

Intent

Computing supports our school vision of inspiring *life in all its fullness* through its contribution to our provision of the widest possible breadth of curriculum, equipping our children to use computational thinking and creativity to further understand and contribute to the wider world. We believe that computing, and computational thinking, are an integral part of all learning.

Our intent and aims for computing are that all children will be able to develop a range of skills, knowledge and understanding that will equip them for the rest of their lives. We are aware that each child's starting point is very different, so our computing curriculum is designed with high expectations and to develop skills sequentially in all of our children, drawing on and extending their prior knowledge in the subject. Our breadth of provision is also designed to allow children to discover and develop new talents in the area and to make links with other areas of learning. We offer a range of enrichment activities, both within our school setting and outside the classroom.

With computer science at the heart of our computing curriculum, we aim to teach children the principles of information and computation, how a range of digital systems work and operate, and how to put this knowledge into practice through programming, as stated in the National Curriculum. Our children will be able to use technology efficiently and access the online world safely, respectfully and responsibly – skills that are compatible with other aspects of their lives and learning. The skills learnt in computing are transferable to a range of different subjects, as well as later in life for the future workplace. Our aim is that our children will become digitally literate contributors and active participants in a digital world.

Implementation

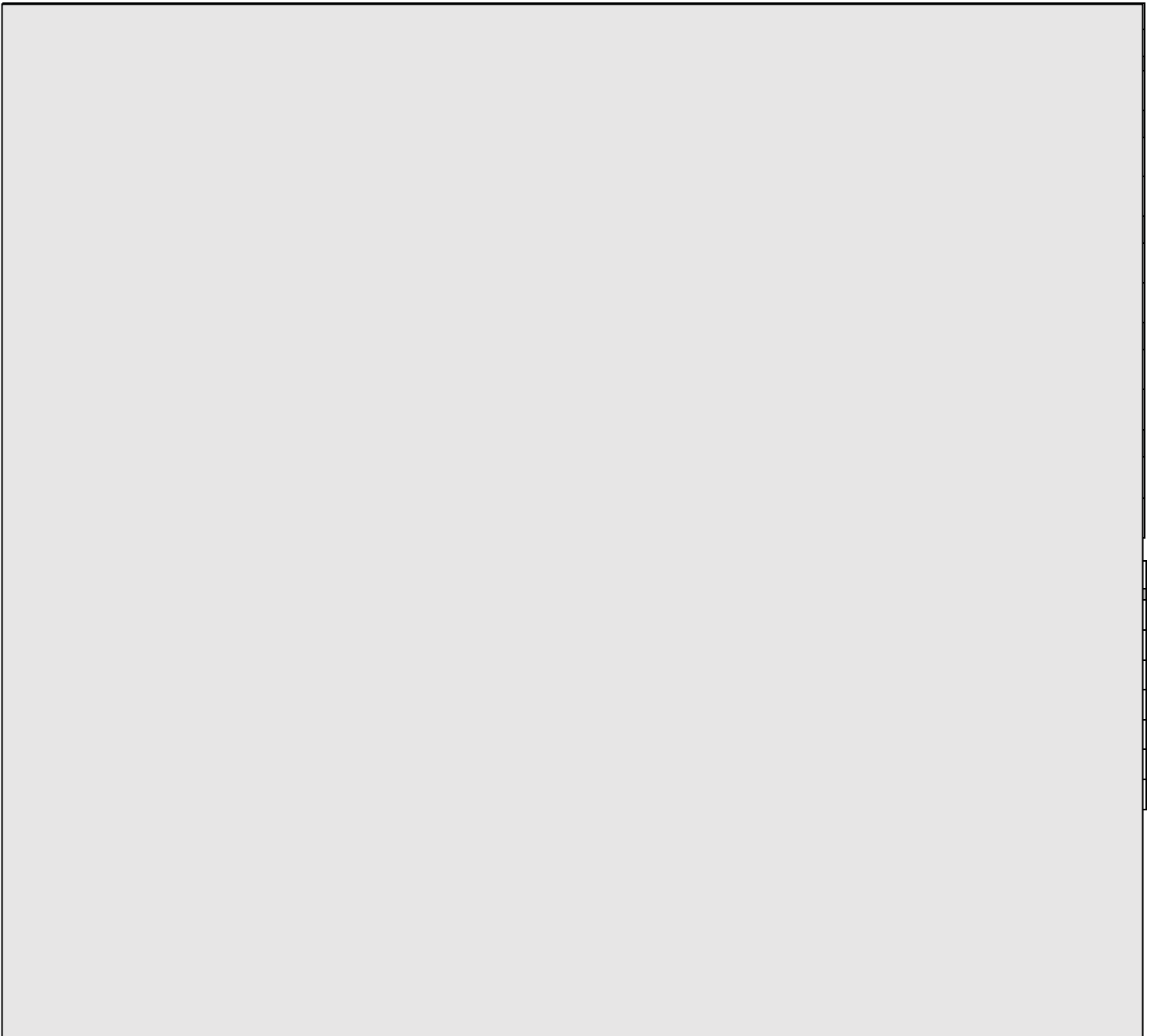
- Taught by class teachers, with support from part-time specialist teacher.
- Class teachers are given ongoing support by the Computing subject leader and a specialist teacher, who have also provided CPD to class teachers in the past.
- Ongoing assessment by class teachers, with end of year assessments against key statements reported to parents in annual reports.
- Enrichment in the subject is offered through after school clubs such as Code Club and Tech Club, and yearly trips to the City Learning Centre in Camden.
- Computing, and Digital Literacy in particular, is often linked to other areas of the curriculum – publishing work on the computer, graphs created in different programs, researching information for different topics.
- School has a good supply of computing resources for different needs and is able to borrow equipment from the CLC if needed.
- Wifi throughout the school allows children to use the class sets of Chromebooks and/or iPads throughout the school building
