Cromwell Learning Community Computing Policy 2023-24

At Cromwell Learning Community Multi Academy Trust we believe that learning without limits means we do not put a ceiling on children's achievement.

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1. Statement of Intent

Cromwell Learning Community understands that ICT and computing are an integral part of the national curriculum and that ICT skills are important beyond the classroom. Computers benefit the way pupils learn and help teachers maximise their role as educators. Our school is committed to ensuring that staff and pupils have access to the necessary facilities to allow them to enhance their learning experience. We believe that it is important for pupils and employees to be confident and competent users of computers, and other technological resources, to aid development across the curriculum.

We will equip children to use computational thinking and creativity that will enable them to become active participants in the digital world. They must understand how to use technology to express themselves, as tools for learning and as a means to drive their generation into the future. Our children will develop as responsible and confident users of technology, aware of measures taken to keep us safe online and understanding the advantages and disadvantages associated with online experiences.

In KS1, pupils will be taught to:

- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions.
- Create and debug simple problems.
- Use logical reasoning to predict the behaviour of simple programs.
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of information technology beyond schools.
- Use technology safely and respectfully, keeping personal information private.
- Identify where to go for help and support when they have concerns about content or contact.

In KS2, pupils will be taught to:

- Design, write and debug programs that accomplish specific goals, including physical systems.
- Solve problems by decomposing them into smaller parts.
- Use sequence, selection and repetition in programs.
- Work with variables and various forms of input and output.
- Explain logically how simple algorithms work and to detect and correct errors in algorithms/programs.
- Understand computer networks (including the internet), how they can provide multiple services (such as the World Wide Web), and the opportunities they offer for communication and collaboration.
- Use search technologies effectively, appreciate how results are selected, and evaluate digital content.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.
- Use technology safely, respectfully and responsibly, recognising acceptable/unacceptable behaviour.
- Identify a range of ways to report concerns about content and contact.

Each year, the children will have the opportunity to explore the following areas of the Computing Curriculum; Computing Systems and Networks, Creating Media, Programming, Data and Information. All units ensure that themes are revisited at least once in each year group, through a new unit that consolidates and builds on prior learning within that theme. This style of curriculum design reduces the amount of knowledge lost through forgetting, as topics are revisited in each year.

2. Implementation

Computing is taught discretely, with cross-curricular links made where appropriate. Through discrete lessons, children can develop their knowledge and application in incremental steps in order to ensure misconceptions are tackled throughout their learning process. With respect to cross-curricular links, the children at Cromwell Learning Community are provided with opportunities to apply their skills in mathematics, science, art and design and design and technology.

The Primary National Curriculum for Computing at Key Stage 1 and Key Stage 2 is split into three strands: information technology, digital literacy and computer science.

- Information technology is about the use of computers for functional purposes, such as collecting and presenting information, or using search technology.
- Digital literacy is about the safe and responsible use of technology, including recognising its advantages for collaboration or communication.
- Computer science helps children of all ages to understand how computers and networks work. It gives all children the opportunity to learn basic computer programming, from simple floor robots in Years 1 and 2, right up to creating on-screen computer games and programs by Year 6, using programming software such as Scratch.

At Cromwell Learning Community, these three strands are covered under the four areas in the Teach Computing scheme of work:

- Computing Systems and Networks (1 unit covered each year)
- Creating Media (2 units covered each year)
- Programming (2 units covered each year)
- Data and Information (1 unit covered each year)

The Computing Curriculum is structured in units. For these units to be coherent, the lessons within a unit must be taught in order. However, across a year group, the units themselves do not need to be taught in order, with the exception of 'Programming' units, where concepts and skills rely on prior learning and experiences.

Pupils' progress will be tracked, and individual targets will be set; pupils will be regularly assessed against these targets at the end of each unit. Where a pupil is not meeting the expected standard, this will be supported through quality first teaching.

Computing skills and competencies will be reliably and consistently assessed through assessment for learning as part of Computing lessons, as well as across the curriculum in other subjects.
The unit overviews for each unit show the links between the content of the lessons and the national curriculum and Education for a Connected World framework. These references show where aspects of online safety, or digital citizenship, are covered within the Teach Computing Curriculum. Not all of the objectives in the Education for a Connected World framework are covered in the Teach Computing Curriculum, as some are better suited to PSHE.

Some children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEND or those who have EAL. Teachers must take account of these requirements and adapt planning, where necessary, to support individuals or groups of pupils to enable them to participate

effectively in the curriculum and assessment activities. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure that appropriate provisions and/or interventions are effected.

In the computer suite desktops/laptops are available for lessons. Additionally, charging trolleys with laptops and iPads can be used in classrooms (See Operating Manual)

The computing subject leader will assess and address staff training needs as part of the annual development plan process or in response to individual needs and requests throughout the year. Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the subject leader.

Annual CPD will be arranged through the National Centre for Computing Education (NCCE), using their scheduled live remote training sessions to ensure that knowledge, understanding and pedagogy is consistent with the aims and outcomes of the Teach Computing scheme of work.

