



Subject Report 2022-2023

Subject	Computing	Report prepared by	Angela Beeson
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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. Since September, both year 4 classes have had a set of 8 iPads in their classrooms. Having swift access to computing hardware has been a huge asset to support the use of computing in the children's learning. Due to the effectiveness of the trial, the school has decided that each KS1 class will have a set of iPads in each classroom which will be used in all areas of the children's learning.

Last year, the school invested in 30 Chromebooks. After testing the effectiveness of them, we have decided to invest in an additional 60. By doing this, each class in years 3, 4 and 5 will now have easy access to a set of Chromebooks which will be used to support their learning in all areas of the curriculum throughout the school day.

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. In October, all teachers completed 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. Parental support is incredibly important when tackling the subject of how to help keep children safe online. In October Ian McGraw (a safeguarding consultant who specialised in child protection as a covert internet investigator for the Metropolitan Police Service) delivered an internet safety workshop for the parents of The Cambridge Primary school. Additionally, to continue to raise the profile of internet safety, an internet safety bulletin is included in our Termly Newsletter.

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
<ul style="list-style-type: none"> • 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. 	<p>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.</p>

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)

Rationale for curriculum organisation:

Every class from Year 1 to year 4 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.

In addition to the discreet computing lesson, Year 4 currently have access to iPads which they use across the curriculum for carrying out research and developing their use of vocabulary.

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

An assessment grid has been created for each class. The grid clearly outlines the learning intentions to be covered during each term. By using this tool, both class teachers and the subject lead are able to see which children are working towards expected, expected or exceeding.

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	<p>June 22 – Took part in CEOP Education Ambassador training. The computing lead received training to better support the teaching and learning of how to stay safe online.</p> <p>June 22 – The computing lead met with computing leads at The Wavell and All Hallows secondary schools. Through discussions, the computing lead was able to identify areas to support the children at The Cambridge Primary</p>

<p>on the school network where they are able to save their work.</p> <p>Children enjoy using different computing hardware and have expressed their interest in the subject through pupil conferencing and discussions the subject lead has had with class teachers.</p>	<p>School so they are prepared for the computing expectations when they leave</p> <p>Oct 22 – Online safety training. This training enabled all teachers to better understand how to teach children to stay safe online.</p> <p>Nov 22 – Training with LSAs. Lead demonstrated how to utilise some of the functions on Smart boards and visualisers. Lead discussed with LSAs how we can utilise the computing hardware in our school further. (Mini PCs will now be installed in Year 4 intervention bay).</p>
<p>What Performance Information is monitored? What are the 3 questions are you considering for future developments?</p>	<p>How are Fundamental British Values, the Cambridge Learning Characteristics and personal development promoted within your subject?</p>
<p>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.</p> <p>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.</p> <p>Key Questions:</p> <ol style="list-style-type: none"> 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? 	<p><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.</p> <p>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.</p> <p><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.</p> <p><u>Opportunities for Personal Development</u> The computing lead runs a ‘Terrific typers’ club every Thursday. In this club the children learn and practise the skill of touch typing.</p>
<p>What have we done in 2022?</p>	
<p>Implementation</p>	<p>Impact</p>
<p>LSA computing hardware training session</p>	<p>As the school grows, it will be vital to ensure all staff are confident in using the different computing hardware and software at The Cambridge Primary School. The training session enabled the computing lead to demonstrate how different hardware can be used.</p>
<p>iPad charging station x2</p>	<p>Having iPads in the classroom greatly increases their usage across the school day.</p>
<p>iPad charging cables pack of 5 x 4</p>	<p>Having iPads in the classroom greatly increases their usage across the school day.</p>
<p>Digital cameras x 8 with cases and SD cards</p>	<p>The school purchased digital cameras so memories can be captured of children taking part in activities both in school and also during school trips.</p>
<p>Visualisers for year 4 classes</p>	<p>Visualisers are used across the curriculum by all teachers on a daily basis. Pupils feel pride when their work is shown to the whole class under the visualiser. Additionally, teachers are able to use it to demonstrate to the whole class.</p>
<p>Establish the format for recording children’s achievements in computing lessons. (Folders have been created for every child from year 1 up to Year 4).</p>	<p>By ensuring there is consistent recording of achievements across year groups we will be able to more effectively record evidence of progress being made.</p>

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 helps educate parents in how they can work towards doing this.
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.
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.
What is the action plan for 2023?	
Implementation	Impact
Purchase 60 Chromebook	As the school grows, additional Chromebooks are needed so all children can access this computing hardware during computing lessons and during other areas of the curriculum.
2 charging station for Chromebooks	Two charging stations which can hold 30 Chromebooks will make it easier to transport devices into classrooms. Making hardware more accessible will hopefully promote their usage.
Visualisers for year 5 classes	Visualisers are used across the curriculum by all teachers on a daily basis. Pupils feel pride when their work is shown to the whole class under the visualiser. Additionally, teachers are able to use it to demonstrate to the whole class.
iPad charging station x2	Having iPads in the classroom greatly increases their usage across the school day.
iPad charging cables pack of 5 x 4	Having iPads in the classroom greatly increases their usage across the school day.
Mini desktop	The mini desktop will be trialled in the year 4 intervention area. This will enable adults working with children to fully utilise the Smart board.
Implement Google Classroom	Google classroom helps teachers to work more efficiently and teach more effectively. It will provide a centralised storage location where multiple users can access the documents at the same time. It also enables teachers to include videos and web pages into their lessons, helping to make learning both collaborative and interactive.
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 helps educate parents in how they can work towards doing this.
Ensure planning is up to date and ensure skills link with relevant and relatable scenarios. Plans and progression maps are to be updated to the new scheme	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.
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.