



Subject Report 2022-2023

Subject	Computing	Report prepared by	Angela Beeson
---------	-----------	--------------------	---------------

Overview of the year:

Our world is becoming more and more technologically advanced. It is our responsibility to help children to learn how to use technology to support their learning and understanding. Our exciting computing curriculum helps children develop their computing skills across a variety of computing hardware and software. As a result of this, as children become more computer literate, they are more confident when faced with new technologies as they have the skills to find logical pathways to solve problems.

Knowing how to stay safe online is always of upmost importance. The Cambridge Primary School tackles the topic of internet safety as a whole school community. Every year, teachers complete the Annual Online Safety for Education training. In addition to this, all children take part in a series of internet safety lessons which are continuously revisited during the academic year. Additionally, to continue to raise the profile of internet safety, an internet safety bulletin is included on our school website.

To ensure we are able to support our children, and keep them safe online, we use a robust filtering and monitoring system. Every child in the school uses their own username and password to log on to our school network. This enables us to identify where safeguarding interventions are required.

Curriculum: Intent, implementation, Impact

Intent

Our intention is for a Cambridge pupil to show a true understanding and enjoyment across the three strands (digital literacy, information technology and computer science) of computing. They demonstrate **bravery** when using new software or hardware and when voicing their views and opinions with their peers. A Cambridge pupil learns to think **innovatively** to problem solve and, by **collaborating** with others, they are able to develop resilience and their critical thinking skills. Through their developed sense of **ownership**, pupils continuously reflect on their learning and achievements in computing.

When children leave the Cambridge Primary, they will have the following key skills;

- Demonstrate **digital literacy**, whilst using digital technologies effectively and safely; knowing what their associated **limitations and dangers** are.
- Confidently and creatively **use a variety of software** and **multimedia** for a range of purposes.
- **Critically evaluate** a variety of **hardware and software**, choosing the best devices and programs for a **specific purpose**.
- Analytically **create, test** and **de-bug programs**.
- **Critically evaluate** their own work and that of others.
- Demonstrate resilience and **problem solving skills** when using computer hardware and software.

In computing, A Cambridge Pupil will leave with:

Key Skills	Qualities
• To be digitally literate. Pupils know how to use digital technologies effectively and safely in addition to knowing what their associated limitations and dangers are. • To confidently and creatively use a variety of software and multimedia for a range of purposes. • To critically evaluate a variety of hardware and software, enabling pupils to choose the best devices and programs for a specific purpose. • To analytically create, test and de-bug programs. • To critically evaluate their own work and that of others. • To demonstrate resilience and problem solving skills when using computer hardware and software.	Pupils show a true understanding and enjoyment across the three strands (digital literacy, information technology and computer science) of computing. They demonstrate bravery when using new software or hardware and when voicing their views and opinions with their peers. Children learn to think innovatively to problem solve and by collaborating with others, pupils are able to develop their critical thinking skills. Through their developed sense of ownership, pupils continuously reflect on their learning and achievements in computing.

Implementation

Computing throughout the curriculum provides opportunities for the children to collaborate with partners, small groups and the whole class to discuss ideas, develop their thinking and understand different areas of computing. Where possible, computing lessons are linked to topics, deepening learning through connections. Computing lessons are taught as a whole class and provide 'hands on' opportunities for children to use all types of computing hardware (laptops, iPads, Chromebooks,

Beebots and Lego We Do). By following our fast feedback policy, teachers and LSAs are able to praise children's achievements and challenge their understanding even further. Teachers assess children's knowledge and skills and complete an assessment tracker half termly.