- Licences and subscriptions have been purchased for various programs, websites and organisations to help facilitate learning and the use of technology – RodoCodo, Discovery Education, Twinkl, 5-a-day, PurpleMash.
- Our progression in the teaching of coding skills is guided by our use of the Rodocodo children's coding program. The development of coding skills in Years 1 -6 begins with lessons focused on the appropriate levels and coding elements taught within Rodocodo.
- Children are expected to transfer the skills learnt in Rodocodo to other software and platforms, including those using different coding formats or languages. Teachers select and introduce a range of programs and platforms where children can practise and consolidate their coding learning (e.g. J2code, Scratch, Purple Mash coding, Barefoot lessons), including by transferring their coding knowledge to specific tasks (e.g. creating a maths game, animating a fairy tale). This is linked to our termly lessons expectations as set out in the *Coding Overview* document.
- Within a range of digital literacy activities across the curriculum, all children are given the opportunity to develop the specific IT skills as set out in our skills progression. Children may have varying access to and experience of technology outside school and some children may need specific or additional teaching or support to build confidence in these key skills.
- Teachers give ongoing, age-appropriate reminders about safe and responsible use of technology before and during all computing and online activities.
- Each year, teaching about online safety and digital citizenship, as set out in our skills progression document, is also taught in all classes in a specific whole-school theme day or week.

- Home learning periods have embedded learning from previous topics. Children were able to complete coding tasks online and some chose to type written work to publish. Quite a lot of daily activities involved the children using computers or technology to access information, research or complete a task.
- Regular reminders about Online Safety were given during home learning, with classes setting regular tasks for children to complete to consolidate learning from school and give relevant reminders.

Impact

- Children enjoy taking part in computing lessons.
- All children develop their skills using a range of programs and devices. These skills are cumulative over their time at Christ Church and build upon previous learning.
- Children have a good knowledge of coding and are able to transfer this to different platforms (eg. Scratch, RodoCodo, J2Code, PurpleMash).
- Children have the opportunity to use computers and technology across the curriculum.
- Children use relevant computing vocabulary and can discuss the meaning of these words
- Children have been able to use technology during home learning to both continue building skills in the subject, and facilitate learning in other areas of the curriculum. Some classes also took part in touch typing activities throughout the home learning period.

