Computing Intent at Charsfield C of E Primary School

Key Purpose: Why is this subject important?

- Computing capability is an essential skill for life and enables learners to participate more readily in a rapidly changing world. Learners who have grown up with technology around them may naturally develop into competent operators. However, that will not give them any awareness of the underlying processes involved and will not help them to understand how best to apply their skills safely and ethically. At our school we therefore have an important role to play in helping children connect with others safely and respectfully; understanding the need to act within the law and with moral integrity.
- Learning about information technology, computing control systems and robots increases children's awareness of many of the operating systems we use to manage our everyday lives and workplaces. Many jobs in the 21st Century now make extensive use of controllable technology including traditional local industries such as agriculture. The inventor of the World Wide Web, Sir Tim Berners-Lee, commented that 'We don't need to teach computing because we need more programmers. Most learners will study music at some point in school but not because there is an international shortage of musicians. Instead, we should teach learners computing because we need more doctors, artists, farmers and civil servants.'
- Technology can act as a 'force multiplier' unlocking children's access to information and creative tools not available in the past, even in relatively recent times. For example, using the Internet gives them instant access to ideas and experiences from a wide range of people, communities and cultures. Furthermore, children are now also able to create impressive multimedia products that would have taken many years and millions of pounds to produce only a generation ago.

Key Principles: What are the distinctive ways of knowing, working and learning in this subject?

- Although Computing has recently replaced ICT as the name of this subject in the National Curriculum, 'Digital Literacy' and 'Information Technology' remain important components of this subject. Children need to know how to use a range of technological applications for a variety of purposes.
- Computing, digital literacy and information technology are often best taught in a rich context. Children should be encouraged to use technology to create works of art using a range of new media and solve problems that are grounded in their own experiences and beyond. Computing has deep links with mathematics, languages, science and design and technology, and provides insights into both natural and artificial systems. There are also many potential benefits through cross-curricular links to other subjects such as statistics in science and mathematics and the use of media in English.

Expectations: What does success look like in this subject?

We aim for our children to become effective users of technology who can thrive in a technological world. To this end they will:

- understand and apply the essential principles and concepts of Computer Science, including logic, algorithms and data representation;
- analyse problems in computational terms, and have repeated practical experience of writing computer programs to achieve desired goals including debugging;
- evaluate and apply information technology analytically to solve problems;
- understand the difference between responsible and irresponsible online behaviour;
- know how to be safe online.