



# DRONFIELD JUNIOR SCHOOL

# Computing Policy

'A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world.'

Computing programme of Study, DfE, 2013

Revision No:	1
Date Issued:	12 November 2019
Committee:	Curriculum
Date Adopted:	26 <sup>th</sup> November 2019
Minute No:	26.11.19 / 8.1.2
Review Date:	November 2022

Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems... Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

At Dronfield Junior School, we believe that Computing is an integral part of preparing children to live in a world where technology is continuously and rapidly evolving, so much so that children are being prepared to work with technology that does not even exist yet. For this reason, we feel that it is important that children are able to participate in the creation of these new tools to fully grasp the relevance of and the possibilities of emerging technologies thus preparing them for the world of work.

## 1. Purpose

The Computing in the National Curriculum (2013) expectations split the teaching and learning of Computing into three strands (Computer Science, Digital Literacy and Information Technology). It is therefore important that children recognise the difference between what makes each one relevant to their future, as well as their everyday lives. High quality teaching of Computing, from Reception through to Year 6, utilises a combination of practical lessons and theory lessons designed to promote discussion and nurture understanding, which are also relevant to other areas of the curriculum such as PSHE and Citizenship.

This policy reflects the values and philosophy in relation to the teaching and learning of and with ICT. It sets out a framework within which teaching and non-teaching staff can operate and give guidance on planning, teaching and assessment.

This document is intended for: all teaching staff, all staff with classroom responsibilities, School governors, Parents

## 2. Aims

### Computer Science

- To enable children to become confident coders on a range of devices.
- To create opportunities for collaborative and independent learning.
- To develop children's understanding of technology and how it is constantly evolving.

### Digital Literacy

- To enable a safe computing environment through appropriate computing behaviours.
- To allow children to explore a range of digital devices.
- To promote pupils' spiritual, moral, social and cultural development.

## Information Technology

To develop ICT as a cross-curricular tool for learning and progression.

To promote learning through the development of thinking skills.

To enable children to understand and appreciate their place in the modern world.

### **3. British Values within Computing**

Children at Dronfield Junior School demonstrate the following values whilst learning about Computing by:

#### Democracy

Listening to everyone's ideas in order to form a majority.

Working as part of a team and collaborating to use computing devices effectively.

#### Rule of Law

Developing knowledge of lawful computing behaviours.

Demonstrating respect for computing laws.

#### Individual Liberty

Taking responsibility for our own computing behaviours.

Challenging stereotypes and bias.

Exercising rights and personal freedoms safely through knowledge of online safety.

#### Respect and Tolerance

Showing respect for other cultures when undertaking research using computing devices.

Providing opportunities for pupils of all backgrounds to achieve in computing.

### **4. Objectives**

In order to develop the Computing and ICT capability and understanding of each child we will provide through our planning:

Computing through all three strands taught within the classroom.

Continuity throughout the school to ensure that experience and skills are developed in a cohesive and consistent way.

Access to computers and iPads within class or in designated communal areas.

Experience of a variety of well-planned, structured and progressive activities.

Experience cross-curricular links to widen children's knowledge of the capability of computing including safe use of the Internet and other digital equipment.

Opportunities for children to recognise the value of computing and ICT in their everyday lives and their future working life as active participants in a digital world.

By doing this we will fulfil the requirements of the National Curriculum.

### **5. Equal Opportunities, Inclusion, Special Educational Needs and Disabilities (SEND)**

It is our policy to ensure that all children, regardless of race, class or gender, should have the opportunity to develop computing and ICT capability. We aim to respond to children needs and overcome potential barriers for individuals and groups of children by:

Providing curriculum materials and programmes, which are in no way class, gender or racially prejudice or biased.

Providing opportunities for our children who do not have access at home to use the school computers/Internet to develop independent learning.

Providing suitable challenges for more able children, as well as support for those who have emerging needs.

Responding to the diversity of children's social, cultural and ethnographical backgrounds.

Overcoming barriers to learning through the use of assessment and additional support. Communication or language difficulties by developing computing skills through the use of all their individual senses and strengths.

Movement or physical difficulties by developing computing skills through utilising their individual strengths.

Behavioural or emotional difficulties (including stress and trauma) by developing the understanding and management of their own learning behaviours.

## **6. Assessment**

We assess the children's work in Computing whilst observing them working during lessons. Teachers record the attainment of children at the end of each term and unit of work on the assessment grid.

## **7. Health and Safety**

The school takes very seriously and is aware of the health and safety issues surrounding children's use of ICT. We ensure that pupils have a safe environment in which to learn. We ensure effective filters are in place to safeguard pupils. As such, we will ensure that:

All fixed and portable appliance in school are tested by a LA approved contractor every twelve months.

Damaged equipment is reported to the school business manager who will arrange for repair or disposal.

Online safety is discretely taught each term by class teachers, through assemblies delivered by Community Liaison Officers and through parent presentations annually.

There is also a link on our school website to direct parents to further information on how to keep children safe online.

Children learn about rights and responsibilities when using the Internet.

## **8. Security, Legislation, Copyright and Data Protection**

We ensure that the school community is kept safe by ensuring that:

The school ICT technician is responsible for regularly updating anti-virus software.

The use of ICT and computing will be in line with the school's Acceptable Use Policy (AUP).

All parents and children must sign a copy of the schools AUP.

Parents are made aware of the AUP at school entry.

All children are aware of the school rules for responsible use on login to the school network and will understand the consequence of any misuse.

Reminders for safe and responsible use of ICT and computing and the Internet will be displayed in all areas.

Software/apps installed onto the school network server must have been vetted by the teacher for suitable educational content before being purchased and installed.

No personal software is to be loaded onto school computers.

Further information can be found in the school's Data Protection policy.

## **9. Curriculum Development**

Learning is based on the National Curriculum guidelines and has been adapted in conjunction with teaching staff. All units of teaching and learning are differentiated with additional assessment activities built in.

Individual laptops and iPads in year groups support the development of Computing and ICT capability by enabling independent learning; encouraging research, and allowing for the creative use of ICT in all subjects. Interactive whiteboards and visualisers are in all classrooms and are used as a teaching and learning resource across the curriculum.

Our school website showcases some of the wealth of experiences that the children are involved in as well as providing help and supportive information for the school community.

## **10. Teaching and Learning**

Our children will use technology to:

Learn Programming by using programmable robots, program on screen, through animation, develop games (simple and interactive).

Develop their computational thinking through filming, exploring how computer games work, finding and correcting bugs in programs, cracking codes and developing project management skills.

Develop computing creativity by taking and editing digital images, shooting and editing videos.

Investigate computer networks through finding images using the Web, researching a topic, finding out how the school network operates and editing and writing code.

Teacher's planning is differentiated to meet the range of needs in each class. A wide range of teaching and learning styles are employed to ensure all children are sufficiently challenged. Children may be required to work individually, in pairs or in small groups according to the nature of the task. Different outcomes may be expected depending on the ability and needs of the individual child.

## **11. Internet Safety**

Internet access is planned to enrich and extend learning activities across the curriculum. However, we have acknowledged the need to ensure that all pupils are responsible and safe users of the Internet and other communication technologies both in school and outside. To further ensure the safety of the children we will teach each class the rights and responsibilities of using the Internet.

A link on the school website homepage gives parents more information on Online-Safety. A parental letter for Online safety is sent home each year.

## **12. Roles and Responsibilities**

The head teacher, in consultation with the ICT leader and staff will:

Determine the ways in which Computing and ICT supports, enriches and extends the curriculum. Decide on the provision and allocation of resources.

Ensure that Computing and ICT is used in a way that achieves the aims and objectives of the school.

There is a designated ICT leader to oversee the planning and delivery of Computing and ICT within the school through:

Facilitating the use of ICT across the curriculum in collaboration with all subject leaders.

Providing or organising training to keep staff skills and knowledge up to date.

Advising colleagues about effective teaching strategies, managing equipment and purchasing resources.

Monitoring the delivery of the Computing and ICT curriculum and reporting to the head teacher and governors.

The relevant teaching staff work in partnership with the subject leader to ensure all National Curriculum statutory requirements are being met with regard to the use of ICT within curriculum subjects.

Whole school coordination and support is essential to the development of Computing and ICT capability however, it is the responsibility of each individual teacher to plan and teach appropriate Computing and ICT activities and assist the leader in the monitoring and recording of pupil progress in the subjects.

### **13. Monitoring**

Monitoring termly enables the subject leader to gain an overview of Computing and ICT teaching and learning throughout the school. This will assist the school in the self-evaluation process identifying areas of strength as well as those for development. In monitoring the quality of Computing and ICT teaching and learning, the subject leader will:

Hold discussions with teachers and children.

Analyse children's work

Examine plans to ensure full coverage of the Computing and cross-curricular ICT

### **14. Home School Links**

Our school website promotes the school and children's achievements as well as providing information and communication between the school, parents and the local community. Twitter is used to keep parents up to date and to share children's achievements in a more accessible way. Texts are sent to parents as reminders or to inform as an addition to sending letters home with children.

### **15. Deployment of Computing/ICT Resources**

To enable regular and whole class teaching of Computing and ICT, each teacher has access to a set of computers as well as a shared bank of iPads. Each member of teaching staff has a laptop computer. Every class has an interactive touch-screen board linked to a main computer on the school network. The school hall has a ceiling mounted projectors and a retractable screen, which is also linked to the school network.

R. Mason

Review date: July 2021

Review Statement: This policy is brought to the attention of staff, pupils and parents in the Autumn term each year and is formally reviewed, along with the principles that underpin it, generally every three years.