

RED ROSE SCHOOL

ICT CURRICULUM

Updated: January 2021

All policies are to be read in conjunction with the School's statement of its goals (Sec1 Chap1), ethos (Sec1 Chap3) and curriculum planning (Sec3 Chap4). This policy outlines the purpose, nature and management of the ICT taught at Red Rose School.

THE IMPORTANCE OF COMPUTING

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content.

Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims

Our computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

National Curriculum: Computing Programmes of Study

<https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study/national-curriculum-in-england-computing-programmes-of-study>

CURRICULUM PLANNING

The school uses the national scheme of work for Computing as the basis for its curriculum planning. We have adapted the national scheme to the local circumstances of the school.

We carry out the curriculum planning in Computing in three phases (long-term, medium-term and short-term). The long-term plan maps the Computing topics that the children study in each term during each key stage. 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, which we have adopted from the national scheme of work, 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. As we have some mixed-age classes, we do our medium-term planning on a two-year rotation cycle. In this way we ensure that we cover the National Curriculum without repeating topics.

The short-term plans list the specific learning objectives of each lesson.

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.

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 software programs 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 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 (PSHE) and citizenship

Computing makes a contribution to the teaching of PSHE and citizenship as children learn to work together in a collaborative manner. 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.

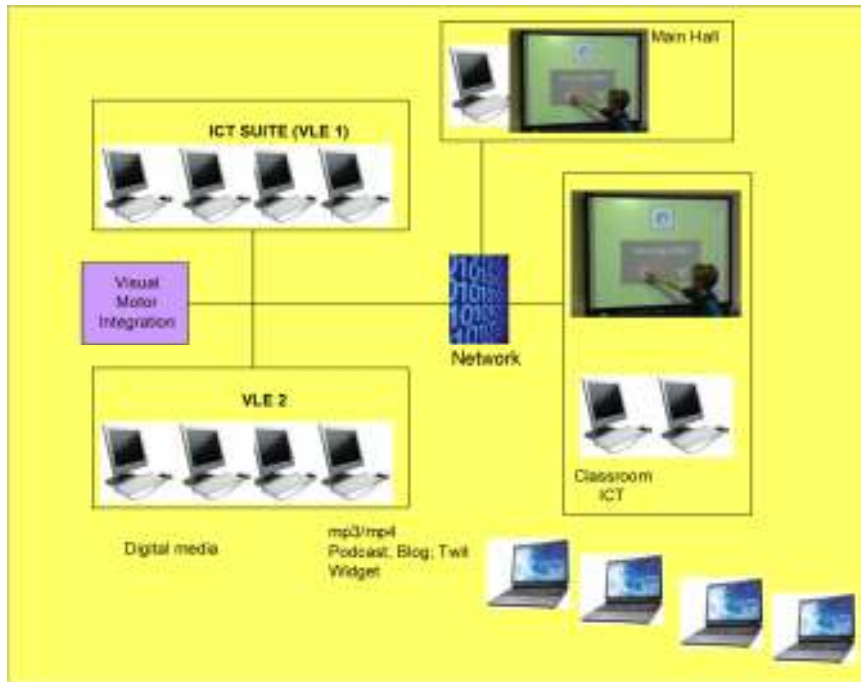
Spiritual, moral, social and cultural development

Through the internet and other electronic media they develop a sense of global citizenship and an understanding of different cultures. During the course of their Computing work moral and social issues are discussed.

ASSESSMENT AND RECORDING

Our pupils undertake Functional Skills Level 1 & 2 and AQA Unit Awards.

RESOURCES



The diagram above outlines our current Computing operational schematic. The vision is to create a whole school Virtual Learning Environment (VLE) which is accessed through a seamless and people transparent network. To implement the vision a deliberate timed step-by-step process is being used. Firstly, to understand the capabilities of the various technologies. Secondly, to be able to bring both staff and pupils along the journey together so that true ownership is enabled.

EMBEDDING PERSONAL LEARNING AND THINKING SKILLS - HOW WILL WE KNOW WHEN WE ARE ACHIEVING OUR AIMS?

In planning for progression, it is important to develop a clear picture of how learners demonstrate PLTS in the context of teaching and learning in ICT and how those skills can raise achievement in this subject. For example, learners may demonstrate that they are:

- ✓ making personal choices about their learning and finding ways to improve their work, for example by identifying their own questions and planning their own enquiries
- ✓ being reflective and discriminating when choosing to use technology
- ✓ Increasingly drawing on their own experiences to explore how ICT addresses issues that may affect their own lives and the lives of others
- ✓ extending and transferring their understanding, for example in increasingly complex or unfamiliar contexts, exploring new ideas, options and points of view with more confidence and creativity