Computing Policy

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INTENT

Computing is changing the lives of everyone. At Saint Alban's C of E Academy our curriculum is designed to 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. Our intent is that our curriculum will develop the skills necessary for children to be able to use information in an effective way. Computing skills are a major factor in enabling children to be confident, creative and independent learners.

The use of Computing within Saint Alban's C of E Academy is designed to allow each pupil to:

So that each pupil can:

- use Computing capability in finding, selecting and using information;
- use Computing for effective and appropriate communication;
- Monitor and control events both real and imaginary;
- Apply hardware and software to creative and appropriate uses of information;
- Apply their Computing skills and knowledge to their learning in other areas;
- use their Computing skills to develop their language and communication skills;
- 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.

Our curriculum provides a broad and balanced education which allows students to become:

Successful learners who enjoy learning, make rapid and sustained progress and achieve their very best in all they do.

Confident individuals who are able to live safe, healthy and fulfilling lives;

Responsible citizens who can make a positive contribution to society.

IMPLEMENTATION

Saint Alban's C of E Academy is committed to meeting the requirements of the primary National Curriculum. Our Computing schemes of work reflect the content and challenge of the curriculum.

Our aim is to offer a broad, balanced, rich and vibrant curriculum that provides challenging pathways to achievement for all learners and leads to outstanding curriculum provision. It will 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. 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 in whatever they are trying to study. So, for example, children might research a history topic by using a programme, interactive resource 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 about etc.

The curriculum will be taught with the consideration of the needs of all learners. Our curriculum will be exciting and will inspire children to nurture a passion for learning.

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 to support the work of individual children or groups of children.

The curriculum is all the planned learning opportunities that we as a school organise in order to promote learning, personal growth and development. It includes, not only the formal requirements of the National Curriculum, but also the range of extra-curricular activities that the school organises in order to enrich the experiences of our children. It also includes the 'hidden curriculum', or what the children learn from the way they are treated and expected to behave. We aim to teach children how to grow into positive, responsible people, who can work and co-operate with others, whilst developing knowledge, skills and attitudes to learning, in order that they achieve their true potential.

Our curriculum promotes British Values of democracy, the rule of law, individual liberty, and mutual respect and tolerance of those with different faiths and beliefs to prepare our pupils for life in modern day Britain. We also provide opportunities for our pupils to learn about the contribution of Britons to innovation, excellence and changes in the world.

Organisation and Planning Computing Curriculum

We carry out the curriculum planning of Computing in three phases (long-term, medium-term and short-term). The Computing subject leader works this out in conjunction with teaching colleagues across the MAT and MAT ICT Director.

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.
Our medium-term plans, 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.

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

The topics studied in Computing are planned to build upon prior learning. While we offer opportunities for children 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 children are increasingly challenged as they move up through the school.

Foundation Stage

We teach Computing in our Reception classes as an integral part of the topic work covered during the year. As the nursery and 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. The children have the opportunity to use the computers and digital cameras. Then during the year, as they gain confidence will start using the computer to find information and use it to communicate in a variety of ways.

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 in closely with work in art, and work using databases supports work in mathematics, while interactive resources and the Internet prove very useful and powerful for researching 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 have the opportunity to develop their writing skills by communicating with people over the Internet, and they are 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 desk-top publishing software.

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. They also acquire measuring techniques involving positive and negative numbers, and including decimal places.

Personal, social and health education and citizenship (PHSCE)

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 and e-mail. 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.

Children's Relative Starting Points

At our 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.

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

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.

Intervention will lead to the creation of an Individual Action Plan (IAP) for children with special educational needs. The IAP may include, as appropriate, specific targets relating to Computing. In some instances, the use of Computing has a considerable impact on the quality of work that children produce; it increases their confidence and motivation.

In Computing staff will develop differentiated weekly plans to ensure pupils who are identified as gifted in Computing and achieving exceptionally high levels of achievement are catered for.

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 marks it and comments as necessary. At the end of a unit of work s/he makes a summary judgement about the work of each pupil in relation to the National Curriculum age related expectations, and records this in the children's Computing profile. We use this as the basis for assessing the progress of the children and to pass information on to the next teacher at the end of the year.

All teachers keep samples of the children's work in a portfolio for each pupil. This demonstrates the expected level of achievement in Computing for each age group in the school.

IMPACT

Our curriculum design will lead to outstanding progress for all pupils, regardless of their starting points, over time. Planned learning will progressively build on prior knowledge and understanding and support children in producing outcomes of the highest quality.

We will ensure that the Computing curriculum is regularly monitored and reviewed by the subject leaders and our children will review individual subjects. The learning and outcomes will be monitored and feedback will be given around what is going well and what are the ways to grow.

Our assessment system of building blocks will be used by the children and staff to reflect on the progress that is being made over time. Senior Leaders will evaluate progress that has been made and the impact of the curriculum to ensure all pupils, including the most disadvantaged and pupils with SEND have been given the knowledge and cultural capital they need to succeed in life.

The quality of education will be evaluated to ensure that it enables children to achieve the highest standards and supports them in being confident, resilient, self-motivated independent learners with the skills to be a lifelong learner.

At St Alban's we aim to ensure all our children:

- Develop their understanding of the fundamental principles and concepts of computer science.
- Develop their skills in using hardware and software to manipulate information.
- 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 ICT, its value for themselves, others and society, and their awareness of its advantages and limitations.

By the end of Key Stage 1, our children are 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 compute 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.

By the end of Key Stage 2, our children are taught to:

- Design and write programs that accomplish specific goals.
- Use sequence, selection, and repetition in programs.
- Work with variables and various forms of input and output.
- Use logical reasoning to explain how a simple algorithm works, and to detect and correct errors in algorithms and programs.

Review

This policy will be reviewed annually by staff and governors