Coley Primary School



Primary Computing Policy

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Statement of intent

At Coley Primary School we understand that a high-quality computing education is essential for pupils to understand modern information and communication technologies. We will provide an enjoyable and rigorous curriculum that addresses the challenges and opportunities offered by the technologically rich world in which we live

We will equip our pupils with the foundational skills, knowledge and understanding of computing they will need for the rest of their lives. They will learn how computers and computer systems work, they will design and build programs, develop their ideas using technology and create a range of content. They will use these skills to become responsible, competent, confident and creative participants of an increasingly digital world and have a solid foundation on which to build in the next phase of their education.

We will ensure that our pupils:

- enjoy and have equal access to technology, regardless of their background or educational need
- develop their ability to think 'computationally' by
  - breaking down problems into smaller steps (decomposition)
  - looking for similarities and differences among and within problems (recognising patterns)
  - focussing on important information only (abstraction)
  - following or developing a step-by-step solution (algorithms)
  - spotting and solving errors (debugging)
- develop competence in coding for a variety of practical and inventive purposes
- understand the connected nature of devices
- are able to connect with others safely and respectfully
- collect, organise, manipulate and present data effectively
- communicate ideas well by using applications and devices throughout the curriculum

Throughout this policy, we outline how we, as a school, will deliver the requirements of the key stage 1 (KS1) and key stage 2 (KS2) computing programmes of study, and to ensure that our pupils have the digital skills they need. We aim to inspire pupils to continue to learn and apply the skills they learn at secondary school, university, and beyond in the workplace.

1. Legal framework

1.1. This policy is in regard to and compliant with the following statutory guidance:

- DfE (2013) 'Computing programmes of study: key stages 1 and 2'

1.2. This policy links in with the following other school policies:

- ICT Policy
- Primary Maths Policy
- Homework Policy
- Social Media Policy
- PSHE Policy
- E-safety Policy

2. Roles and responsibilities

2.1. The Headteacher will:

- Ensure that there is a Primary Computing Policy in place, and that it is regularly reviewed and updated to take into account new developments, both to the primary computing curriculum and to ICT.
- Ensure that the Primary Computing Policy, as written, is disseminated to the computing subject leader, teaching staff and parents, for implementation.
- Hold the computing subject leader to account for the effective implementation of the Primary Computing Policy, including budget expenditure.
- Intervene where it is apparent that the Primary Computing Policy is not being implemented according to its provisions.

2.2. The computing subject leader will:

- Manage the computing budget, and keep appropriate records of expenditure in order to review them and make suggestions for the future.
- Secure and maintain computing resources, and advise staff on the correct use of digital technologies.
- Offer help and support to all members of staff in their planning, teaching and assessment of computing.
- Keep the Headteacher and other stakeholders, such as parents, informed about our school's implementation of the primary computing curriculum.
- Keep up-to-date with new developments in computing and communicate such information and developments to colleagues, including, where necessary, through the creation and delivery of bespoke training programmes.
- Attend appropriate in-service training.

2.3. Teachers will:

- Plan and deliver the requirements of the KS1 and KS2 computing programmes of study to the best of their abilities.

- Set high expectations for all their pupils, including pupils with special educational needs and/or disabilities (SEND), pupils from various social, cultural and linguistic backgrounds, and academically more able pupils.
- Encourage pupils to apply their knowledge, skills and understanding of computers and ICT across the curriculum.
- Maintain up-to-date records of both formative and summative assessment.
- Tailor lesson delivery according to pupils' respective abilities.

3. Early years foundation stage (EYFS)

3.1. Although computing is not a statutory part of the EYFS, we will ensure that children of reception age receive a broad, play-based experience of computing through the use of new technologies.

4. Key stage 1

4.1. Pupils will be taught to:

- Understand what algorithms are, and how they are implemented.
- Create and debug simple programs.
- Predict the behaviour of simple programs.
- Create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of ICT beyond school.
- Use technology safely and respectfully, keeping personal information private, and to identify where to go for help and support when they have concerns online.

