ELSTON HALL
Multi-Academy Trust

Computing Policy

2018-19

Policy written in 2018
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Policy Statement

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 Elston Hall Multi-Academy Trust we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive approach to learning how computer systems work, the use of technology skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the MAT (Multi-academy trust) intends to make this provision.

Aims

The MAT's aims are to:

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Develop pupil's computational thinking skills that will benefit them throughout their lives.
- Meet the requirements of the national curriculum programmes of study for Computing at Key Stage 1 and 2.
- To respond to new developments in technology.
- To equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- To enhance and enrich learning in other areas of the curriculum using technology.
- To develop the understanding of how to use computers and digital tools safely and responsibly.

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

- 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.
- Responsible, competent, confident and creative users of information and communication technology.

Rationale

The school believes that technology, computer science and digital literacy:

- Are essential life skills necessary to fully participate in the modern digital world.
- Allows children to become creators of digital content rather than simply consumers of it.
- Provides access to a rich and varied source of information and content.
- Communicates and presents information in new ways, which helps pupils understand, access and use it more readily.
- Can motivate and enthuse pupils.
- Offers opportunities for communication and collaboration through group working.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Objectives

Early Years

It is important in the foundation stage to give children a broad, play-based experience of technology and computing in a range of contexts, including off-computer activities and outdoor play. Computing is not just about computers. Early years learning environments should feature technology scenarios based on experience in the real world, such as role play. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys. Outdoor exploration is an important aspect and using digital recording devices such as video recorders, cameras and microphones can support children in developing communication skills. This is particularly beneficial for children who have English as an additional language.

By the end of Key Stage 1, pupils are taught to:

- Understand what algorithms are, how they are implemented as programs on digital devices and that programmes execute by following a sequence of instructions.
- Write and test simple programs.
- Use logical reasoning to predict the behaviour of simple programs.
- Organise, store, manipulate and retrieve data in a range of digital formats.
- Communicate safely and respectfully online, keeping personal information private and recognise common uses of information technology beyond school.

By the end of Key Stage 2, pupils are taught to:

- Design and write 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 if input and outputs and predict outputs to test programs.
- Use logical reasoning to explain how a simple algorithm works, detect and correct errors in algorithm and programs.
- Understand computer networks including the internet.
- Describe how internet search engines find and store data.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals.

Resources and Access

The MAT acknowledges the needs to continually maintain, update and develop its resources 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 technology, computer science and digital literacy across the schools. Teachers are required to inform the computer subject leader of any faults as soon as soon as they are noticed.

- There is access to laptops and data based.
- Internet is available in all classrooms.
- Each class from Nursery - Year 6 has an allocated slot each week for teaching computing as a discrete subject.
- The desktops and laptops are available for use throughout the school day as part of computing lessons and for cross-curriculum use.
- Pupils may use technology and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The MAT has a computer technician.

- A governor for each school has been selected to take a particular interest in computing for their school.

Planning, Assessment and Record Keeping

Lessons are planned using the National Curriculum document and the MAT Computing Curriculum Overview document. Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term. The MAT uses the Computing AREs when assessing pupils. Each pupil's attainment is then recorded every term. Assessing computing is an integral part of teaching and learning and key to good practice.

Assessment should be process orientated – reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. As assessment is part of the learning process, it is essential that pupils are closely involved.

Assessment can be broken down into;

- Formative assessments are carried out 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 steps to learning. This feeds into planning for the next lesson or activity.
- Summative assessment should review pupils' ability and provide a best fit 'level'. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their capability throughout the assessment should be recorded for all pupils - showing whether the pupils have met, exceeded or not achieved the learning objectives.

We assess the children's work in computing by making informal judgements as we observe the children during lessons. Once a term, children also produce an independent assessment piece of work for their Computing folder.

The children's work is saved on the school network and 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 school's monitoring cycle. This is through planning, lesson observations, pupil discussion, evaluating pupil work and scrutiny of data. We allocate time for the vital task of reviewing samples of children's work and for visiting classes to observe teaching in the subject.

The role of the Subject Leader

There is a computing subject leader at each school within the MAT who is responsible for the implementation of computing policy across their school. Their role is to:

- Offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.

- Provide colleagues 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 classrooms teaching and planning.
- Monitor the children's progression in computing
- Lead staff training on new initiatives.
- Attend appropriate training.
- Liaise and work with the Computing Subject Leaders across the MAT to ensure good practice and consistency of approach to the subject.
- Have enthusiasm for computing and encourage staff to share this enthusiasm.
- Keep parents and governors informed on the implementation of computing across the school / MAT
- Liaise with all members of staff on how to reach and improve on agreed targets.
- Help staff to use assessment to inform future planning.
- Provide opportunity for using a range of teaching approaches and techniques.
- Use appropriate assessment techniques and approaches.
- Maintain up to date assessment records.

Staff Training

The computing subject leader will access and address staff training needs as part of 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. Teachers will be encouraged to use technology and computing to produce plans, repots and teaching resources.

Cross Curriculum

As staff, we are all aware that technology and computing skills should be developed through core and foundation subjects. Where appropriate, technology and computing should be incorporated into schemes of work for all subjects.

Parental involvement

Parents are encouraged to support the implementation of technology and computing where possible by encouraging use of technology and computing skills at home for pleasure. Parents will be made aware of issues surrounding e-safety and encourage to promote this at home.

Additional Policies

In addition to the computing policy, the following polices are also available:

- Online Safety Policy
- Acceptable Use Policy (KS1 and KS2)

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