Whole school standards (two year trend)



Last year's key developments and successes in 2020/21:

- Refine collection of evidence in teaching and planning folders for coding taught outside RodoCodo and other wider computing activities (20/21 target partially achieved – new *Coding Overview* will assist with this)
- Continued development of teachers' confidence in teaching computing through discussion and CPD with computing lead and specialist teacher (20/21 target achieved – training given to staff on RodoCodo and Purple Mash coding. Ongoing assistance available)
- Continued annual visits to CLC (Spring term) if possible, visits to school from CLC staff or virtual workshops (20/21 target not possible due to Covid restrictions – will continue this academic year)
- Training for class teachers in PurpleMash (20/21 target achieved)
- Training for staff and set up of Google Classrooms, to be used for some homework activities and possibly in the event of class closures. (20/21 target achieved)
- Renewal of CEOP/Online Safety training for all staff (20/21 target achieved – Head teacher took part in CEOP training, all other teaching staff took part in Online Safety Alliance course)
- Annual Digital Citizenship/Online Safety day (20/21 target achieved – during remote learning)
- Purchase of class set of ChromeBooks – (Autumn Term) training for staff and pupils (20/21 target achieved)

The **anti-racist curriculum review** asked us to consider both the inspirational figures related to coding or technology which the children learn and hear about and the characters represented in the computing resources we use to ensure they reflect the diversity in our society. It also asked us to reflect on whether pupils are taught to be questioning and critical of the information they find online (e.g. is it presented with a western bias). Our Y5/6 digital citizenship teaching includes objectives on questioning, checking and appraising information online.

COVID impact – remote learning provision and recovery curriculum

Home learning provision (March–June 2020 and January-March 2021)

- Children were able continue to build computing skills during home learning through online activities in PurpleMash, Discovery Coding and RodoCodo.
- Some classes were set touch typing tasks online
- Children were able to use technology to help facilitate learning in other areas of the curriculum – researching, producing work, filming, communication with teachers online.
- Children all enjoyed using technology to help with their home learning. Some parents even gave feedback that other members of the family were also taking part in the activities set by teachers.
- Online safety activities were set on a weekly or fortnightly basis for children to complete with their families and provided reminders about using technology and the internet safely.
- Teachers' feedback of home learning was positive. Some were more confident setting computing tasks than others. Some support from specialist teacher was used to set specific tasks.
- Home learning in the instance of student self-isolation or class closure will now utilise Google Classroom and teaching videos/zoom input to support new learning at home. Teachers will have the option to set computing activities, which may involve coding or completing tasks online using some of our subscriptions mentioned above.
- More use of online subscriptions such as PurpleMash or Busy Things to set tasks and give feedback

Whole school projects

- During home learning, all children took part in an online safety/digital citizenship day
- Ongoing online safety and respectable use reminders

Recovery curriculum:

No major adaptations to our Computing curriculum have had to be made for 21/22 school year, as the majority of key skills continued to be taught at home or at school last year.



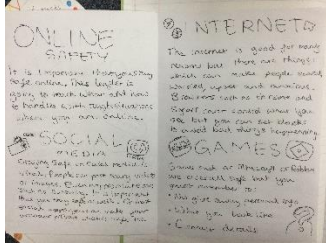

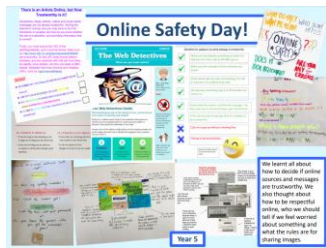



The DfE recovery curriculum document suggests the following:








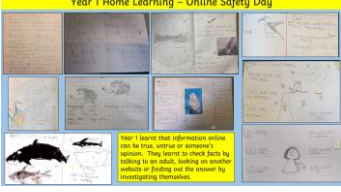


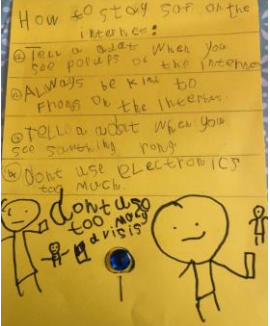
- priority should also be given to using computing devices safely and responsibly
- teachers should give priority to developing pupils' knowledge of algorithms, notably sequencing in key stage 1.
At KS2
- teachers should focus on sequencing, selection and repetition.
- pupils should be given enough time to practise programming to secure knowledge of key programming constructs.
- gaps in knowledge of how to use digital devices should be identified and addressed. It is important that pupils use devices confidently and competently, so that they can focus on complex tasks without also having to learn how to use a device, which may otherwise get in the way of processing information.

