



ST ANNE'S CE (VC) PRIMARY SCHOOL
COMPUTING POLICY

'Together with God, Making Learning a Life Long Friend'

OUR VISION FOR COMPUTING

The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At St Anne's Primary School, we recognise that pupils are entitled to quality hardware, software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively.

SUBJECT AIMS AND OBJECTIVES

Our computing aims are to:

- Provide a relevant, challenging and enjoyable curriculum for Computing for all pupils.
- Meet the requirements of the National Curriculum programmes of study for computing.
- Use computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use computing throughout their later life.
- To enhance learning in other areas of the curriculum using computing.
- To develop the understanding of how to use computing safely and responsibly.

The Computing curriculum should offer opportunities for our children to:

- Develop their understanding of the fundamental principles and concepts of computer science.
- Develop their skills in using hardware and software to manipulate information in their process of problem solving, recording and expressive work;
- Develop a high quality computing education which equips them to understand and change the world through logical thinking and creativity.
- Develop their understanding of how digital systems work and to become digitally literate individuals.
- Explore their attitudes towards Computing, its value for themselves, others and society, and their awareness of its advantages and limitations

In computer science our children should:

- Design, write and debug 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.
- Use logical reasoning to explain how some algorithms work and detect and correct errors in algorithms and programs.

- Understand computer networks including the internet; how they can provide multiple services such as the World Wide Web.

When using Computing our children should acquire and develop skills associated with information technology in order to:

- Use search technologies effectively. - 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 accomplish given goals, including collecting, analysing, evaluating and presenting data and information.
- acquire and refine the techniques e.g. saving, copying, checking the accuracy of input and output needed to use Computing;
- practise mathematical skills e.g. ordering numbers including negative numbers, measuring and calculating to an appropriate number of decimal places, drawing and interpreting graphs and bar charts in real contexts;
- learn why numerical and mathematical skills are useful and helpful to understanding;
- Develop the skills of collecting first hand data, analysing and evaluating it, making inferences or predictions and testing them, drawing and presenting conclusions, and use all these in their work with Computing.

It is through the teaching of digital literacy that our children should acquire and develop their skills in digital literacy in order to:

- Understand the opportunities networks offer for communication and collaboration.
- Be discerning in evaluating and presenting data and information.
- Be able to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

TEACHING APPROACHES

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 to progress in whatever they are studying. So, for example, children might need to classify animals by creating a branching database.

We recognise that all classes have children with a wide range of 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:

- 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;

PLANNING

The Computing curriculum skills are taught through designated Computing lessons and embedding them through other subjects i.e. Power point books in literacy and Publisher information leaflets on topic subjects.

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, so that the children are increasingly challenged as they move up through the school.

COMPUTING IN THE FOUNDATION STAGE

While there is no explicit Computing scheme for Early Years under the current framework, children in EYFS continue to recognise that a range of technology is used in places such as homes and schools, and they select and use technology for particular purposes in their continuous provision. They use devices such as BeeBots, iPads and the interactive white board to create artwork, take pictures and use timers, for example.

THE CONTRIBUTION OF COMPUTING TO OTHER CURRICULUM AREAS

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 role-play simulations and the Internet prove very useful for research in humanities subjects. Computing supports mathematics through the use of spreadsheets, databases, graphs, coding and changing variables such as size and scale or position using coordinates. Computing enables children to present their information and conclusions in the most appropriate way. Much of the software we use is generic and can therefore be used in several curriculum areas.

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.

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. Computing supports mathematics through the use of spreadsheets, databases, graphs, coding and changing variables such as size and scale or position using coordinates.

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.

CONTRIBUTION OF COMPUTING TO THE DEVELOPMENT OF SMSC EDUCATION

Computing makes a contribution to the teaching of PSHE and citizenship in that children in computing 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 an E-Safety programme of study for all year groups. Through discussion of safety and other issues related to electronic communication, the children develop their own view about the use and misuse of Computing, and they also gain an insight into the interdependence of computing users around the world.

INCLUSION

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 Computing 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 Discrimination; Gifted and Talented Children; English as an Additional Language (EAL).

ASSESSMENT AND RECORDING

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. 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.

Computing uses an assessment tool, in line with the other foundation subjects, which covers all aspects of the National Curriculum. It is also tied in with every Purple Mash unit, and has an additional unit of essential skills which is unique to our school. This also provides staff with a convenient place to evidence children's learning in one location to streamline the process.

RESOURCES

Our school has a good computer-to-pupil ratio, with every child in each class having access to a computer with Internet access during designated computing sessions. All software is already installed on computers and any necessary resources are pre-allocated and accessible by children in their shared Google Drive.

We employ a technician to keep our equipment in good working order. Our technician will also set up new equipment, and install software and peripherals.

In order to keep our school computers virus-free, no software from home will be installed on school computers. Pupils completing work at home e-mail to the teacher concerned, or upload to Purple Mash/Google Classroom/ClassDojo as appropriate.

MONITORING AND REVIEW

The coordination and planning of the Computing curriculum are the responsibility of the subject leader, who also:

- supports colleagues in their teaching, by keeping informed about current developments in Computing and by providing a strategic lead and direction for this subject;
- gives the Head teacher an annual summary report in which s/he evaluates the strengths and weaknesses in Computing and indicates areas for further improvement;
- uses specially allocated regular management time to review evidence of the children's work, and to observe Computing lessons across the school.

Signed: J Nixon

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