

Birch C. of E. (Aided) Primary School

Computing Policy

1 Aims and objectives

1.1 Computing is changing the lives of everyone. At Birch Primary School we recognise that through teaching Computing we equip pupils to participate in a rapidly changing world, where work and leisure activities are increasingly transformed by technology. We enable them to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for pupils to be able to use information in a discriminating and effective way. Computing skills are a major factor in enabling pupils to be confident, creative and independent learners.

1.2 Our aim is to develop pupils who are confident, responsible and effective users of Computing. We strive to achieve this by helping all:

- to develop Computing capability in finding, selecting and using information;
 - to use Computing for effective and appropriate communication;
 - to develop partnerships beyond the school;
 - to use their Computing skills to develop their language and communication skills;
 - to monitor and control events both real and imaginary;
 - to apply hardware and software to creative and appropriate uses of information;
 - to apply their Computing skills and knowledge to their learning in other areas;
 - to become autonomous users of Computing
 - to explore their attitudes towards Computing and its value to them and society in general. For example, to learn about issues of security, confidentiality and accuracy.
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- The school aims to meet the requirements of the National Curriculum and to maximise the benefits available from Computing for management purposes including target setting and assessment.
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2 Teaching and learning style

2.1 We recognise that all classes have pupils with widely differing Computing abilities. This is especially true when some pupils have access to Computing equipment at home, while others do not. We provide suitable learning opportunities for all pupils by matching the challenge of the task to the ability and experience of the pupil.

Teachers will employ a range of strategies which will include:

- Using a laptop with a digital projector and Interactive Whiteboard to demonstrate to groups or whole class, or to teach a specific aspect of the curriculum;
- Leading group or class discussions about the benefits/limitations of Computing;

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- Providing opportunities for individual, paired and group work;
- Providing opportunities for individual pupils to demonstrate skills to others;
- Setting common tasks which are open-ended and can have a variety of responses;
- Setting tasks of increasing difficulty (not all pupils complete all tasks);
- Grouping pupils 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 pupil;
- Intervening/demonstrating where appropriate to reinforce an idea/new teaching point;
- Using classroom assistants to support the work of individual pupils or groups of pupils.

3 Computing curriculum planning

3.1 The school embeds Computing skills through all areas of the curriculum whenever appropriate, as is reflected in the Medium and Short Term plans. However, sometimes it is deemed necessary to have discrete 'skills' lessons.

3.2 We carry out the curriculum planning in Computing in three phases (long-term, medium-term and short-term). Our long-term Computing plan was created by the coordinator, in meetings with other local primary and secondary schools, and shows how the new Computing curriculum is split into 3 documents: **Information Technology, Computer Science and Digital Literacy**. Each document shows the National Curriculum objectives, how it can be delivered, resource ideas, what to assess and specific vocabulary to be used. Teachers use these documents as a starting point for their planning and ensure all objectives are covered by the end of the year.

3.3 Our medium-term plans give details of how Computing skills will be taught through different subject areas.

3.4 The class teacher is responsible for writing the short-term plans with the Computing component of each lesson. These weekly plans list the specific learning objectives of each lesson. The class teacher keeps these individual plans so that s/he and the Computing subject leader can discuss them on an informal basis.

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

4 Early Years Foundation Stage

4.1 We teach Computing in Class 1 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 pupil's work to the objectives set out in the Development Matters and Early Learning Goals (ELGs) which underpin the curriculum planning for pupils aged three to five. The pupils are taught to operate a range of technology, including CD players, Beebots, remote control toys, microphones, iPads and digital cameras. During the year, the children gain confidence using the laptops and can find information and use it to communicate in a variety of ways.

4.2 Each child in the Foundation Stage has an online 'Learning Journey' on Tapestry <https://evlj.org/login/birch-c-of-e-primary-school/>. Each page in the journal includes notes, photographs, videos, EYFS assessments and characteristics of learning. Each member of staff in the EYFS has a mini iPad that they use to take photos/videos. Each observation can then be uploaded to the Tapestry app. The observations can be enhanced by comments from parents (who have personalised log on details). Parents can also add their own observations from home. Tapestry can also be accessed through an Ipad/Iphone app which has been recommended to parents. Each learning journey can be converted to a PDF at the end of the year and saved onto a disk for parents to keep.