Key targets and actions moving forward (development priorities for 2021/22):

Target and <i>intended outcome</i>	Planned actions (including dates where applicable)
1. Ensure teaching of coding follows <i>Coding Overview</i> document. <i>All children to have experience of coding using a range of programs/platforms over the academic year.</i>	Staff meeting with all class teachers and specialist teacher to explain <i>Coding Overview</i> document. Ongoing staff training and support from specialist computing teacher and subject leader.
2. Reinroduce Computing enrichment with visits to the CLC and after school clubs. <i>All children to receive enrichment opportunities to build on computing skills and enjoyment in the subject.</i>	Trips to be decided upon by subject leader and specialist teacher (in conjunction with class teachers). CLC visits to target aspects of the curriculum that are more difficult to cover at school due to equipment/expertise. Code Club to start in Spring term for KS2 children. Possible re-introduction of Tech Club in Spring/Summer term.
3. Continue to use training to build staff confidence in teaching coding strand of the curriculum. <i>All staff to feel more confident in the technology, skills progression and coding strand of the computing curriculum and can successfully teach this to children in their classes.</i>	In- school training from specialist teacher and subject leader on the curriculum progression in coding. Training to include time to use and experiment with software to give class teachers experience across a range of programs. Open this training to support staff as well as teaching staff. Autumn term 2021 and Spring term 2022

Work sampling 2020/21 – in school projects and home learning

	RodoCodo Progression	Digital Literacy	Online Safety/Home learning
Year 6	<p>Year 6 – If statements</p> 	<p>The house advert</p> <p>Stone's Estates offers to the market a 4 bedroom house located in the rural countryside in Scotland. This is a magnificent opportunity for any growing family.</p> <p>This superb possessing spacious rooms that can accommodate your possessions. Victorian walls are plain ready for you to paint. The exposed floorboards give a cosy sensation. Modernisation is recommended.</p> <p>At the rear of the house, there is a garden which is a generous size for families to enjoy. Mature shrubs may be spotted and the garden has huge potential. A renovation can be easily made.</p> <p>In this superb three are four bedrooms, two kitchens, two bathrooms, one living room and a laundry room on the ground floor. The living room is much loved and has an ample space for a growing family.</p> <p>This location is nearby a tranquil cafe and is 15 minutes away from a local farm. A leisure centre with desirable facilities is 10 minutes away from Falconer road.</p> <p>This property is ideal for many people and therefore an early viewing is recommended. Please contact us on Stone's Estate: 020.com.UK.</p> <p>Like</p> 	
Year 5	<p>Year 5 – Trickier patterns</p> 	<p>The Dreamgiver</p> <p>Below the cloudy, indigo night sky, where the stars glistened in the twilight, the coarse, red-tiled house, lowered over the misty landscape. The town was motionless and silent except for the fresh breeze that would make the hairs on the back of your neck stand up. Puddles covered the town in snow and despite that had shivered all over the people this day. A thick cloud of mist cloaked the scene, while the people, were in a deep slumber. BUZZ! Hovering, a deceptive creature flashed through the sky with an enchanting, unusual glow!</p> <p>Making his descent, the unknown figure flew towards the gloomy orphanage that no child would want to end up in. Boney, unlit fingers steadily opened the white shutters as if this intruder were in a hurry. The old white part of this shutter had been blown away by the battering wind however, this did not wake the children in the dormitory. Peering inside, the peculiar creature studied the way room. Hunched, the creature wore an old, raggedy linen cloth and adventurer's goggles. Heavily rain covered his thin body as he checked the address, 2855 Kensington Avenue. Wings as delicate as porcelain, gave the creature flight as he entered the orphanage with a strange bag.</p> <p>Brown and veined, the bag held numerous luminous and bright yellow spellbinding eggs that gave a glow to the visible room. Heading in the nearest bed, the creature dropped his notebook and bag and observed the child. He had not seen this child before. Reaching his hand in the bag, all the golden eggs fell onto the girl's bed, nearly waking her up. As he took one of the dazzling eggs, he cracked it, separating the egg in two, inside was a mixture, a very damp mixture however, it was golden. Pouring it meticulously, he lowered the mixture into the child's basket where a classic, spectacular balloon emerged, landing and tumbling into the girl's dreams. Immediately, the girl's town turned into a smile. This really was pleasurable for the Dreamgiver.</p> <p>Next, was a boy who had a book about space. Cracking open another egg, the light-hearted Dreamgiver dropped the egg on the book where suddenly, a small astronaut zoomed up to the ceiling. Leaving the boy in joy, the Dreamgiver kept on concocting dreams a space adventure, a baseball game, a music band and more. All of the dreams delighted the children and filled them with satisfaction.</p> <p>About to leave, the Dreamgiver steadily edged his way towards the window however, he heard something that made him stop and turn around. Perplexed, he spun around to find that an egg was dripping onto a book. As fast as he could, he tried to stop it however, it was too late. BOOM! A colossal cloud of purple dust formed, sucking the helpless astronaut into a hole that made him vanish at an instant. A colossal firework show appeared which knocked out the Dreamgiver, causing him to tumble to the ground.</p> <p>Opening his eyes, the astronaut took in his surroundings. Lush green trees surrounded him like a subterranean prison. Humid, damp air covered his body, causing him to sit down and the rough floor that the astronaut sat on was warm and covered in tiny ants and beetles. Passing by, golden radiant butterflies landed on the astronaut as he admired their beauty. As the butterflies flew away, the astronaut turned around to leave him in a gap.</p>	
Year 4	<p>Year 4 – Practising functions</p> 		

