SWANAGE PRIMARY

COMPUTING POLICY

Reviewed: January 2025
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Introduction

Computing focuses on how computers work with an emphasis on how they are designed and programmed. It incorporates techniques and methods for solving problems and enhancing understanding, both with and without a computer. The National curriculum distinguishes three aspects of Computing: Computer Science, Digital Literacy and Information Technology.

Please refer to the school's separate e-safety policy for details on this particular aspect of computer/ internet use.

Purpose of Computing

The following information, taken directly from the National Curriculum, explains the importance and purpose of teaching Computing effectively in our school:

A high-quality Computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has strong links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of Computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. 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.

Aims

Swanage Primary School aims to:

- Provide a relevant, challenging and enjoyable Computing curriculum for all pupils.
- Raise the profile of Computing as one of the school's core values.
- Meet the requirements of the National Curriculum programmes of study for Computing.
- Use IT and Computing as a tool to enhance learning throughout the curriculum.
- To motivate and enthuse pupils in this subject.
- To equip pupils with the confidence and capability to use IT and Computing throughout their life.

- To develop the understanding of how to use IT and Computing safely and responsibly both in and out of school.

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
- 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.

Planning and delivery

At Swanage Primary School, Computing is often taught as a discrete subject. In addition to this, IT is used across the curriculum to enhance teaching and learning.
We follow the long-term plan using the Purple Mash Scheme of work.

Resourcing

Swanage Primary School acknowledges the need to continually maintain, update and develop its provision by investing in resources that will effectively deliver the strands of the National Curriculum and support the use of IT across the school.

Assessment

Computing is assessed both formatively and summatively using achievement criteria based on the National Curriculum.

Formative assessment occurs on a lesson-by-lesson basis based on the lesson objectives and outcomes in the school's scheme of work. These are conducted informally by the class teacher and are used to enable the teacher to match work to the abilities and needs of the children and ensure progression in learning.

Computing skills capabilities should be monitored regularly in relation to the Computing curriculum as outlined in the 'The National Curriculum'. Teachers should assess module requirements with reference to children's knowledge, understanding and skills. Other opportunities for assessment will arise from cross-curricular work.

Entitlement to the Computing curriculum

All children should have access to the Computing curriculum and relevant resources, regardless of gender, race, cultural background or physical/ sensory disability. Where use of a school computer proves difficult for a child because of a disability, the school will endeavour to provide specialist equipment and software to enable access. Children with learning difficulties can also be given greater access to the whole curriculum through the use of these technologies.
Planning for Computing in the Early Years needs to be considered carefully if children are to begin to gain confidence in the use of a variety of technologies as soon as they start attending school. A range of appropriate hardware, software and activities needs to be offered.

Appendix 1

National Curriculum Objectives for Computing

Early years

It is important in the foundation stage to give children a broad, play-based experience of computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature computing scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or program a toy. Recording devices can support children to develop their communication skills. This is particular useful with children who have English as an additional language.

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 purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

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.