# Gosford Park Primary School

## Computing Policy

**Contents**



It is essential that this policy is considered alongside the following Gosford Park policies as they contain guidance and information integral to both delivery of the Computing curriculum and the wider PSHE values of the school.

- Online Safety Policy
- Acceptable Use Policy
- Social Media Policy
- Safeguarding Policy
- PSHE Policy

This document is intended for:

- All teaching staff
- All staff with classroom responsibilities
- School governors
- Parents
- Inspection Teams
- Copies of this policy are kept centrally and are available from the office and the subject leader.

**STATUTORY REQUIREMENTS**

### 1. PURPOSE OF STUDY

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

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

**Attainment targets**

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

**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:

2. design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
3. use sequence, selection, and repetition in programs; work with variables and various forms of input and output
4. use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
5. 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

6. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
7. 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
8. use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

## 2. AIMS

The national curriculum for computing aims to ensure that all pupils:

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- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
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**Computational thinking**
The thinking that is undertaken before starting work on a computer is known as computational thinking. Computational thinking describes the processes and approaches we draw on when thinking about problems or systems in such a way that a computer can help us with these. Computational thinking is not thinking about computers or like computers. Computers don't think for themselves. Not yet, at least!

Computational thinking is about looking at a problem in a way that a computer can help us to solve it.
When we do computational thinking, we use the following processes to tackle a problem:

- Logical reasoning: predicting and analysing
- Algorithms: making steps and rules
- Decomposition: breaking down into parts
- Abstraction: removing unnecessary detail)
- Patterns and generalisation: spotting and using similarities
- Evaluation: making judgements

## 3. INTRODUCTORY STATEMENT OF INTENT

**Intent-** At Gosford Park our computing curriculum aims to provide pupils with the skills and knowledge to fully participate in the continually developing digital world. We focus on providing creative opportunities and experiences so we can develop the skills necessary for children to be able to use information in a discriminating and effective way. We want pupils to know, remember and understand more in computing so that they leave primary school computer literate. We teach skills

explicitly within computing and encourage them to be applied across other curriculum subjects, enabling children to be confident, creative and independent learners. By using a rich, broad, up to date curriculum pupils are provided with the opportunity to embrace and use technology in a safe, positive and responsible way. Staying safe online is of the upmost importance and is an area that we prioritise to all our pupils and our computing curriculum equips pupils with the appropriate skills to navigate the digital world safely.

## 4. IMPLEMENTATION

As a school, we have chosen the Purple Mash Computing Scheme of Work from Nursery to Year 6. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise standards and allow all pupils to achieve to their full potential.

We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and integrates perfectly with the 2Simple Computing Assessment Tool. Furthermore, it gives excellent supporting material for less confident teachers.

Children and parents also have access to the scheme of work at home to continue their learning past the school day.

Children in the Early Years will have access to a range of devices and remote-controlled toys and resources so that they can explore simple technologies independently and use them in their learning and play. Throughout Key Stage 1, children are taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content. In Key Stage 2, children select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content that accomplishes given goals. Children across school are encouraged to use technology where appropriate to support their learning in all subjects.

## 5. IMPACT

Our Computing Curriculum has been structured to demonstrate a progression of knowledge and skills and ensures that children can build on their understanding, as each new concept and skill is taught with opportunities for children to revisit skills and knowledge as they progress through school.

Children become digitally literate and are ready to confidently use technology at home and at school. We believe it is a skill that empowers, and one that all pupils should be aware of and develop competence in. Pupils who can think computationally are better able to create, understand and use computer-based technology, and so are better prepared for today's world and future.

Evidence of progression in computing is collected in named school files where pupils pick and save work to include, and it is shared with their peers to assess and discuss. We believe that when assessing computing it is important to look for

evidence of knowledge of understanding as well as technical skills. Asking pupils to talk about what they have learned as well as showing the work they have completed, provide important evidence of learning.

We assess through observation of work on tasks, contribution to class discussion and peer discussions.

We measure the impact of our curriculum through the following methods:

- Learning walks and staff
- Scrutiny of digital portfolios/Assessment
- Pupil discussions about their learning; which includes discussion of their thoughts, ideas, processing and evaluations of work.

## 6. British Values within Computing

Children at Gosford Park Primary 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 E-safety.

**Mutual 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.

## 7. EQUAL OPPORTUNITIES, INCLUSION, EAL, PUPIL PREMIUM, HIGHER ATTAINERS, 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:

- Ensuring that all children follow the scheme of learning for Computing.
- 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.
- Children who have English as a second language are given extra support, as necessary, and can include access to both multilingual resources and translation software such as, but not limited to, Google translate. The school website enables translation of both school information and curriculum information.

## 8. ASSESSMENT

As in all other subjects, children should be assessed and appraised of their progress in understanding and applying of computing skills. Teacher assessments of computing capability will be recorded throughout the year and reported to parents at the end of each academic year. Staff save examples of pupils' work and sufficiently detailed records to form a judgement on each pupil's level of attainment at the end of each key stage. Formative assessment occurs on a lesson-by-lesson basis determined by the aims.

## 9. 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 appliances in school are tested by an approved contractor every twelve months.
- Damaged equipment is reported to the computing leaders and office manager who will arrange for repair or disposal.
- Online safety is discretely taught throughout the school year by class teachers and through parent presentations. There is also a link on our school website to direct parents to further information on how to keep children safe online. https://www.gosfordpark-coventry.org.uk/our-parents/online-safety/
- Children learn about rights and responsibilities when using the Internet.

## 10. ROLES AND RESPONSIBILITIES

The head teacher, in consultation with the Computing 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 Computing 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 organizing 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 subject leader will 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.

## 11. 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:

- Observe teaching and learning in the classroom.
- Hold discussions with teachers and children.

- Analyse children's work
- Examine plans to ensure full coverage of the Computing and cross-curricular ICT requirements.

## 12. Home School Links/Home Learning

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. The platform Class Dojo is used to keep parents up to date and to share children's achievements and Home learning in a more accessible way. Texts and/or emails are sent to parents as reminders or to inform instead of sending letters home with children.

## 13. DEPLOYMENT OF COMPUTING/ICT RESOURCES

To enable regular and whole class teaching of Computing and ICT, teachers have access to a bank of Laptops, Chromebooks and a shared bank of iPads.
Every class has an interactive touch-screen board linked to a main computer on the school network. The school's hall has a projector and a retractable screen, which are also linked to the school network.