Early Years Foundation Stage (EYFS)

Although Computing is not a statutory part of the EYFS, we will ensure that children of reception age receive a broad, play-based experience of Computing through the use of new technologies. This will include use of Beebots, iPads and interactive displays.

Our scheme of work for Computing follows the 'Teach Computing' Curriculum and covers all aspects of the National Curriculum. This scheme was chosen because it was created by subject experts and based on the latest pedagogical research. It provides an innovative progression framework where computing content (concepts, knowledge, skills and objectives) has been organised into interconnected pathways. These pathways can be found in the subject skills progression documents.

3. Impact

Pupils will save digital portfolios of work on the school's shared network drive. Depending on the module taught, this will include; completed creative media projects (digital art, desktop publishing, word processing etc.), screen shots of programming tasks and collages of other digital work. Where 'unplugged' activities have been completed, photos of activities and completed worksheets will be saved in separate folders.

To evidence completed work, exemplar materials of higher, middle and lower ability tasks will be printed in hard copy and displayed in 'floor books' to provide pupils, staff and visitors with a demonstration of skills progression and modelled work.

Formative assessments will be carried out during lessons, based on individual objects and outcomes – these assessments will be conducted informally by the class teacher.

Summative assessments will be completed at the end of every module. Pupils' capabilities will be reviewed using open-ended tasks, providing them with an opportunity to demonstrate their capabilities in relation to the unit of work.

Misconceptions and gaps in learning will be identified and addressed in lessons by the teacher, using AFL strategies. This can be achieved through individual support, group work or with a mini plenary

Pupil Voice gathering will take place annually using Microsoft Forms.

The provision of the Computing curriculum will be monitored and assessed by the Computing subject leader and Curriculum Lead.

Teachers will enable pupils to achieve attainment targets set out in the national curriculum for each key stage. By the end of each key stage, pupils are expected to know, understand and apply the skills and processes specified in this policy.

The school will meet the general aims set out by the DfE for computing programmes of study, which means 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 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.
- Have achieved their end of key stage expectations (as stated in the curriculum intent).

4. Legal framework

The Computing policy has due regard to all relevant legislation and statutory guidance including, but not limited to, the following:

- DfE (2022) 'Keeping Children Safe in Education (KCSIE) 2022'
- Data Protection Act 2018
- General Data Protection Regulation (GDPR)
- Equality Act 2010
- DfE (2013) 'Computing programmes of study: key stages 1 and 2'
- Education for a Connected World (Updated 2020)

This policy operates in conjunction with the following school policies:

- Online Safety Policy
- Cyber Response and Recovery Plan
- Data Protection Policy
- Technology Acceptable Use Agreement for Pupils
- Technology Acceptable Use Agreement for Staff
- Pupil Equality, Equity, Diversity and Inclusion Policy

5. Roles and responsibilities

The governing board will be responsible for:

- Monitoring the effectiveness of the Computing curriculum.
- Monitoring the progress and attainment of pupils in Computing.
- Holding SLT and the Computing subject leader to account for pupils' attainment and progress, and the delivery of the Computing curriculum.
- Ensuring the school has appropriate filters and monitoring systems in place on its ICT systems to safeguard pupils during Computing lessons.

Overall responsibility for monitoring the teaching of Computing throughout the school will lie with the Computing and Curriculum Leads. They will make decisions on:

- How Computing/ICT should support, enrich and extend the curriculum.
- The provision and allocation of resources.
- The ways in which the need for developments in the school's ICT system can be assessed and records can be kept for these developments.
- How Computing/ICT can benefit the aims and objectives of the whole school.

The Computing Lead and Curriculum Lead will be responsible for overseeing the implementation and reviewing of this policy.

The Computing Lead will be responsible for:

- Monitoring the progression of teaching and learning in Computing.
- Managing resources and advising staff on the use of materials.
- Supporting teaching staff to deliver the Computing curriculum and monitoring the quality of teaching and learning.
- Keeping abreast of technological developments and using these to inform practice.
- Leading staff training on new Computing initiatives.

Teachers will be responsible for:

- Planning and delivering lessons in line with this policy.
- Providing equality of opportunity to all pupils through their teaching approaches and methods.
- Keeping up-to-date assessment records.
- Ensuring pupils' development of skills and knowledge progresses through their learning and understanding of Computing.
- Setting pupils appropriate targets based on their needs and prior attainment.
- Maintaining an enthusiastic approach to Computing.
- Taking part in Computing training and other CPD opportunities.