Topics taught across each year group:

	AT1	AT2	SP1	SP2	SU1	SU2
EYFS	Children begin to learn how to keep safe online, and what to do if they see something they don't like online. Children know what a keyboard is and how to use a digital device to take a photo and a video. Children begin to learn how to move a Beebot using basic directional language.					
Y1	Digital literacy - Online Safety and technology around us	Information technology – Creating media (digital painting)	Information technology – Creating media (digital writing)	Information technology – Creating media (Grouping data)	Computer science – Programming (moving a robot)	Computer science – Programming (introduction to animation)
Y2	Digital literacy - Online Safety and IT around us	Information technology – Creating media (making music)	Information technology – Data and information (pictograms)	Information technology – Creating media (digital photography)	Computer science – Programming (robot algorithms)	Computer science – Programming (an introduction to quizzes)
Y3	Digital literacy - Online Safety and connecting computers	Computer science – Programming (sequence in music)	Information technology – Creating media (desktop publisher)	Information technology – Creating media (photo editing)	Information technology – Data and information (branching databases)	Computer science – Programming (events and action)
Y4	Digital literacy - Online Safety and the internet	Information technology – Data and information (data logging)	Information technology – Creating media (audio editing)	Information technology – Creating media (animation)	Computer science – Programming (repetition in shapes)	Computer science – Programming (An introduction to Lego we do)
Y5	Digital literacy - Online Safety, systems and searching	Information technology – Flat file databases	Information technology – Video production	Information technology – Vector graphics	Computer science – Programming (selection in physical computing)	Computer science – Programming (creating quizzes)

Rationale for curriculum organisation:

Every class from Year 1 to year 5 has a 1 hour, discreet, whole class computing lesson every week. Reception access technology throughout the day by use of the interactive white board, Beebots and iPads. Each year group has their lesson on a specific day so there is enough hardware for the pupils. The curriculum has been designed so that learning is cyclical by revisiting skills throughout each topic and building upon prior knowledge. A skills progression document has been created to ensure that every skill is taught within this subject.

What have you done to ensure that every skill is covered?

Every term, the subject lead carries out a safeguarding pupil voice audit. During this process, three children from each class are questioned on their understanding of how to stay safe online. In addition to this, the subject lead carries out pupil conferencing where children are asked a range of questions linked to their learning in computing lessons. This insight enables the subject lead and teachers to know which aspects of the curriculum are having the most impact on the children's enjoyment and learning.

The subject lead is responsible for checking planning, resources and hardware are being used and discusses with teachers areas to be developed further. The subject lead monitors lessons by carrying out learning walks every half term.

Impact

The children at The Cambridge Primary School enjoy computing lessons and are confident in using a range of computing hardware. Children are able to transfer their computing skills from one device to another and are able to articulate why they like using specific hardware.

What does marking and assessment look like in your subject? How do you know this has been effective for children's progress?	What CPD have you received / research have you carried out in your subject area? What has been the impact of this on the children?
All teachers use fast feedback to inform children of their achievements and the next steps in their learning. After each lesson, or after children have completed an area of learning, teachers assess the children's understanding and record it on assessment tracking grids. Every pupil has their own folder on the school network where they are able to save their work. Children enjoy using different computing hardware and have expressed their interest in	Sept 23 – Online safety training. This training enabled all staff to better understand the complex issues that can arise around the topic of online safety and what they need to do if they have any online safety safeguarding concerns. Oct 23 – I have researched different filtering and monitoring systems and how they can help ensure our children are kept safe when using computer technologies.

