Computing Policy

May 2023

1 Aims and Objectives

1.1 Purpose of study

Langford Village Academy believes that every child should have the right to a curriculum that champions excellence; supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school. We believe that technology can provide enhanced collaborative learning opportunities, better engagement of pupils, easier access to rich content, whilst supporting conceptual understanding of new concepts and can support the needs of all our pupils. We offer a high-quality computing education; equipping pupils to use skills, strategies 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.

1.2 Aims

Our objectives in the teaching of Computing are for all our children:

- To provide an exciting, rich, relevant and challenging Computing curriculum for all pupils.
- To understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- To analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- To evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- To be responsible, competent, confident and creative users of information and communication technology.

2 Teaching and learning style

2.1 As the aims of Computing are to equip children with the skills necessary to become independent learners, the teaching style that we adopt is as active and practical as possible. At times we do give children direct instruction on how to use hardware or software in 'skills' lessons but we often use Computing capabilities to support teaching across the curriculum. So, for example, children might research or investigate a history topic or 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.

2.2 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 teaching assistants to support the work of individual children or groups of children.

3 Computing Curriculum Planning

3.1 The school uses a developed scheme of work for Computing; from Purple Mash. This covers the national curriculum and shows a solid progression of skills from reception through to year six.

3.2 We carry out the curriculum planning in Computing in three phases (long-term, medium-term and short-term). The National Curriculum gives a detailed outline of what we teach in the long term, while our yearly teaching programme identifies the key objectives we teach to in each year.

3.3 The plans for computing lessons come from Purple Mash. It is down to the individual teachers to ensure these are workable for their class and adapt if necessary. These plans list the specific learning objectives and expected outcomes for each lesson, and give details of how the lessons are to be taught. The class teacher keeps these individual plans, and the class teacher and Computing lead often discuss them on an informal basis.

3.4 We aim for our Computing planning to build on prior learning. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit, and we also build progression into the Computing Scheme of Work, so that the children are increasingly challenged as they move up through the school.

3.5 In the Foundation Stage Computing experiences are developed as part of the topic work covered during the year.

5. Cross Curricular Links:

5.1 Computing contributes to teaching and learning in all curriculum areas. For example, work using databases supports work in mathematics, while the internet proves very useful for research in English and Topic subjects. Computing enables children to present their information and conclusions in the most appropriate way.

5.2 **English**

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of Chromebooks, children learn how to edit and revise text. They have the opportunity to develop their writing skills by creating emails on Purplemash. They learn how to improve the presentation of their work by using word processing and power points.

5.3 **Mathematics and Science**

Many Computing activities build upon the mathematical skills of the children. Children use Computing in mathematics and science 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.

5.4 **Personal, Social and Health Education (PSHE)**

Computing contributes to the teaching of PSHE in KS2 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 Technologies, and they also gain a knowledge and understanding of the interdependence of people around the world.

6. Computing and Inclusion

6.1 At our school, we teach IT to all children, whatever 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. 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. When planning work in Computing, we can consider the targets in the children's Individual Support Plans (ISP's). The use of Computing can help children in achieving their targets and progressing in their learning.

7 Assessment

Please refer to the school's Assessment, Marking and Presentation Policy.

8 Resources

8.1 At present, there are multiple sets of Chromebooks for use across the school. One set are touch screen and are used with the younger children (Reception and sometimes year 1). The other sets are for KS1, LKS2 & UKS2. There is access to WIFI and google suites. There are filters set on the Chromebooks to ensure the children are safe when using the internet.
Resources for Computing, including software are kept in a central store.

8.2 Along with the Chromebooks, the school has the following:

Hardware:
Visualisers
Interactive whiteboards
Cameras
Tablets

Software:
- Word Processing Packages (Google Apps including Docs, Sheets, Slides amongst others.)
- Purplemash
- Subscriptions/access to resources via the internet, e.g. Espresso, Twinkl
- Freeware is installed on computers according to teachers needs by the IT support technicians.
- RM Unify software

9 Equal Opportunities and Inclusion

9.1 It is the responsibility of all staff to ensure that there is equal opportunity for all children regardless of colour, culture, background, gender or religious belief. The school will not tolerate exclusion from any activity that is rooted in the above to the detriment of the child.

9.2 It is also the responsibility of member of staff to ensure that barriers to learning are reduced as far as practicable and can reasonably be expected. The inclusive nature of education is a highly valued element of Langford Village Academy's ethic.

10 Intended Outcomes:

10.1 Children become confident and proficient in using a growing range of new technologies in line with the school expectations identified in the Computing Programme of Study.

Implementation and Review

This policy will be made known to all staff, parents/carers and governors, and published on the academy's website. Copies are also available upon request from the academy office. This policy will be reviewed every year.

Written by: Stephanie George Date: May 2023

Agreed by Principal: Debbie Randall Date: May 2023

Ratified by Governors: Date: May 2023