WHOLE SCHOOL COMPUTING POLICY

Old Catton C of E Junior School

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Other Policies Related	**Teaching and Learning Policy, Equalities Policy, eSafety Policy, SEND policy; Anti-bullying policy**

Introduction
It is intended that the new subject of computing embraces the existing strengths of digital literacy and information technology in the current ICT programme of study, alongside a new strand of computer science. This policy document sets out the school's aims, principles and strategies for the delivery of the new Computing Curriculum.

Aims & Objectives
There are three aspects of the computing curriculum: computer science, information technology and digital literacy. The core of computing is computer science, in which pupils are taught the principles of information and computation. Computational thinking allows us to solve problems and is a skill that empowers. Pupils who can think computationally are better able to conceptualise, understand and use computer-based technology, and so are better prepared for today's world and the future.
"A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world". (NC 2014 Computing)
Pupils will learn how computers and computer systems work, and how they are designed and programmed. They will put this knowledge to use through programming, discovering how to design and build programs, develop their ideas using technology and create a range of content. Computing also ensures that pupils become digitally literate. They will be 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". (NC 2014 Computing)

The national curriculum for computing aims to ensure that all pupils:
- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

Teaching & Learning
This section sets out the essential knowledge that all children should acquire. It gives schools and teachers more freedom to decide how to teach this most effectively and to design a wider school curriculum that best meets the needs of their pupils.

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.

Planning
Delivery of the current ICT curriculum is supported by the Rising Stars 'Switched on Computing' scheme, developing a clear progression of skills from Year 3 to Year 6. This scheme reflects the new curriculum and ensures coverage of the new programmes of study. In Year 3 the curriculum is supported by Twinkl plans and resources.

Curriculum links
Computing has deep links with mathematics, science, and design and technology. The units covered by the 'Switched on Computing' scheme are also designed to link with other curriculum areas including literacy, geography, history, art and design, PE, music and PSHE.

Monitoring and Evaluation
The subject leader is responsible for monitoring standards in computing. This will be through the monitoring of planning and pupils work, end of unit teacher assessments and undertaking pupil self-assessments and analysing responses.

Assessment
Children will be assessed against the statements in the Computing Programme of Study. Each unit in the 'Switched on' scheme includes assessment statements for All, Most and Some pupils, which are clearly cross referenced against the Computing Programme of Study statements. In addition, opportunities will be provided for other forms of assessment including self and peer assessment, using open questioning and discussion.

Equal opportunities
All pupils, regardless of gender, race or learning needs will be given equal access to the Computing curriculum. The Computing curriculum will be differentiated according to the needs of the pupils. Resources will reflect the needs of all our students and the subject co-

ordinator will work with the Special Needs Co-ordinator to develop the provision of those resources required to support the needs of specific children in the school.
There are many opportunities for enrichment in computing. Pupils may choose or be provided with different sets of tools to accomplish programming tasks. The 'Switched on' scheme includes the provision of extension opportunities for the more able in every unit. The assessment support for each unit is also differentiated and shows what all, most and some children will achieve. We have plans to purchase a small number of Raspberry Pis for use with a group of gifted and talented pupils as a lunchtime club. (n.b. The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch and Python). Where appropriate ICT and computing are used to support children on a one to one or small group basis where children receive additional support e.g. Mathletics and Lexia groups.

Health and safety
At OCJS we recognise the importance of e-Safety in all aspects of the Computing Curriculum. We strive to protect and educate pupils and staff in their use of technology and to have the appropriate procedures to intervene and support any incident where appropriate. (see additional 'e-safety' policy)
The 'Switched on' scheme also embeds e-Safety and focuses on the safe and responsible use of technology.

Homework/parent partnership
There are many opportunities for independent study outside of school. We aim to support and encourage by celebrating achievements and providing opportunities for pupils to pursue their interests.
The VLE enables communication with parents and others connected to the school. The VLE can directly support the children's learning e.g. through creating and managing blogs. It also allows work to be accessed at home and school. Homework and projects can be set via the school VLE.

Resources
Provision currently stands at:
ICT suite with 26 machines

1 trolley of 16 laptops on

1 trolley of 10 iPads

All these machines are and all files are stored on a central server located in the ICT suite

Each teacher has their own laptop

Every teaching room has a whiteboard, projector and many have a visualiser

Projector and audio equipment in the hall

3 networked colour laser printers

Each teacher has access to a digital camera

11 sound recording devices

1 networked photocopier

Each classroom has a CD player and a set of 6 headphones

The system is maintained by an ICT technician employed for half a day a week. Additional hardware support is available through ICT Solutions.

Appendix 1

Useful Links

Computing in the national curriculum: A guide for primary teachers (Naace)
http://www.computingatschool.org.uk/data/uploads/CASPrimaryComputing.pdf
Switched on Computing KS2 Units
http://www.risingstars-uk.com/uploads/publications/1255.pdf
Computing programmes of study key stage 2
https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study
www.computingatschool.org.uk
www.naace.co.uk