The ICT technician will be responsible for:

- Maintaining and keeping ICT equipment in good working order.
- Dealing with any reports of broken, damaged or faulty equipment.
- Ensuring the school's Cyber Response and Recovery Plan is adhered to.
- Carrying out checks on all computers once per term.
- Adjusting access rights and security privileges in the interest of the school's data, information, network and computers.
- Monitoring the computer logs on the school's network and reporting inappropriate use to SLT.
- Disabling the user accounts of staff and pupils who do not follow school policies, at the request of SLT.
- Assisting staff with authorised use of ICT facilities, if required.
- Assisting SLT in all matters requiring reconfiguration of security and access rights, and all matters relating to this policy.
- Accessing files and data to solve problems for a user, with their authorisation – if an investigation is required by SLT, authorisation from the user is not required.

Pupils will be responsible for:

- Using the school's ICT facilities appropriately.
- Being aware of the school's rules around the use of ICT equipment during lessons.
- Understanding how the use of ICT improves learning.

Parents will be responsible for encouraging ICT skills and safe ICT use at home.

6. System Monitoring

The suitability of all ICT equipment and programs will be assessed and updated, if necessary, by the ICT technician to ensure they are sufficient for effective learning.

Staff will be provided with high-quality training regarding both curriculum delivery and the safeguarding issues around online safety.

Any breach of this policy will be reported to SLT.

Use of the school's internet connection and network use will be recorded and monitored by the ICT technician.

The ICT technician has the ability to remotely view or interact with computers on the school's network.

The ICT technician will use this to help implement this policy and to identify and solve any problems.

7. Equipment

Cromwell Computer Suite	Bordesley Village Computer Suite
30 Desktop Computers	6 Desktop and 10 Laptop Computers

iPads are stored in a Sync & Charge cabinet in school:

Cromwell	Bordesley Village
16 iPads	32 iPads

Additional Laptops are stored in a Sync & Charge cabinet in school:

Cromwell	Bordesley Village
30 Laptops	60 Laptops

8. Teaching

- The teaching of Computing will ensure that pupils of all abilities are able to engage with the curriculum as effectively as possible, enhancing their Computing knowledge and skills.
- The skills needed for pupils to access the wider curriculum using ICT will be mapped and developed to ensure that pupils can use applications progressively through the curriculum.
- Teachers will use ICT to allow pupils to investigate, solve problems, refine their work, learn from their mistakes and reflect critically.
- There will be a good balance across the whole school between the high-quality use of ICT to support and enhance teaching and learning, and the individual pupil's productive use of ICT for their own learning.
- When administering homework tasks, teachers will be sensitive to the fact pupils may not have access to a computer at home.
- ICT will be used to support and extend learning beyond the school, through activities integrated with pupils' school-based learning.

9. Equal opportunities

- All pupils will be provided with equal learning opportunities regardless of their background or characteristics, in line with the school's Pupil Equality, Equity, Diversity and Inclusion Policy.
- To ensure pupils with SEND can achieve to the best of their ability, targets for pupils with SEND will be adapted and the delivery of the curriculum will be differentiated for these pupils.
- The curriculum and targets will also be adapted for other pupils based on their needs, e.g. pupils with EAL.
- Where possible, ICT will be used in a specialist way to support pupils with SEND. The school will look to utilise software systems that can be modified to aid language, spelling or reading development.
- The school will aim to maximise the use and benefits of ICT as one of many resources to enable all pupils to achieve their full potential.

10. Online learning and safeguarding

The school recognises the importance of teaching pupils about online safety, the potential dangers of the internet and their responsibilities when using communication technology – as set out in the school's Online Safety Policy.

As part of the school's commitment to the principles outlined in the most recent version of KCSIE, the school will:

- Offer a safe online environment through filtered internet access.
- Ensure the filtering systems in place will prevent pupils from accessing terrorist and extremist materials, in accordance with the school's Online Safety Policy and the Prevent duty.
- Take care to ensure the use of filtering and monitoring does not cause "over blocking", which may lead to unreasonable restrictions on what pupils can be taught.
- Run assemblies about the potential dangers of the internet and how to stay safe online.
- Teach pupils about online safety and cyberbullying during Computing and PSHE lessons.

Pupils and staff who use the school's ICT facilities inappropriately will be reported to SLT, and the DSL where appropriate.

The ICT technician will keep internet filters and other safeguarding controls up-to-date, to avoid misuse and protect pupils.

11. Health and safety

All electrical wires and sockets, where possible, will be kept out of the way of pupils.

Visual electrical inspections will be undertaken by the ICT technician on a regular basis – any other problems will be reported immediately to the health and safety officer and ICT technician.

Pupils will be given a five-minute break if they are using the computer for more than one hour at a time.

The rules of the computer room will be displayed around the classroom, and both staff and pupils will be expected to familiarise themselves with, and adhere to, these rules.

12. Monitoring and review

This policy will be reviewed annually by the Computing Lead and Curriculum Lead. The subject leader will monitor teaching and learning in the subject at CLC MAT, ensuring that the content of the national curriculum is covered across all phases of pupils' education.

Any changes made to this policy will be communicated to all members of staff.

All members of staff directly involved with the teaching of Computing will be required to familiarise themselves with this document.

The next scheduled review date for this policy is July 2024.