*Through wisdom, compassion and endurance, we endeavour to make the best decisions possible for our children*

# COMPUTING POLICY

Whaddon Church of England first school, Whaddon, Milton Keynes, MK17 0LS
Head: Mrs Selina Davies B Ed (hons)
T 01908 501719 E office@whaddon.bucks.sch.uk
whaddon.eschools.co.uk

**COMPUTING POLICY**

**Vision**

A high quality computing education equips pupils to use computational thinking and creativity, skills that will be important in an ever-changing technological world. Computing has deep links with mathematics, science and design and technology, but it is important that technology is used to support learning in all subject areas.

**Aims**

At Whaddon School our aim is to ensure that all pupils become digitally literate – that is they can use, express themselves and develop their ideas through the use of technology so that they can play an active part in a digital world.

**Objectives**

- To provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- To develop pupil's computational thinking skills that will benefit them throughout their lives.
- To meet the requirements of the National Curriculum programmes of study for computing
- 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 IT and computing.
- To develop the understanding of how to use computers and digital tools safely and responsibly.

**Planning and Teaching**

The 2014 National Curriculum puts a greater emphasis on computer science and coding. As a school, we ensure separate computer science and coding sessions should be planned for within each academic year so that all of the expected National Curriculum subject content is covered. Direct teaching of specific skills and procedures will be necessary in each class for the safe management of ICT equipment. Classes are mixed ability but planning should show differentiated/ personalised tasks. Children of all abilities and backgrounds should make progress as assessed by the National Curriculum description levels.

**Early Years Foundation Stage**

It is important in the foundation stage to give children a broad, play-based experience of IT 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 IT scenarios based on experience in the real world, such as in 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 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 should be taught to:**

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions.

- write and test simple programs
- use logical reasoning to predict and computing 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 should 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 ranked, 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 presenting data and information.
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

**Organisation and Resources**

Class teachers are responsible for ensuring that children have appropriate technology available to them to support their learning. There are computers in both classrooms at all times. Printers are available and pupils are taught how to select and print to the appropriate printer. Programmable toys are provided and recording devices. Resources will be reviewed and updated regularly wherever possible.

**Spiritual, Moral, Social and Cultural Development**

Through the computing curriculum children will have a keen interest in learning about the digital world. Children will learn how to become responsible digital citizens and understand how to conduct themselves appropriately when using technology to communicate and interact with others. Children will learn how to promote the positives of British society through online collaboration without being detrimental to the ideas and beliefs of other cultures and religions.

**Assessment**

Teachers are responsible for assessing their children against the National Curriculum subject content descriptions for key stage one. They regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term.

- 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 success criteria. 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 term. There should be an opportunity for pupil review and identification of next steps. Summative 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 judgments as we observe the children during lessons. Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

**Health and Safety**

Children are taught to use the resources safely in accordance with the school's Health and Safety Policy. Regular electrical safety checks (PAT) are made by the appropriate authorities. The school has a Home - School Internet Agreement which covers e-safety and appropriate use of resources and is signed by parents/guardians.

**Equal Opportunity**

All children have access to and given confidence in the different activities offered, regardless of their ability, gender religion or cultural/ethnic background. The content of lessons and the resources available ensure that all pupils are valued equally, are able to participate with enjoyment and are able to achieve qualities and standards appropriate to their age, experience and abilities. Provision is made for children with Special Educational Needs so that they can participate in any activity provided by the school.

**Monitoring and Evaluation**

The Computing Coordinator/Headteacher is responsible for monitoring and evaluation. Discussions take place between the staff and the Headteacher, both individually and in whole staff meetings. Through all the above, the Headteacher assesses the effectiveness of the Policy and Schemes of Work, adapting, improving and advising as appropriate to maintain a high quality of teaching and effective learning.

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