



HIGHBURY PRIMARY SCHOOL

COMPUTING POLICY

(see also Health & Safety, Internet Use Policy)

Highbury Primary and Nursery School's mission is:

- To be an inclusive, safe and caring community where each member is equally valued and nurtured to develop their potential.
- To achieve academic excellence by ensuring each pupil performs to the best of their ability.
- To work together as a team with parents and carers within the community to promote respect responsibility for the benefit of all.

Computing Policy

1 Aims

1.1 ICT has become part of the way we all work and entertain ourselves. Almost everything we do at school now involves the use of ICT:

- online lesson research, teaching plans and resource materials;
- lesson delivery via interactive whiteboard;
- communication by e-mail and fax;
- document distribution and storage;
- assessment information analysis;
- production and editing of reports.

1.2 Through teaching computing curriculum we equip children to participate in a world of rapidly-changing technology. We enable them to find, explore, analyse, exchange and present information. We also help them develop the necessary skills for using information in a discriminating and effective way. This is a major part of enabling children to be confident, creative and independent learners.

1.3 The aims of teaching computing are to enable children:

- 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.

2 Teaching and learning style

2.1 As an objective of teaching of computing is to equip children with the technological skill to become independent learners, the teaching style that we adopt is as active and practical as possible. While at times we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in computing is for individuals or groups of children to use computers to help them progress in whatever they are studying. So, for example, children might research a history topic by using role-play software that engages them in a highly visual way, or they might place themselves in a historical setting by manipulating a digital photograph, or they might investigate a particular issue on the Internet.

2.2 We recognise that all classes have children with a wide range of computing abilities. This is especially true when some children have access to ICT equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways:

- setting tasks which are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty (not all children complete all tasks);
- grouping children by ability in the room, and setting different tasks for each ability group;
- providing resources of different complexity that are matched to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children.

3 ICT curriculum planning

3.1 The school uses the national scheme of work for computing as the basis for its curriculum planning. We have adapted the national scheme to the local circumstances of the school.

3.2 We carry out the curriculum planning in computing in three phases (long-term, medium-term and short-term). The long-term plan maps the computing topics that the children study in each term during each key stage. The computing subject leader devises this in conjunction with teaching colleagues in each year group, and the children often study computing as part of their work in other subject areas. Our long-term computing plan shows how teaching units are distributed across the year groups, and how these fit together to ensure progression within the curriculum plan.

3.3 Our medium-term plans, which we have adopted from the national scheme of work, give details of each unit of work for each term. They identify the key learning objectives for each unit of work, and stipulate the curriculum time that we devote to it. The computing subject leader is responsible for keeping and reviewing these plans. As we have some mixed-age classes, we do our medium-term planning on a two-year rotation cycle. In this way we ensure that we cover the National Curriculum without repeating topics.

3.4 The class teacher is responsible for writing the short-term plans with the computing component of each lesson. These daily plans list the specific learning objectives and expected outcomes for each lesson. The class teacher keeps these individual plans and s/he and the computing subject leader often discuss them on an informal basis.

3.5 The topics studied in computing are planned to build on prior learning. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, we also plan progression into the scheme of work, so that the children are increasingly challenged as they move up through the school.

3.6 Parents are required to give signed authorisation before their child can use the Internet, either in guided or in independent school work. The parents are however assured that their child's use of the Internet at school is always supervised. A record of those children who do not have permission to use the Internet at school is held by each class teacher and by the school office.

4 The Foundation Stage

4.1 We teach computing in reception classes as an integral part of the topic work covered during the year. As the reception class is part of the Foundation Stage of the National Curriculum, we relate the computing aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) which underpin the curriculum planning for children aged birth to five. The children have the opportunity to use the computers, a digital camera and a floor robot. Then, during the year, they gain confidence and start using the computer to find out information and to communicate in a variety of ways.

5 The contribution of computing to teaching in other curriculum areas

5.1 The teaching of computing contributes to teaching and learning in all curriculum areas. It also offers ways of impacting on learning which are not possible with conventional methods. Teachers use software to present information visually, dynamically and interactively, so that

children understand concepts more quickly. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, while role-play simulations and the Internet prove very useful for research in humanities subjects. ICT enables children to present their information and conclusions in the most appropriate way. Quite a lot of software is generic, and can therefore be used in several curriculum areas.

5.2 English

Computing is a major contributor to the teaching of English. Children's reading development is supported through talking stories. As the children develop mouse and keyboard skills, they learn how to edit and revise text on a computer. They have the opportunity to develop their writing skills by communicating with people via e-mail, and they are able to join in discussions with other children throughout the world through the medium of video conferencing. They also learn how to improve the presentation of their work by using desktop publishing software. There is in addition a variety of software which targets specific reading, grammar and spelling skills.

5.3 Mathematics

Children use computing in mathematics to collect data, make predictions, analyse results, and present information graphically. Screen robots allow pupils to give exact instructions for a particular route, or to use their knowledge of angles to draw a range of polygons. Children practise their key skills using games.

5.4 Science

Software is used to animate and model scientific concepts, and to allow children to investigate processes which it would be impracticable to do directly in the classroom. Data loggers are used to assist in the collection of data and in producing tables and graphs. Microscopes show a miniature world.

5.5 Personal, Social and Health Education (PSHE) and Citizenship

Computing makes a contribution to the teaching of PSHE and citizenship in that children in ICT classes learn to work together in a collaborative manner. They also develop a sense of global citizenship by using the Internet and e-mail. There is consequently an Internet Proficiency Scheme for Key Stage 2 pupils. The scheme aims to develop a set of safe and discriminating behaviours for pupils to adopt when using the Internet and other technologies. Through discussion of safety and other issues related to electronic communication, the children develop their own view about the use and misuse of ICT, and they also gain an insight into the interdependence of ICT users around the world.

6 ICT and Inclusion

6.1 At our school we teach computing to all children, whatever their ability and individual needs. Computing forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our ICT teaching we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to

achieve this. For further details see separate policies: Special Educational Needs; Disability Non-Discrimination and Access; Gifted and Talented; English as an Additional Language (EAL).

6.2 When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors - classroom organisation, teaching materials, teaching style, differentiation - so that we can take some additional or different action to enable the child to learn more effectively (for example, a lot of software can be differently configured for different ability ranges). Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels. This ensures that our teaching is matched to the child's needs.

7 Assessment for learning

7.1 Teachers will assess children's work in computing by making informal judgements during lessons. On completion of a piece of work, the teacher assesses the work, and uses this assessment to plan for future learning. Written or verbal feedback is given to the child to help guide his/her progress. Older children are encouraged to make judgements about how they can improve their own work.

7.2 The subject leader keeps samples of the children's work in a portfolio. This demonstrates the expected level of achievement for computing for each age group in the school.

8 Monitoring and review

8.1 The monitoring of the standards of the children's work and of the quality of teaching in computing is the responsibility of the subject leader. The computing subject leader is also responsible for supporting colleagues in their teaching of computing, for keeping informed about current developments in the subject, and for providing a strategic lead and direction for computing in the school. The subject leader gives the headteacher an annual summary report in which s/he evaluates the strengths and weaknesses in the subject, and indicates areas for further improvement.

This policy will be reviewed at least every three years.

Headteacher

Date agreed: 26th September 2017

Date to be reviewed: September 2020