<p>Year 3</p>	<p>Year 3 – debugging buggy code</p> 		<p>Wednesday 10th February 2021</p> <p>Dear George George,</p> <p>Something your laptop might be missing is not the laptop or zoom call with you. You can also order your online and you can email other people. If you are feeling lonely, I recommend to be social online like only share videos with people you know. If someone sends you a message, please block and report them and don't post any videos or pictures to people. A lot of people show up all people when you live and don't tell people your home. Good luck with it.</p> <p>Kind regards I too</p> <p>George George 5th Street, London, UK 10th February 2021</p> <p>Dear George George,</p> <p>I hope you are well. I heard you bought a new laptop. I want to be useful to shop and to communicate with people including in Australia. Here are a few things that you can do to know.</p> <p>With your new laptop, make sure your password is very easy to remember and it's very secret. You should be a good person on it. If you have something that come up on your screen that say "THEY CAN SEE YOUR SCREEN" or "YOUR SCREEN IS NOT THE NEW WINDOW" ignore them.</p> <p>If you want to see people that are not near enough to take a look to each, you may use an app that allow people to meet each other on the screen such as Facebook. It's convenient because you can see each other. If you're not sure about the sound or look of a message or picture, please do not click that app. If you're not sure about the sound or look of a message or picture, please do not click that app. If you are getting any message like "You got an email" or "BLOCK THEIR APP REPORT TO THE AUTHORITIES" Make sure that the app is safe for you.</p> <p>Also please be aware that there are harmful things such as computer viruses which is not a physical virus but can break your computer. If you find there is a virus on your screen, turn off the screen and don't go on it for a few days.</p> <p>Enjoy your new laptop.</p> <p>Keep safe! Glorious regards, Jayant</p>
<p>Year 2</p>	<p>Year 2 – looping movement</p> 	<p>CHRIST CHURCH NEWS</p> <p>by Arbella TO STOP FOOD POVERTY year 2</p>  <p>Many children in the UK get hot school meals but during the weekends, Holidays and when they're not at school they can't afford hot meals and this is known as Hunger. Holidays year 2 have collected food to donate to local food banks. They have written letters to Tulip Siddiq and have talked to their Parents about this situation. You can help to you can or food to food charities, write letters to your local mps and tell other people about the issue. No child should ever go hungry in the UK.</p>	 <p>Year 2 - Home Learning Week beginning February 9th, 2021</p> <p>This week we learnt all about being sustainable and we had fun. We discussed our personal information - things we should keep private, and how to protect our own and for each.</p>
<p>Year 1</p>	<p>Year 1 - sequences</p> 	 <p>I like summer because we can go to the beach with my friends.</p>	<p>Year 1 Home Learning - Online Safety Day</p>  <p>Year 1 learnt that information online can be true, untrue or someone's opinion. They learnt to check facts by talking to an adult, looking on another website or finding out the answer by investigating themselves.</p>
<p>Reception</p>	<p>BeeBots – Directions</p> 	<p>L1 To develop digital literacy</p> <p>Can you find the letters to type your name on the computer? Name: William Green</p> <p>Can you finish the sentence? My favourite part of Goldilocks is when the three bears came home.</p> 	 <p>How to stay safe on the internet:</p> <ul style="list-style-type: none"> • Tell a adult when you see popups or the internet • Always be kind to friends on the internet • Tell a adult when you see something funny • Don't use electronics too much • Don't do too many visits

