Computing Policy

In conjunction with the Online Safety Policy and Acceptable Use Policy

Reviewed - September 2024
Next Review - September 2025
Subject Leader: Beth Hunter

Introduction

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At The Carlton Junior Academy, we recognise that pupils are entitled to a broad and balanced computing education. We aim to provide the skills necessary to become digitally literate and participate fully and safely in the modern world. The purpose of this policy is to state how the academy intends to make this provision.

Aims

The academy's aims are to:

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Use technology to create an innovative learning environment which enhances all learning opportunities; enabling children to work collaboratively and independently; reflect and improve and present their learning with pride.
- Meet the requirements of the National Curriculum Programmes of Study for Computing at Key Stage 2.
- Respond to new developments in technology.
- Equip pupils with the confidence and computational thinking skills to use digital tools and technologies safely throughout their lives.
- Develop the understanding of how to use computers and digital tools safely and responsibly.
- Enhance and enrich learning in other areas of the curriculum using IT and computing.

The National Curriculum for Computing aims to ensure that all pupils can:

- Understand and apply the fundamental principles of Computer Science, including logic, algorithms, data representation and communication.
- Analyse problems in computational terms and have repeated practical experience of writing computer programs, in order to solve such problems.
- Evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Act responsibly, competently, confidently and be creative users of information technology.

Rationale

The academy believes that IT, Computer Science, digital literacy and Online Safety:

- Are essential life skills necessary to fully participate in the modern digital world safely.
- Allow children to become creators of digital content rather than simply consumers of it.
- Provide access to a rich and varied source of information and content.
- Communicate and present information in new ways, which help pupils understand, access and use it more readily.
- Can motivate and enthuse pupils.
- Offer opportunities for communication and collaboration through group work both inside and outside of the academy.
- Have the flexibility to meet the individual needs and abilities of each pupil.

Objectives

By the end of Key Stage 2 pupils should be taught to:

- Design and write programs that accomplish specific goals, including controlling or simulating physical systems and solving problems by deconstructing them into smaller parts.
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs.
- Use logical reasoning to explain how a simple algorithm works and 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.
- Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Resources and Access

The academy acknowledges the need to maintain, update and develop its resources continually and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, Computer Science and digital literacy across the academy. Teachers are required to contact the Computing Technician as soon as any faults are noticed so that they can be rectified. A service level agreement with GBMicros is currently in place to help support the Subject Leader to fulfill this role both in hardware and software. Computing network infrastructure and equipment has been sited so that:

- Every teacher has a laptop and an iPad which can be connected to the academy network.
- There is a Clevertouch Screen with sound in each classroom.
- There are 30 laptops which are stored in recharging cabinets and used in the classrooms.
- Each pupil, teacher and teaching assistant has their own allocated iPad which is used to support learning in all areas of the curriculum.
- Internet access is available in all classrooms.
- Each class has an allocated slot per week for teaching computing as a discrete subject.
- The laptops and iPads are available for use throughout the day as part of computing lessons and for cross-curricular use.
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- A governor will be invited to take a particular interest in computing in the academy.

Planning

The academy uses the National Curriculum objectives and consists of a progression of key concepts and skills broken down into three strands:

Information Technology - Information Technology provides a context for the use of computers within society. Within IT there is a focus on how computers are used within different sectors and it describes methods to create digital artefacts such as videos, animations and 3D models.

Computer Science - Computer Science covers principles such as data representations e.g. binary, algorithms, data structures e.g. the way data is stored in a database or program and programming.

Digital Literacy - Digital literacy is the knowledge and ability to use technology confidently, competently and in a safe way. It covers wide ranging knowledge from how to operate devices at a mechanical level, searching and selecting information and how to use devices safely and responsibly. In Digital Literacy, we concentrate on eight different aspects of online safety. They are: Self-Image and Identity, Online Relationships, Online Reputation, Online Bullying, Managing Online Information, Health, Well-being and Lifestyle, Privacy and Security and Copyright and Ownership. Online Safety is not be seen as a separate category but is embedded in all aspects of the academy community.

