

## Rationale

The world we live in is rapidly evolving. Technology, whether discrete or overt is now a central part of our lives.

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.

## Aims and Objectives

- to develop a capability in finding, selecting and using information;
  - to use electronic devices 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 digital literacy 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.

## Teaching and learning style

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 provide children with direct instruction on how to use hardware or software in 'skills' lessons but we also use digital literacy capabilities to support teaching across the curriculum. For example, children might research a history topic by using Chromebooks or they might investigate a particular issue on the World Wide Web. Children may use a computer program to model a problem or to analyse data in maths and science lessons.

We encourage the children to explore ways in which their use of technology 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 manipulating text.

We recognise that all classes have children with widely differing computing abilities. This is especially true when the availability of access to technology outside of school is not equitable. 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 differentiated 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.
- Providing opportunities for vulnerable groups to access and enjoy the full range of hardware and software Available.

## Computing curriculum planning

The school uses the national curriculum for Computing as the basis for its curriculum planning. We have adapted the national curriculum to the local circumstances of the school and we have the additional support of the 'Rising Stars' planning to ensure adequate depth and coverage in every year group.

Programming is taught through distinct lessons aimed at equipping children with the relevant skills for coding. Children are expected to use the correct terminology and vocabulary such as algorithm, debugging and variables. Other elements of Computing are taught across the curriculum and encourage children to think logically through problem solving and how best to use the technology and skills at their disposal to complete a task or activity.

For example, graphics work links in closely with work in art, and work using databases supports work in mathematics and the World Wide Web proves very useful for research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way.

Computing is a major contributor to the teaching of English and improving general literacy skills. Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. In addition, they learn how to improve the presentation of their work by using publishing software.

Many Computing activities build upon the mathematical skills of the children. Children use digital equipment in mathematics to collect data, make predictions, analyse results, and present information graphically. They also acquire measuring techniques involving positive and negative numbers, including decimal places.

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

In Early Years children have access to a variety of technology devices. Although computing is not taught discretely, there is an area of learning that is focused on technology in 'Understanding the World'. This area encourages children to understand and interact with technological devices in a real life setting and allows children to understand the uses of technology within their own lives.

## Teaching ICT to children with special needs

At St Augustine's, we teach Computing to all children, regardless of their ability. Computing forms part of our school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties and/or specific needs. In some instances, the use of technology has a considerable impact on the quality of work that children produce; it increases their confidence and motivation. When planning work in Computing, we can take into account the targets in the children's Support Plans (ISPs).

## Assessment and recording

Teachers assess children's work in Computing by making informal judgements as they observe them during lessons. Pupils' progress is closely monitored by the class teacher and at the end of each term, each pupil will be assessed and recorded as being WTS, ARE or GDS in relation to the areas covered and KPI's achieved. All class teachers keep a record of the Computing Work that has been completed, often in digital form. The Computing subject leader monitors samples of the children's work and feeds back to teachers through discussions/staff meetings as to the next steps.

## Resources

At present, each classroom contains at least one PC/workstation for teachers to use for teaching and learning. Shared Computers are in the ICT suite and two PCs are available for staff use in the medical room. Along with the computers available in the ICT suite, the school has the following:

- Networked Colour Printer/Photocopier / ICT suite printer
- 60 Chromebooks (30 in KS1 / 30 in KS2)
- All teachers have an iPad which is used as a a teaching and photographic resource

## 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 and the Leadership Team. The subject leader is also responsible for supporting colleagues in the teaching of Computing (with the assistance of the IT technician), for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The subject leader regularly discusses the Computing situation with SLT and provides an annual summary report in which he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement.

## Role of Subject Leader

The Subject Leader is responsible for improving the standards of teaching and learning in Computing through:

Monitoring and evaluating Computing:-

- pupil progress,
- provision of computing,
- the use of resources,
- taking the lead in policy development,
- auditing and support colleagues in their CPD,
- purchasing and organizing resources (along with SLT/IT technician),
- keeping up to date with recent Computing developments,
- monitoring the use of Assessment Guidelines,
- delivering CPD as appropriate.