the subject through pupil conferencing and discussions the subject lead has had with class teachers.	
What Performance Information is monitored? What are the 3 questions you are considering for future developments?	How are Fundamental British Values, the Cambridge Learning Characteristics and personal development promoted within your subject?
Progress across the school is good. Children are confident when using a range of devices and are able to explain what they like about using different types of hardware. Learning walks, observations, planning scrutiny, pupil conferencing and pupil progress reviews all play a part in monitoring the quality and the impact of the computing provision across the school. Where gaps are noticed, provision is put in place. Key Questions: 1. How can we effectively record the work children have done? 2. Are children using computing hardware and software in other areas of the curriculum? 3. How can we link children's learning to real life scenarios?	<u>Fundamental British Values</u> We promote tolerance through respecting and discussing the views and opinions of others. All pupils are encouraged to recognise not only their strengths but also the strengths of others. To help ensure there is gender balance and equality, when appropriate, computing lessons are linked to topics to help engage all pupils. Computing lessons are differentiated to enable all children to achieve, and enjoy learning, during their computing lessons. <u>The Cambridge Learning Characteristics (BICO)</u> They demonstrate bravery when using new software or hardware and when voicing their views and opinions with their peers. Pupils think innovatively to problem solve and, by collaborating with others, they are able to develop resilience and their critical thinking skills. Through their developed sense of ownership, pupils continuously reflect on their learning and achievements in computing. <u>Opportunities for Personal Development</u> The computing lead keeps up-to-date with current trends and potential threats by reading weekly computing articles.
What have we done in 2023?	
Implementation	Impact
90 Lenovo Chromebooks (and configured), a Google management licence and Chromebook trolleys	Due to the success of the Chromebooks, the school has invested in an additional 90 Lenovo Chromebooks. Due to this, teaching ICT won't be constrained by hardware.
5 micro computers	The mini desktops are located in our intervention areas. They enable adults working with children to fully utilise the Smart board and maximise learning opportunities.
7 Dell Inspiron Ryzen processors	Next year, our school will be at capacity. With this in mind, these laptops were purchased for new staff for our next academic year.
Sever warranty extensions and a port switch	If our server was to go down, this port switch can be used to immediately solve the problem.
4 Desktop computers and monitors	All classrooms (including Year 6) have desktops, monitors and visualisers ready for September 2024.
SMART interactive board	SMART interactive boards are now fitted in all classrooms and interventions bays.
Micro computers for reception display	Using the microcomputer, we are now able to advertise and display school activities and learning on the computer in the school's reception.
Ensured planning is up to date and ensure skills link with relevant and relatable scenarios.	To help ensure the skills the children are learning are memorable, we need to ensure the skills they are learning are relatable and relevant to them.
Monitored planning, teaching and learning to ensure a consistent approach and standard to the teaching of computing across the school.	Quality computing teaching across the school and pupil progress at good or above.
Plans and progression maps were updated to the new scheme.	By ensuring progression maps are up to date, the subject lead is able to ensure there is a clear progression of skills across key stages and all year groups.
Children are more confidently self-assessing their learning across the computing curriculum.	By reflecting on their learning, children are able to better understand what their strengths and next steps in their learning journey are.

Ensured pupil conferencing was carried out termly.	Gather feedback from teaching staff. Learning walks and reviewing learning evidence.
Ensured online safety pupil conferencing was carried out termly.	By carrying out online safety pupil conferencing, gaps in understanding and misconceptions can be addressed.
Implemented a new filtering and monitoring system. (Sensocloud safeguarding software)	All pupils have their own username, email address and password. This now enables our monitoring system to identify what computer users have been searching for. As a result of this, if there are any safeguarding concerns, our DSL and DDSLs are able to swiftly support the identified user.
Internet safety information was made available on our school website.	Updates from 'Wake Up Wednesday' are now uploaded onto our school website. The information provided supports parents with a variety of online safety issues.
What is the action plan for 2024?	
Implementation	Impact
Parent 'Online Safety' workshop	It is vital that parents understand the importance of their role in keeping their children safe online. The online safety workshop will help to educate parents in how they can work towards doing this.
Stay safe online information video	Children will create a video advert which will highlight certain aspects of how to stay safe online. This video can then be played on the school television in the reception area and at school events.
Monitoring planning, teaching and learning evidence to ensure a consistent approach and standard to the teaching of computing across the school focusing on transferable skills.	Quality computing teaching across the school and pupil progress at good or above.
Ensure pupil conferencing is carried out termly.	Gather feedback from teaching staff. Learning walks and reviewing learning evidence.
Ensure online safety pupil conferencing is carried out termly.	By carrying out online safety pupil conferencing, gaps in understanding and misconceptions can be addressed.
Create a child friendly online safety policy	It is vital children understand the importance of how to stay safe online. To help do this, the children in the school council will work with the subject lead to create a child friendly online safety policy.
Ensure planning is up to date and ensure skills link with relevant and relatable scenarios.	To help ensure the skills the children are learning are memorable, we need to ensure the skills they are learning are relatable and relevant to them.
Ensure children continue to confidently self-assessing their learning across the computing curriculum.	By reflecting on their learning, children are able to better understand what their strengths and next steps in their learning journey are.