Each strand is presented as a progression from Year 3 to Year 6. It offers a clear picture of how skills and concepts in each strand progress. This supports differentiation and the development of personalised learning. The strands are also presented in phases to support with medium-term planning.

A minority of children will have particular teaching and learning requirements which go beyond the provision for their age range and if not addressed, could create barriers to learning. This could include more able children, those with SEND or those who have EAL. Teachers must take account of these requirements and plan, 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 and accessibility features used to support individual pupils. This is in accordance with the academy inclusion policy. These children should be identified and discussed at Pupil Progress Meetings to ensure that appropriate provisions/interventions are effective.

Cross Curricular Links

As a staff, we are all aware that IT and Computing skills should be developed through core and foundation subjects. Where appropriate, IT and Computing is incorporated into schemes of work for all subjects. IT and Computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding. Children will develop skills in core apps on iPads from Year 3 to Year 6, equipping them with a variety of skills which will be essential for future learning.

Assessment and Record Keeping (also see Assessment Policy)

Teachers regularly assess progress through observations and evidence gathering. Key objectives to be assessed are taken from the National Curriculum each term. Assessing computing is an integral part of teaching and learning and key to good practice. An annual report is produced to analyse progress of all children and groups of children. This report is used to inform an action plan.

Assessment will review the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. Assessment can be broken down into;

- Formative assessments undertaken during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their

learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.

- Summative assessment should review pupils' ability. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their attainment throughout the term. There should be an opportunity for pupil review and identification of next steps. Summative assessment is recorded using EAZMAG– showing whether the pupils have met, exceeded or not achieved the learning objectives.

The children's work is saved on the academy network. Other work may be printed and filed within the subject from which the task was set.

Monitoring and Evaluation

The Subject Leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the academy's monitoring cycle. This may be through lesson observations, pupil discussion and evaluating pupils' work.

We allocate time for the vital task of reviewing samples of children's work and for observing teaching in the subject.

Pupils with Special Educational Needs (see also SEND Policy)

We believe that all children have the right to access IT and Computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the Computing curriculum for some pupils.

We teach IT and Computing to all children, whatever their ability. Computing forms part of the National Curriculum to provide a broad and balanced education for all children. Through the teaching of Computing we provide opportunities that enable all pupils to make progress. We do this by setting suitable challenges and responding to each child's individual needs and using accessibility features when required. Where appropriate, IT can be used to support SEND children on a one-to-one basis where children receive additional support.

Equal Opportunities (see also Equal Opportunities Policy)

We will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to Computing and have 1:1 use of an iPad. All staff members follow the equal opportunities policy. Resources for SEND children and more able pupils will be made available to support and challenge appropriately.

The Role of the Subject Leader

Beth Hunter is the Computing Subject Leader who is responsible for the implementation of the Computing Policy across the school. Her role is to:

- **Ensure that there is the appropriate level of safeguarding around Computing use and staff are aware of all safeguarding issues that surround Computing.**
- **Ensure that the Online Safety Policy and Acceptable Use Policy are kept up-to-date and are shared with all stakeholders.**
- **Ensure staff receive regular online safety training and updates.**

- Offer help, training and support to all members of staff (including teaching assistants) in their teaching, planning   and assessment of Computing.
- Provide colleagues with opportunities to observe good practice in the teaching of computing.
- Maintain resources and advise staff on the use of digital tools, technologies and resources.
- Monitor classroom teaching or planning following the academy's monitoring programme.
- Monitor the children's progression in Computing.
- Keep up-to-date with new technological developments and communicate information and developments to colleagues.
- Lead staff training on new initiatives.
- Attend appropriate training.
- Have enthusiasm for Computing and encourage staff to share this enthusiasm.
- Keep parents and governors informed on the implementation of Computing in the academy.
- Liaise with all members of staff on how to reach and improve on agreed targets.
- Help staff to use assessment to inform future planning.

