Ocker Hill Academy

Computing Curriculum Policy

Date policy last reviewed: _____

Signed by:

_____	Principal	Date:	_____
_____	Chair of governors	Date:	_____

Last updated: 31 January 2024

Contents:

Definition of terms

Computing; refers to the Computing Curriculum delivered to pupils. This follows the Teach Computing Curriculum which is funded by the Department for Education and meets the needs of the programmes of study for Computing in Key Stage 2 as outlined in the National Curriculum 2013 (DfE).

ICT (Information and Communication Technology): refers to the devices and networks used to implement the Computing Curriculum by staff and pupils.

Statement of intent

Computing at Ocker Hill Academy intends to develop 'thinkers of the future' through a modern, ambitious and relevant education in computing. We want to equip pupils with knowledge to understand how systems are created and work, the vocabulary to discuss the subject using correct terminology and the skills to develop their computational thinking and creativity that will enable them to become active participants in the digital world. It is important to us that the children understand how to use the ever-changing technology to express themselves, as tools for learning and as a means to drive their generation forward into the future.

Whilst ensuring they understand the advantages and disadvantages associated with online experiences, we want children to develop as respectful, responsible and confident users of technology, aware of measures that can be taken to keep themselves and others safe online.

Our aim is to provide a computing curriculum that is designed to balance acquiring a broad and deep knowledge alongside opportunities to apply skills in various digital contexts. Beyond teaching computing discreetly, we will give pupils the opportunity to apply and develop what they have learnt across wider learning in the curriculum.

Implementation

Our scheme of work for Computing is the 'Teach Computing' Curriculum and covers all aspects of the National Curriculum. This scheme was chosen as it has been 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) have been organised into interconnected schema called learning graphs.

The curriculum aims to equip young people with the knowledge, skills and understanding they need to thrive in the digital world of today and the future. The curriculum can be broken down into 4 strands; Computer Systems and Networks, Creating Media, Data and information and Programming, with the aims of the curriculum reflecting this distinction.

The national curriculum for computing aims to ensure all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation (Computer Systems; Networks and Data and Programming)
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems (Programming)
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems (Computer Systems and Networks ; Programming;)
- are responsible, competent, confident and creative users of information and communication technology. (Creating Media and E Safety)

E-Safety and Digital Citizenship

A key part of implementing our computing curriculum was to ensure that safety of our pupils is paramount. We take online safety very seriously and we aim to give children the necessary skills to keep themselves safe online. The children know that their exposure to the internet within the Academy is filtered and monitored by Senior Teachers using SENSO software. Where issues arise, individual pupils are spoken to and coached about how to conduct themselves in future. Children have a right to enjoy their online experience, to access safe online spaces and to benefit from all the opportunities that a connected world can bring them, appropriate to their age and stage.

Children build online resilience through the use of the 'UKCIS – Education for a Connected World' framework. The framework aims to support and broaden the provision of online safety education, so that it is empowering, builds resilience and effects positive culture change. The objectives promote the development of safe and appropriate long-term behaviours, and support educators in shaping the culture within their setting and beyond. The Academy has a multifaceted approach to delivering e-safety via; the Teach Computing Curriculum; PHSRE sessions; Special Assemblies and themed events (Such as Safer Internet day and Safety Week) and visiting speakers.

Legal framework

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

- DfE (2023) 'Keeping Children Safe in Education (KCSIE) 2023'
- Data Protection Act 2018
- General Data Protection Regulation (GDPR)
- Equality Act 2010
- DfE (2013) 'Computing programmes of study: key stage 2'

This policy operates in conjunction with the following Academy policies:

- E Safety Policy
- Data Security and Management Plan
- Data Protection Policy
- Technology Acceptable Use Agreement for Pupils
- Technology Acceptable Use Agreement for Staff
- Pupil Equality, Equity, Diversity and Inclusion Policy

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

Overall responsibility for monitoring the teaching of Computing throughout the Academy will lie with the Leader of Computing department. They will make decisions on:

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

The Computing subject leader and Principal will be responsible for overseeing the implementation and reviewing of this policy.

The Computing subject leader 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 initiatives.

