Childwall Valley Primary School

Computing Guidance 2021

"Easy is boring, Challenge is fun!"

Computing Guidance

Computing is concerned with storing, processing and presenting information by electronic means. Pupils need to use Computing in schools:

- to enhance and extend learning
- to gain confidence and the capability to use Computing in later life. (NCC)

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

The use of computers and other Computing tools will be incorporated into every curriculum area so that it becomes a working tool in the classroom and that its application arises naturally through classroom activities. It enriches the wider curriculum by providing opportunities for both individual and collaborative learning. Computing is not only a subject in its own right but is also a means of enhancing teaching and learning and proves to be a strong motivator for all children.

The purpose of this policy is to:

- ensure appropriate access and equal opportunity for use by all pupils
- ensure continuity and progression in children's learning
- examine teaching and learning strategies
- identify skills, concepts and attitudes to be achieved
- monitor and record pupils' Computing capability
- ensure coherent management and support
- match provision against statutory requirements
- inform staff, governors, parents and other interested parties
- ensure awareness by all of e-safety issues

Aims and Objectives

Computing is changing the lives of everyone. Through teaching Computing we equip children 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 children to be able to use information in a discriminating and effective way. Computing skills are a major factor in enabling children to be confident, creative and independent learners.

The aims of Computing are to enable children:

- to develop Computing capability in finding, selecting and using information;
- to use Computing for effective and appropriate communication;
- 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 use their Computing skills to develop their language and communication skills;
- 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
- to use Computing to access the global community and develop an awareness of world citizenship

Teaching and Learning Styles

As the aims of Computing are to equip children with the skills necessary to use technology to become independent learners, the teaching style that we adopt is as active and practical as possible. We do give children direct instruction on how to use hardware or software to enable them to use the computers effectively when studying other aspects of the curriculum.

The main emphasis of our teaching in Computing is for individuals or groups of children to use computers to help them in whatever they are trying to study and share and present information about the world. So, for example, children might research a history topic by using an app, or they might investigate a particular issue on the Internet. Children who are learning science might use the computer to model a problem or to analyse data. We encourage the children to explore ways in which the use of Computing can improve their results, for example, how a piece of writing can be edited or how the presentation of a piece of work can be improved by moving text or editing an image etc.

We recognise that all classes have children with widely differing Computing abilities. This is especially true when some children have access to Computing 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, by:

· setting common 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, when available, to support the work of individual children or groups of children.

Computing Curriculum Planning

Childwall Valley Primary School uses a skills based scheme of work for Computing as the basis for its curriculum planning. Computing skills are taught in context through the topics studied in the various classes. We continue to adapt the scheme as technology advances to allow children to access the widest possible Computing curriculum.

We carry out the curriculum planning in Computing in three phases (long-term, medium-term and short-term). The long-term plans map the Computing areas that the children study throughout the year and how these activities fit into the rest of the curriculum. These fit together to ensure progression within the curriculum plan. Computer science will tend to be taught more discreetly and the school uses Code Studio as the basis of its computer science throughout the school. Other activities and apps such as Scratch are also used to consolidate work completed in Code Studio.

The Computing subject leader works this out in conjunction with teaching colleagues in each year group. Our long-term Computing plan shows how skills and wider understanding are distributed across the year groups.

Our medium-term plans are derived from the long term maps. These detail coverage for each term. They identify the key skills for each unit of work. The Computing subject leader reviews these plans and advises teachers as necessary.

The class teacher is responsible for writing the short-term plans including the Computing component where appropriate. The class teacher keeps these individual plans and s/he and the Computing subject leader often discuss them on an informal basis.

The areas studied in Computing are planned to build upon prior learning in other years. While we offer opportunities for children of all abilities to develop their skills and knowledge each term, we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move up through the school. Children are encouraged to use the computers individually if they feel that a computer is the best tool for the task at hand.

Foundation Stage

We teach Computing in Reception 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 three to five. Throughout the year the children gain experience using a variety of Computing equipment.

The contribution of Computing to teaching in other curriculum areas

Computing contributes to teaching and learning in all curriculum areas. For example, graphics work links closely with work in art, and work using databases supports work in mathematics, while presentational apps and the Internet prove very useful for research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way.

English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. They will have the opportunity to develop their writing skills by communicating with people over the Internet, and they will be able to join in discussions with other children throughout the world through the medium of video conferencing. They learn how to improve the presentation of their work by using multimedia apps. Computing is used to help support the development of the learning of phonic and spelling skills.

Mathematics

Many Computing activities build upon the mathematical skills of the children. Children use Computing in mathematics to collect data, make predictions, analyse results, and present information graphically. Computing is used to support the development of mathematical skills in the lessons and as a cross curricular tool.

Personal, Social and Health Education (PSHE) and Citizenship

Computing makes a contribution to the teaching of PSHE and citizenship as children learn to work together in a collaborative manner. They develop a sense of global citizenship by using the Internet, email and social messaging. Through the discussion of moral issues related to electronic communication, children develop a view about the use and misuse of Computing, and they also gain a knowledge and understanding of the interdependence of people around the world.

Computing and online resources are increasingly used across the curriculum. We believe it is essential for e-safety guidance to be given to the pupils on a regular and meaningful basis. E-safety is embedded within our curriculum and we continually look for new opportunities to promote e-safety.

Teaching Computing to Children with Special Educational Needs

At Childwall Valley Primary School we teach Computing to all children, whatever their ability. Computing forms part of the school curriculum policy to provide a broad and balanced education to all children. 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 child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels.

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, and differentiation – so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs.

We enable pupils to have access to the full range of activities involved in learning Computing.

Assessment and Recording

Teachers assess children's work in Computing by making informal judgements as they observe them during lessons. On completion of a piece of work, the teacher comments on it to the child as necessary.

Childwall Valley Primary School will devote some time on an annual basis for moderation of pupils' work. Short term assessments are informal notes about progress in lessons, medium term assessments are assessments done at least twice a year where appropriate. These will establish the next steps for the current year and are referred to when writing reports. These feed into the next stage of long term assessment which will be in the form of a review across the whole school and progress towards targets. Teachers will assess pupils progress in the key skills for their year group. This is completed termly. The teacher and subject leader will have access to the ongoing progress of a class and individual pupil. From this we will be able to identify strengths and weaknesses, allowing us to set targets and build these into our development plan.

Monitoring and Review

The monitoring of the standards of the children's work and of the quality of teaching in Computing is the responsibility of the Computing subject leader. The Computing subject leader is also responsible for supporting colleagues in the teaching of Computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.