Computing at Claycots

Claycots Primary School

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Computing Team

Mrs Ansari is our Computing Leader at Claycots

The vision for Computing

Our vision at Claycots is to instil excitement, intrigue and ingenuity in our learners so that they become confident, creative and responsible digital citizens, equipped with the knowledge and skills they need to succeed in the 21st century. Claycots Primary School strives to bring together the best of both worlds, combining traditional teaching methods with modern technology to create an inspiring and innovative learning environment.

We believe that if we can provide opportunities at Claycots for our pupils, who may not have these experiences outside of school, to use different forms of hardware and software, we may just kick start a life-long passion and a career for the future.

Computing Intent

At Claycots Primary School, we aim 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. Knowledge and understanding of computing is of increasing importance for children's future, both at home and for employment. Our Computing curriculum focuses on a progression of skills in digital literacy, computer science, information technology and online safety to ensure that children become competent in safely using, as well as understanding, technology. These strands are revisited through a range of themes during children's time in school to ensure the learning is embedded and skills are successfully developed. Our intention is that Computing also supports children's creativity and cross-curricular learning in a range of subjects, to engage children and enrich their experiences in school.

Central to our intent for Computing at Claycots is teaching all aspects of the national curriculum to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

How we teach Computing

- At Claycots, we teach the National Curriculum, supported by the Kapow Computing scheme to provide clear skills and knowledge progression. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children.
- To ensure a broad range of skills and understanding, Computing is taught across three main strands: digital literacy, computer science and information technology. As part of information technology, children learn to use, express themselves and develop their ideas through writing and presenting as well as exploring art and design using multimedia. Within digital literacy, children develop practical skills in the safe use of ICT and the ability to apply these skills to solve relevant, worthwhile problems such as, understanding safe use of internet, networks and email. In computer science we teach children to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation; to analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- At Claycots, we teach a progression of Computing vocabulary to support children in their understanding. Online safety is taught within each Computing unit as well as during internet safety week and school assemblies. Online safety procedures are communicated with all staff and parents.
- At Claycots, all children have a weekly session where they are timetabled to receive computing lesson

How we measure progress

At Claycots, we measure progress in Computing in a variety of ways:

- At the beginning of the unit, we ask the pupils to recall all previous learning undertaken within the unit and discuss the future learning with them.
- At the end of each computing unit, children take part in completing an end of unit assessment
- Teachers use specific targeted questioning to assess the children's understanding of skills and content.

Pupil voice

“I like Computing especially using scratch as I can design and code to make the sprite move around”

Y6 pupil

“ I like computing this year as everything I have learnt is new and interesting”

Y6 pupil

“I loved the Lego programming workshop, it was the best day ever. I learnt how to use gears, cams, levers, sensors along with creating an algorithm in scratch to design and make a dancing monkey.”

Y5 pupil

“ I enjoyed learning how to use ppt to create a presentation for an inventor of our choice. I looked at Bill Gates and then presented this as a slide show to my class.”

Y5 pupil

Claycots School Computing Overview

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Computing through Continuous Provision	Programming 1 *All About Instructions*	Data Handling *Introduction to Data*	Computing Systems and Networks *Exploring Hardware*	Programming 2 *Programming Bee-Bots*	Computing Systems and Networks *Using a Computer*
Year 1	Computing Systems and Networks *Improving Mouse Skills*	Programming 1 *Algorithms Unplugged*	Skills Showcase *Rocket to the Moon* *Online Safety*	Programming 2 *Programming Bee-Bots* *Online Safety*	Creating Media *Digital Imagery* *Online Safety*	Data Handling *Introduction to Data*
Year 2	Computing Systems and Networks *What is a Computer?*	Programming 1 *Algorithms and Debugging* *Online Safety*	Computing Systems and Networking *Word Processing* *Online safety*	Programming 2 *ScratchJr* *Online Safety*	Creating Media *Stop Motion* *Online Safety*	Data Handling *International Space Station* *Online Safety*
Year 3	Computing Systems and Networks *Networks and the Internet* *Online Safety*	Programming *Programming: Scratch*	Computing Systems and Networks *Emailing* *Online Safety*	Computing Systems and Networks *Journey inside a Computer* *Online Safety*	Creating Media *Video Trailers* *Online Safety*	Data Handling *Comparison cards databases* *Online Safety*
Year 4	Computing Systems and Networks *Collaborative Learning* *Online Safety*	Programming 1 *Further Coding with Scratch* *Online Safety*	Creating Media *Website Design* *Online Safety*	Skills Showcase *HTML* *Online Safety*	Programming 2 *Computational Thinking* *Online Safety*	Data Handling *Investigating Weather* *Online Safety*
Year 5	Computing Systems and Networks *Search Engines*	Programming 1 *Programming Music* *Online Safety*	Data Handling *Mars Rover 1* *Online Safety*	Programming 2 *Micro:bit* *Online Safety*	Creating Media *Stop Motion Animation* *Online Safety*	Skills Showcase *Mars Rover 2* *Online Safety*
Year 6	Computing Systems and Networks *Bletchley Park* *Online Safety*	Programming *Intro to Python* *Online Safety*	Data Handling *Big Data 1* *Online Safety*	Creating Media *History of Computers* *Online Safety*	Data Handling *Big Data 2* *Online Safety*	Skills Showcase *Inventing a Product* *Online Safety*