Teachers will be responsible for:

- Adapting Teach Computing Units of work 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 Knowledge and skills progresses through their learning and understanding of Computing and of the devices that they use.
- Setting pupils appropriate challenge based on their needs and prior attainment.
- Maintaining an enthusiastic approach to Computing in subject specific lessons and in the wider curriculum.
- Taking part in Teach Computing training and other CPD opportunities.

The SIPs ICT support 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 Academy's Data Security and Management Plan is adhered to.
- Carrying out checks on all computers once per term.
- Adjusting access rights and security privileges in the interest of the Academy's data, information, network and computers.
- Monitoring the computer logs on the Academy's network and reporting inappropriate use to the Principal, Leader of Computing and Safeguarding Lead.
- Disabling the user accounts of staff and pupils who do not follow Academy's policies, at the request of the Principal.
- Assisting staff with authorised use of ICT facilities, if required.
- Assisting the Principal 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 the Principal, authorisation from the user is not required.

Pupils will be responsible for:

- Using the Academy's ICT facilities appropriately.
- Being aware of the Academy's rules around the use of ICT equipment during lessons.
- Understanding how the use of ICT improves learning.
- Knowing that their access to the internet in the Academy is filtered and monitored.

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

Overall curriculum aims

The Academy aims to assist pupils in achieving attainment targets set out in the national curriculum. By the end of the key stage, pupils will be expected to know, apply and understand the matters, skills and processes specified in this policy.

The Academy 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.

The curriculum

Prior to entering the Academy, in KS1, pupils will be expected to have been 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 on the internet or other online technologies.

During their time at the Academy, in KS2, pupils will be taught to:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating 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.
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and 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 ranged, and be discerning in evaluating 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, including collecting, analysing, evaluating and present data and information.
- Use technology safely, respectfully and responsibly.
- Recognise acceptable and unacceptable behaviour.
- Identify a range of ways to report concerns about content and contact.

Homework

Every half-term, each year group will be informed of what is expected of them with regards to homework.

Parents will receive a termly newsletter informing them about the main topics and units of work that will be covered.

Computing homework will be issued to pupils in a variety of ways and will be responded to by pupils either on paper or electronically dependent on the nature of the activity.

Pupils will receive computing homework on at least on a half-termly basis.

Parents will be encouraged to discuss the homework that is set with their child. If they have any queries or other comments about the homework, parents should make an appointment to see their child's class teacher.

The amount of homework will increase as pupils progress through the Academy.

Assessment

Teachers will record pupils' ability and progression through two types of assessment – formative and summative.

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

Summative assessments will be completed at the end of every half term using materials from the Teach Computing Curriculum. 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.

Pupils' progress will be tracked, as pupils will be regularly assessed against year group expectations of knowledge, skills and understanding..

Where a pupil is not meeting the expected standard, a supportive intervention will be put in place – this could include the support of a TA.

Computing skills and competencies will be reliably and consistently assessed and recorded as part of Computing lessons, as well as across the curriculum in other subjects.

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 ICT 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 Academy 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 Academy, through activities integrated with pupils' academy-based learning.

Equal opportunities

All pupils will be provided with equal learning opportunities regardless of their background or characteristics, in line with the Academy'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 Academy will look to utilise software systems that can be modified to aid language, spelling or reading development.

The Academy will aim to maximise the use and benefits of ICT as one of many resources to enable all pupils to achieve their full potential.

Online learning and safeguarding

The Academy 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 Academy's Online Safety Policy.

As part of the Academy's commitment to the principles outlined in the most recent version of KCSIE, the Academy 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 Academy's E 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 on a termly basis about the potential dangers of the internet and how to stay safe online.
- Teach pupils about internet safety and cyberbullying during PHSRE lessons and Computing sessions..

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

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

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 Site Manager on a weekly basis – any other problems will be reported immediately to the health and safety officer and ICT support.

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

Implementation of this policy

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

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

Staff will be provided with high-quality training from The Teach Computing Hub and the Leader of Computing regarding both curriculum delivery and the safeguarding issues around e-safety.

Any breach of this policy will be reported to the Principal.

Use of the Academy's internet connection and network use will be recorded and monitored by SIPS ICT support and the DSL.

The SIPs ICT support has the ability to remotely view or interact with any computers on the Academy's network. SIPs ICT support will use this to help implement this policy and to identify and solve any problems.

Monitoring and review

This policy will be reviewed annually by the Computing subject leader and Principal.

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 policy.

The next scheduled review date for this policy is January 2026.