Media
- Programming
- Data and Information

Our curriculum is carefully sequenced so that pupils know more, remember more and can do more as they progress through the school. Key knowledge and skills are revisited and developed over time, with foundational concepts secured before pupils move on to more complex learning.

We want pupils to become increasingly independent in selecting and using appropriate digital tools, solving problems and creating digital outcomes. Computing also provides opportunities to develop creativity, communication, collaboration, critical thinking and resilience. Technology is used meaningfully across the wider curriculum, while ensuring that pupils receive sufficient dedicated time to develop computing-specific knowledge and skills.

We are committed to ensuring that all pupils, including disadvantaged pupils and pupils with SEND, can access and succeed in Computing. Technology and accessibility features are used thoughtfully to remove barriers and enable pupils to participate, create and demonstrate their understanding.

We also want pupils to understand the impact of technology on themselves, others and society, becoming thoughtful, critical and responsible digital citizens.

Implementation

The Teach Computing Curriculum provides the foundation for our planning. As a mixed-age school, our long-term plan has been adapted to ensure a logical and coherent progression of knowledge and skills across our classes.

Learning is carefully sequenced so that pupils develop the prerequisite knowledge needed for future learning. Key concepts are deliberately revisited, consolidated and applied in increasingly complex contexts. Teachers use prior learning and assessment information to identify starting points, misconceptions and gaps before introducing new concepts.

Computing lessons typically include:

- explicit teaching of important knowledge and subject-specific vocabulary;
- links to prior learning and retrieval opportunities;
- clear modelling and explanation;
- regular checks for understanding;
- opportunities to practise and apply knowledge;
- problem-solving, testing and debugging;
- opportunities for pupils to explain their thinking;
- gradually reduced scaffolding to develop independence.

Programming is taught as a progressive body of knowledge, with pupils developing, testing and debugging algorithms and programs and explaining how and why their solutions work.

Each class has a planned weekly opportunity to access our Computing Suite, alongside other digital devices and resources where these enhance learning.

Cross-curricular use of technology is purposeful and supports learning in other subjects, but does not replace discrete Computing teaching. Pupils are taught the relevant knowledge and skills before being expected to apply technology independently.

Teachers are supported through the Teach Computing curriculum resources and professional development. The Computing subject leader supports colleagues with planning, subject knowledge, resources, assessment and online safety.

Pupils also have opportunities to become Digital Leaders, developing their own Computing knowledge while supporting others, contributing to Computing enrichment and promoting safe, responsible and effective use of technology.

Computing for Every Child

Every child receives a high-quality Computing education from Reception to the end of Key Stage 2, including pupils within our mixed-age classes.

Our mixed-age curriculum ensures that pupils encounter foundational knowledge before progressing to more complex concepts. Teachers adapt tasks, questioning, scaffolding and expected outcomes according to pupils' prior knowledge while maintaining high expectations.

In the Early Years Foundation Stage, Computing is incorporated appropriately through continuous provision and experiences across the Prime and Specific areas of learning. Children begin to develop understanding of technology, sequencing, problem-solving and safe use through age-appropriate experiences.

Adaptive teaching may include modelling, visual and vocabulary support, carefully selected hardware or software, additional practice, structured collaboration, targeted adult support, accessibility features and opportunities to revisit prerequisite knowledge.

Adaptations are designed to remove barriers rather than reduce ambition**.**

Pupils are encouraged to develop independence and resilience by solving problems, debugging their work and reflecting on their learning.

Assessment

Assessment in Computing establishes what pupils know, remember and can do, identifies misconceptions and gaps, and informs subsequent teaching.

Teachers use a range of approaches, including:

- questioning and discussion;
- retrieval activities;
- observation of practical work;
- low-stakes assessment;
- pupil explanations;
- debugging and problem-solving;
- review of saved digital work;
- learning profiles and workbooks;
- end-of-unit or end-of-theme assessment where appropriate.

Assessment considers both pupils' underlying Computing knowledge and skills and their ability to apply these practically, rather than simply whether they have completed a digital product.

Three times a year, pupils' learning is assessed against the four key areas of the Teach Computing Curriculum:

- **Computing Systems and Networks**
- **Data and Information**
- **Programming**
- **Creating Media**

Assessment information is used to identify gaps, revisit prerequisite knowledge and inform future planning and support. It also contributes to transition, ensuring that teachers understand pupils' strengths, misconceptions and areas for development.

Assessment is proportionate and purposeful, supporting pupils' learning and informing teaching without creating unnecessary workload.

What makes a Preston Candover computer scientist?

End of KS1: A Preston Candover computer scientist understands how technology can be used for different purposes, can create and follow simple algorithms, use digital tools to create and communicate, and use technology safely and responsibly.

End of KS2: A Preston Candover computer scientist can apply their knowledge of computer systems, networks, programming, data and digital media to **design, create, test and debug solutions**, use technology purposefully and responsibly, and explain how computing works and its impact on themselves, others and society.