The Role of the Class Teacher

Individual teachers will be responsible for creating an effective learning environment that ensures pupils have opportunities for learning Computing and progressing their knowledge, skills and understanding of Computing across the curriculum. iPad technology enhances our curriculum and ensures our children attain well in all subjects.

They will plan and deliver the requirements of the National Curriculum for Computing to the best of their ability. We set high expectations for our pupils and provide opportunities for all to achieve.

The class teacher will also:

- **Ensure that there is the appropriate level of safeguarding around Computing use and pupils are aware of safeguarding issues that surround computing.**
- Secure pupil motivation and engagement.
- Provide equality of opportunity using a range of teaching approaches and techniques.
- Use appropriate assessment techniques and approaches.
- Set suitable targets for learning.
- Ensure pupils respect equipment and use it safely and responsibly.

Staff Training

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. All staff will receive regular online safety training and updates.

Individual teachers should attempt to develop their own skills and knowledge continually. They should identify their own needs and notify the Subject Leader if support is required.

Teachers will be encouraged to use IT and Computing to produce plans, reports, communications and teaching resources.

Health and Safety (see also Health and Safety Policy)

The academy is aware of the health and safety issues involved in children's use of IT and Computing.

All fixed wiring in the academy is tested every five years. All portable electrical appliances in the academy are tested by the Premises Manager on a rolling programme to ensure compliance with statutory requirements.

It is advised that staff should not bring their own electrical equipment in to the academy but, if this is necessary, equipment must be PAT tested before being used in the academy. This also applies to any equipment brought into the academy by, for example, visitors running workshops and activities. It is the responsibility of the member of staff organising these activities to advise visitors of this requirement.

All staff should visually check electrical equipment before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to a Computer Technician, Premises Manager or Subject Leader who will arrange for repair or disposal.

 In addition:

- Children should not put plugs into sockets or switch the sockets on.
- Trailing leads should be made safe behind the equipment.
- Liquids must not be taken near the computers.
- Magnets must be kept away from all equipment.
- Online Safety guidelines will be set out in the Online Safety Policy and Acceptable Use Policy.

Security

We take security very seriously.

- The Computing Technician will be responsible for regularly updating anti-virus software and advising us to ensure we are GDPR compliant.
- All equipment will be stored in the resource room where it can be safely locked away or in lockable cabinets in the classroom.
- Use of IT and Computing will be in line with the academy's 'Acceptable Use Policy'. All staff, volunteers and children must sign a copy of the academy's 'Acceptable Use Policy'.
- Parents/Carers will be made aware of the 'Acceptable Use Policy' at academy entry and it will be signed yearly.
- Regular visitors to the academy will be made aware of and sign the 'Acceptable Use Policy'.
- All pupils and parents/carers and visitors to the academy will be aware of the academy rules for responsible use of IT, Computing and the internet. They will understand the consequence of any misuse.

Asset Disposal

Details of all academy-owned hardware will be recorded in a hardware inventory.

All redundant equipment will be disposed of through an authorised agency. All redundant equipment will have the storage media forensically wiped. Alternatively, if the storage media has failed, it will be physically destroyed. The academy will only use authorised companies who will supply a written guarantee that this will happen.

Disposal of any equipment will conform to The Waste Electrical and Electronic Equipment Regulations 2006 and/or The Waste Electrical and Electronic Equipment Regulations 2007. Further information can be found on the Environment Agency website.

Parental Involvement

Parents/Carers are encouraged to support the implementation of IT and Computing where possible by encouraging use of IT and computing skills at home for pleasure, through home-learning tasks and use of the academy website. Parents/Carers will be made aware of issues surrounding online safety and encouraged to promote this at home. All pupils can take their iPad home at weekends for completing homework. The iPads have certain apps removed to ensure they are safe for use at home.