Pupil voice

Pupil voice discussions in September 2021 demonstrated that:

Children could talk about what they had been learning about recently and clarify skills they had learnt with confidence:

'We learnt how to debug coding in RodoCodo. We researched ancient Egyptians so we could make a poster.' (Year 3 pupil)

'We learnt about functions – a specific piece of code for a purpose that you can put in when you want. We typed up data for geography about mountain ranges.' (Year 5 pupil)

'We have been learning about nested loops, which is a loop in a loop, and functions. We have also typed up character descriptions on Alex Rider' (Year 6 pupil)

'We used RodoCodo and learnt functions – repeated patterns. We had to add something to the function to get all three stars' (Year 2 pupil)

'We used beebots and then started RodoCodo. We made pictures on the iPad too.' (Year 1 pupil)

'We researched what people in the Stone Age used for weapons.' (Year 4 pupil)

Children could explain specific terminology in detail:

Y3 children were able to explain what debugging is.

Y2 child was able to explain a loop.

Children could talk about how prior learning – previous lessons or even years – has helped with their computing learning now:

'Last year we looked at loops, but this year they are trickier.' (Year 5 pupil)

'Last year we looked at functions and loops, but this year we are looking at nested loops which are more advanced' (Year 6 pupil)

'We learnt about safe searches last year, and we are able to do these this year' (Year 4 pupil)

'Last year we were writing simple coding, and this year we are debug more difficult things.' (Year 3 pupil)

'When we were in Reception we used the BeeBots so it was easier for us this year when we used them' (Year 1 pupil)

'We are doing more difficult levels (RodoCodo) than we did last year. We are learning loops and functions now' (Year 2 pupil)

Children could talk about what helped them to remember what they had learnt in computing:

'In previous years we learnt the basics – loops – and this year it is trickier so we can use that to help us.' (Year 5 pupil)

'We learnt about loops and repeated patterns, then a couple of weeks later we had to fill in a sheet about it.' (Year 6 pupil)

'We are reminded about how to use the internet safely all the time.' (Year 4 pupil)

'When we were researching we had to remember how to do it safely and our teacher reminded us.' (Year 3 pupil)

Additional comments during discussions:

'I learnt new things about using a computer because my classmates showed me shortcuts, like searching images' (Year 5 pupil)

'We have also been using maths frame on the ipads – this is an app where you can practise your maths skills. I would like to do even more coding, like RodoCodo.' (Year 4 pupil)

'I really like researching using the internet and would like to do even' (Year 6 pupil)

'I really enjoy it when we can do our own research' (Year 3 pupil)

What makes our curriculum provision for Computing exceptional and beyond the expected?

- ❖ Computing enrichment opportunities at the CLC
- ❖ The skilled support and training provided by our specialist computing teacher is beyond the expected
- ❖ Student confidence using devices appropriately is exceptional

Key points for discussion with governors about this report

- Sharing *Skills Progression* and *Coding Overview* – showing how this all fits together and builds year on year
- Google Classroom successful use during remote learning
- Importance of online safety work – within computing and across curriculum, as well as school day/routines
- Three strands – Coding (computer science), Information Technology (Digital Literacy), and Online Safety (Digital Citizenship)