5. Key stage 2

5.1. Pupils will be taught to:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, and solving problems.
- Use sequence, selection, and repetition in programs.
- Work with variables and various forms of input and output.
- Explain how some simple algorithms work, and how they can detect and correct errors.
- Understand computer networks, how they can provide multiple services, and the opportunities they offer for communication and collaboration.
- Use search technologies, understand how results are selected and ranked, and be able to critically evaluate digital content.
- Select, use and combine a variety of software on a range of devices to design and create programs, systems and content that accomplish specific goals.
- Use technology safely, respectfully and responsibly, recognise acceptable behaviour and identify a range of ways to report online concerns.

6. Curriculum delivery

6.1. We have organised our curriculum into three main areas: coding, digital media and e-safety and networks.

6.2. Coding is taught via practical programmable toys, moving on to simple abstract systems in Key Stage 1. In Key Stage 2, we use the Code-it Gold resources to teach coding Throughout both key stages we use ‘unplugged’ activities away from a computer to develop the distinct way of thinking needed for computer science.

6.3. Digital media encompasses all that we can do using technology, including gathering data and databases, taking and creating images, video and sound, word-processing and presentation.

6.4. Teaching of e-safety is delivered both through computing lessons and through strong cross-curricular subject links with PSHE and includes using search technologies safely, efficiently and judiciously.

6.5. The core requirements of the KS1 and KS2 computing programmes of study will be delivered through a dedicated weekly computer lesson.

6.6. We believe that the practical experience of programming is the best way for primary pupils to learn about computer science and provide learning opportunities which are as ‘hands on’ and practical as possible.

6.7. We have laptops and tablets to support the delivery of the primary computing curriculum and appropriate licenses as required for their use.

6.8. An audit of resources is taken on an annual basis to ensure that our computing provision remains appropriate to the latest requirements of the KS1 and KS2 primary computing programmes of study.

6.9. Web filters are kept up-to-date in order to ensure that pupils don’t access inappropriate materials.

6.10. Obsolete or broken machines are sold, repaired or, where repair is not possible or cost-effective, scrapped in accordance with data protection requirements.

6.11. A service level agreement (SLA) with Turn it on is in place to support the computing coordinator to fulfil this role.

6.12. An SLA with Turn it on is in place, and all computing-related devices and related applications have access to the internet. This SLA will be reviewed annually to ensure that the current package remains sufficient for purpose, and that it continues to represent the best value for money.

7. Differentiation

7.1. We provide suitable learning opportunities for all pupils by matching the challenge of the task to the individual needs and abilities of each pupil. We will achieve this in a variety of ways, including:

- Providing scaffolding and extension tasks
- Making reasonable adjustments to the way in which we deliver the computing curriculum, such as providing transcripts of online learning videos to pupils with hearing impairments, or making resources available in a pupil's first language where they use English as an additional language.
- Assigning adults to individual/groups of pupils, where appropriate, to enable greater one-to-one support.
- Recognising pupils' current attainment in computing and varying groupings to support all pupils: mixed attainment pairings or groups who have the same development needs.

7.2. Pupils who show a particular flair for or interest in computing may be asked to become 'digital leaders', mentoring and sharing their skills with others, both during computer lessons and throughout school.

8. Assessment

8.1. Pupils' knowledge and understanding of the primary computing curriculum will be assessed according to the provisions outlined in our school's Assessment Policy.

8.2. Ongoing formative assessment monitors pupil performance and progress during learning; the outcomes of which we will use to ensure that work matches the individual needs and abilities of pupils.

8.3. Summative assessment reviews pupils' progress and abilities, and will be undertaken at the end of each unit, term and school year via a number of means, including but not limited to:

- End of unit quizzes
- The work children have produced

8.4. Samples of work will be kept for groups of children, stored in both classrooms and on the school network, within relevant class and pupil folders.

9. Staff training

9.1. The computing subject leader will be responsible for the identification and delivery of staff training requirements.

9.2. Staff training requirements will be met by:

- Auditing staff skills and confidence in the use of computers and ICT on an annual basis.
- Arranging top-up training for individual staff members as required.

9.3. The computing subject leader will remain up-to-date with the latest developments in computing through subscriptions to relevant journals, attendance at relevant courses, etc., and will pass on any newly acquired knowledge/skills to staff members, where appropriate.

10. Monitoring and evaluation

10.1. We appreciate that computers and ICT are rapidly developing, with new uses and technology being created all the time.

10.2. We will review this policy on an annual basis in line with our school's policy review schedule.

10.3. We will review our web filters on an annual basis in order to ensure that pupils continue to be protected from inappropriate content online.