5. Key Stage 1 and 2 Curriculum

5.1 As the aims of Computing are to equip pupils with the skills necessary to use technology to become independent learners, the teaching style that we adopt is as active and practical as possible. While at times we do give pupils direct instruction on how to use hardware or software, the main emphasis of our teaching in Computing is for individuals or groups of pupils to use computers to help them in whatever they are studying.

5.2 Computing contributes to teaching and learning in all curriculum areas. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, pupils who are learning science might use the computer to model a problem or to analyse data, while the Internet proves very useful for research in humanities subjects. Computing enables pupils to present their information and conclusions in the most appropriate way.

5.3 By the end of 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 a sequence of instructions
- write and test simple programs
- use logical reasoning to predict and computing the behaviour of simple programs
- organise, store, manipulate and retrieve data in a range of digital formats
- communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

5.4 By the end of Key Stage 2 pupils should be taught to:

- design and write 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; generate appropriate inputs and predicted outputs to test programs
- use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs

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- 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
- describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

6 Teaching Computing to pupils with Special Educational Needs

6.1 At our school we teach Computing to all pupils, whatever their ability. Computing forms part of the school curriculum policy to provide a broad and balanced education to all pupils. Through our Computing teaching, we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each pupil's different needs. Assessment against the National Curriculum allows us to consider each pupil's attainment and progress against expected outcomes.

6.2 When progress falls significantly outside the expected range, the pupil 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 pupil to learn more effectively. This ensures that our teaching is matched to the pupil's needs.

6.3 In some instances, the use of Computing has a considerable impact on the quality of work that pupils produce; it increases their confidence and motivation. Clicker 6 is particularly useful for children with Special Educational Needs in Literacy as it can read back what has been typed, helping the child check for spelling mistakes and fluency.

6.4 We enable all pupils to have access to the full range of activities involved in learning Computing. Where pupils are to participate in activities outside the classroom, for example, a visit to a Computing exhibition, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

6 Assessment and recording

7.1 Teachers assess pupils' work in Computing by making informal judgements as they observe them during lessons. On completion of a piece of work, the teacher assesses it and comments as necessary. At the end of the year s/he makes a summary judgement about each pupil, deciding whether they are working at age related expectations or not.

7.2 Records of work are put into either English, Maths or Topic books.

8 Monitoring and review

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8.1 The monitoring of the standards of the pupils' work and of the quality of teaching in Computing is the responsibility of the subject leader.

8.2 The Computing subject leader is also responsible for supporting colleagues in the teaching of Computing, for keeping colleagues informed about current developments in the subject, for assessing progress of the subject, and for providing a strategic lead and direction for the subject in the school.

8.3 Having analysed the results of the pupils' work as recorded by the class teachers, the Computing subject leader identifies strengths in the subject and indicates areas for further improvement, and delivers this information to the rest of the staff.

9 Inset

9.1 We ensure that all staff have the appropriate skills to use Computing resources effectively through:

- skills audits;
- staff loan of equipment;
- updates on new equipment/approaches/resources from coordinator
- Espresso training

10 Resources

10.1 The school acknowledges the need to continually maintain, update and develop its resources. Staff inform the technicians of any faults or damaged equipment as soon as they are noticed in a log book. All equipment is supported and maintained by Cablers, who work under the supervision of the Computing Technician/Subject Leader. At present, we have remote assistance and a monthly on site visit from the technicians at Cablers. All equipment is PAT tested annually.

- There is a laptop/desktop computer with an interactive screen in each learning area (classrooms, London room, children's centre room and hall). They are all linked to the printer/photocopiers and the main computer network and the Internet.
- Each class teacher and HLTA has a laptop for use at home.
- In each class base, there is a digital camera and a visualiser, which can effectively share children's work and aid discussion points.
- There are two laptop trollies, which combined hold our 35-40 laptops.
- There are 16 iPads, also stored in the laptop trollies. In addition, there are 3 mini iPads used by staff in the EYFS.
- Each Year 6 pupil has their own desktop computer in their class.
- There are 12 Beebots which are charged via a docking station and 2 Probots.
- There are CD players in Class 1 and 2 which allow 6 children to listen to a CD at the same time.
- Subscriptions to Espresso, Espresso Coding, My Maths and Mathletics are renewed annually and are accessible at home and school.

Associated documents:

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- Internet Access and e-Safety Policy.
- Acceptance Use Policy for pupils.

Signed:

Date: