

**Computing Guidance**

**December 2020**

**Signature of Chair of Governors:**

**Signature of Headteacher**

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| Review date | By whom | Summary of changes | Date implemented | Date ratified |
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**Introduction**

“Education enhances pupils’ lives as well as their life skills. It prepares young people for a world that doesn’t yet exist, involving technologies that have not yet been invented and that present technical and ethical challenges of which we are not yet aware.” – Computer Science: A Curriculum for Schools

The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. We recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively.

**Aims**

• Provide a relevant, challenging and enjoyable curriculum for technology and computing for all pupils.

• Meet the requirements of the national curriculum programmes of study for computing.

• Use computing as a tool to enhance learning throughout the curriculum.

• To respond to new developments in technology.

• To equip pupils with the confidence and capability to use computing throughout their later life.

• To enhance learning in other areas of the curriculum using computing.

• To develop the understanding of how to use computing safely and responsibly. 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.

Use the Knowledge and Skills progression document to inform planning and teaching.

**Rationale**

The school believes that computing and technology:

• Gives pupils immediate access to a rich source of materials.

• Can present information in new ways which help pupils understand access and use it more readily.

• Can motivate and enthuse pupils.

• Can help pupils focus and concentrate.

• Has the flexibility to meet the individual needs and abilities of each pupil.

• Ensures that pupils become digitally literate – that they are able to use and express themselves through technology and that they are at a level suitable as active participants in an ever changing digital world.

**Objectives**

**Early years**

It is important in the foundation stage to give children a broad, play-based experience of technology in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature technological scenarios based on experience in the real world, such as in role play (iron, kettle, etc). Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills. Children will also access resources such as ipads, laptops, beebots, etc. as part of the Early Years curriculum.

**By the end of key stage 1 pupils should 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 programs

• Use logical reasoning to predict the behaviour of simple programs

• Use technology to create, organise, store, manipulate and retrieve digital content

• Recognise common uses of information technology beyond the school

• Use technology safely and respectfully online, keeping personal information private, identify where to go for help and support when they have concerns about content or contact the Internet

**Resources and access**

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of computing across the school. Teachers are required to inform the technician of any faults as soon as they are noticed in a log book.

**Planning**

Computing should be planned for as part of the National Curriculum requirements. This should be included within long, medium and short term plans. Teachers will use the Computing Knowledge and Skill’s document to ensure their planning is sequential and builds upon the knowledge and skills that the children have already been taught.

Teachers could access these websites to find resources for teaching and learning within computing.

Barefoot.co.uk

Projectevolve.co.uk

**Online Safety**

As part of our computing curriculum, children will have weekly discussions in class regarding how to stay safe online. Children will be aware of what they can do and who they can talk to if they see anything online that makes them worried or upset.

The Computing lead will send out a fortnightly update for teachers so that they are aware of any new apps or potentially harmful content. If appropriate, immediate action may be taken to inform teachers of applications and or content. This will enable staff to have up-to-date knowledge of current safety issues that may arise.

**Assessment**

Teacher’s must add their assessment of children to the planning. This is in terms of which children are exceeding, expected or working towards the objectives on the medium term planning.

In Early Years, EazMag is used to assess whether children are at the expected development stage for technology. Photos are uploaded as evidence to show their knowledge and skills.

**Monitoring**

The subject leader is responsible for monitoring the standard of the children’s work and the quality of teaching. The subject leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school. The governors will ensure this policy is reviewed.

**Security**

• The technology technician and computing lead will be responsible for regularly updating anti-virus software.

• Use of technology and computing will be in line with the school’s ‘acceptable use policy’. All staff must sign a copy of this.

• All pupils will be aware of the school rules for responsible use and will understand the consequence of any misuse.

• The agreed Online Safety Rules will be displayed in every classroom. School staff must make opportunities for children to discuss these regularly.