

Computing at Cropredy CE Primary School

Intent

At Cropredy CE Primary School, we aim to enable children to use digital technology confidently to find, explore, analyse, exchange and present information. Our intention is to prepare our learners for their future by giving them the opportunities to gain knowledge and develop skills that will equip them for an ever-changing digital world.

Our aims are to fulfil the requirements of the National Curriculum for Computing whilst also providing enhanced collaborative learning opportunities, engagement in rich content and supporting pupil's conceptual understanding of new concepts which support the needs of all our pupils.

“A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world...core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content.” - *National Curriculum*

The aims of our Computing curriculum are to develop pupils who:

- Are responsible, competent, confident and creative users of information and communication technology.
- Know how to keep themselves safe whilst using technology and on the internet and be able to minimise risk to themselves and others.
- Become responsible, respectful and competent users of data, information and communication technology.
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Can analyse problems in computational terms and have repeated practical experience writing computer programs in order to solve such problems.
- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Become digitally literate and are active participants in a digital world.
- Are equipped with the capability to use technology throughout their lives.
- Understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- Have a 'can do' attitude when engaging with technology and its associated resources.
- Utilise computational thinking beyond the Computing curriculum.
- Understand and follow the SMART E-Safety rules.
- Understand that E-Safety messages can keep them safe online.
- Know who to contact if they have concerns.
- Apply their learning in a range of contexts, e.g., at school and at home.
- Know where to locate the CEOP button and how to use it.

We want our children to leave Cropredy CE Primary School with the skills they need to be competent, discerning and responsible users of technology. We want to prepare our pupils to live safely in an increasingly digital British society where pupils can evaluate

and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

Implementation

To ensure high standards of teaching and learning in computing, we implement a curriculum that is progressive throughout the whole school. Computing is a foundation subject in the National Curriculum and at Cropredy CE Primary School, implementation of the computing curriculum is in line with 2014 Primary National Curriculum requirements for KS1 and KS2 and the Foundation Stage Curriculum in England. This provides a broad framework and outlines the knowledge and skills taught in each key stage.

Computing teaching at Cropredy CE Primary School will deliver the requirements of the National Curriculum through half-termly units. Teachers plan using our long term planner and this highlights the knowledge, skills and vocabulary for each year group and is progressive from year to year.

Our Computing progression model is broken down into three strands that make up the computing curriculum. These are Computer Science, Information Technology and Digital Literacy. Computer Science underlines the knowledge and skills relating to programming, coding, algorithms and computational thinking.

When teaching computing teachers should also follow the children's interests to ensure their learning is engaging, broad and balanced. Teachers should ensure that ICT and computing capability is also achieved through core and foundation subjects and where appropriate and necessary ICT and computing should be incorporated into work for all subjects using our wide range of interactive ICT resources.

Computing teaching at Cropredy CE Primary School is practical and engaging and a variety of teaching approaches and activities are provided based on teacher judgement and pupil ability. We have a wide range of resources to support our computing teaching including but not limited to, iPads, bee-bots, webcams, floor roamers, video recorders, cameras and log boxes. Pupils may use iPads independently, in pairs, alongside a TA or in a group with the teacher. Teachers and pupils are also aware of the importance of health and safety and pupils are always supervised when using technology and accessing the internet.

In Cygnets (Reception) and Key Stage 1, children are taught to use equipment and software confidently and purposefully, they will learn what algorithms are, and begin to experiment with simple coding, problem solving, recording and expressive skills.

In Key Stage 2, our children extend their use of coding to design, write and debug programs, and use logical reasoning to explain how their algorithms work. In computing, they will have opportunities to build on their skills, using software for investigation, presentation and communication.

At Cropredy CE Primary School we provide a variety of opportunities for computing learning inside and outside the classroom. Computing and safeguarding go hand in hand and at Cropredy CE Primary School, we provide a huge focus on internet safety inside and outside of the classroom. Additional to all pupils studying an online safety unit through their computing lessons, every year we also take part in National Internet Safety Day in February. The Computing Subject Leader, alongside class teachers will plan additional

internet safety lessons and activities to take part in following a specific yearly theme. Furthermore, at Cropredy CE Primary School, we actively encourage parent partnership within the computing curriculum and outside of school. Parents are made aware of e-safety issues through the school website, newsletters and information letters.

Special Educational Needs Disability (SEND) / Pupil Premium / Higher Attainers

All children will have Quality First Teaching. Any children with identified SEND or in receipt of pupil premium funding may have work additional to and different from their peers in order to access the curriculum dependent upon their needs. As well as this, our school offers a demanding and varied curriculum, providing children with a range of opportunities in order for them to reach their full potential and consistently achieve highly from their starting points.

Pupils at Cropredy CE Primary School are fully encouraged to engage with ICT and technology outside of school. Each teacher and pupil have their own unique Google Classroom login and password. Computing work can be stored and saved using pupil log in details and homework or can also be set for pupils to access and complete tasks at home that link with their current class learning.

Alongside our curriculum provision pupils at Cropredy CE Primary School also have the opportunity to participate in after school computing clubs ran by teachers or teaching assistants. Examples of clubs run in the past have been iPad club and coding club. These clubs aim to provide additional computing support and enjoyment whilst further challenging pupils who possess exceptional computing abilities.

Impact:

Our Computing Curriculum is high quality, well thought out and is planned to demonstrate progression and build on and embed current skills. We focus on progression of knowledge and skills in the different computational components and alike other subjects, discreet vocabulary progression also form part of the units of work.

If children are keeping up with the curriculum, they are deemed to be making good or better progress.

We measure the impact of our curriculum through the following methods:

- Pupil discussions and interviewing the pupils about their learning (pupil voice).
- Governor monitoring with our subject computing link governor.
- Assessment collated on Target Tracker, reviewing attainment and progress in Computing
- Moderation staff meetings with opportunities for dialogue between teachers.
- A reflection on standards achieved against the planned outcomes.
- Learning walks and reflective staff feedback (teacher voice).
- Computing Subject Leader release time.

Impact

Cropredy children:

- Are responsible, competent, and creative users of information and communication technology.
- Are digital-literate, confident users of a wide range of hardware and software and understand the language of computing.
- Understand the potential risks posed by the internet. They know ways to keep themselves safe and where to find support if they need it.

- Have the knowledge and understanding of computer programmes to write and debug code.
- Can independently solve problems using technology and logical thinking.
- Are analytical and discerning when researching information.
- Build resilience through their work and are encouraged to learn from their mistakes.
- Have an inherent love of learning and are excited by new challenges.
- Are able to work both independently and collaboratively, acknowledging and respecting each other's ideas.