



## Dishforth CE Primary School

### Computing Intent, Implementation and Impact

At Dishforth CE Primary School, all children receive a high-quality, broad and balanced Computing curriculum which allows them to develop and achieve as competent Computational Thinkers. Through creative and practical activities, children develop a respectful and responsible attitude towards information and communication technology, especially regarding their own and other's safety. Children are equipped with the skills to prepare them for the opportunities, responsibilities and experiences of later life. The progression of skills is carefully mapped so that all children are able to learn, practise and build on previously learned skills as they progress through school. Children are able to apply knowledge and skills learned in other subjects, particularly Maths, Science and DT. Children's interests are captured, ensuring that links are made in a cross curricular way, giving children motivation and meaning for their learning.

The overall aim of our Computing curriculum is that children leave our school as confident, capable and creative users of digital technology, with a secure understanding of computer science and as safe, responsible and discerning digital citizens.

Our school curriculum is underpinned by our school vision, which encourages all pupils to achieve their full potential and develop a life-long passion for learning, whilst developing their personal values of respect, compassion, trust and perseverance.

We teach the National Curriculum Computing Programme of Study through the Boost Learning 'Switched-On Computing' scheme, which is supported by clear skills and knowledge progression. This ensures that skills and knowledge are built on, year by year, and sequenced appropriately, in order to maximise learning for all children.

The scheme recognises that computing has three inter-related aspects, and these are covered in each year:

- Computer Science (the foundations of computing, covering coding and computational thinking)
- Information Technology (the applications of computing, including working with documents, data and digital media)
- Digital Literacy (the implications of computing for individuals and society)

Within these aspects, the key skills we teach are:

- **Programming**
- **Computational thinking**
- **Creativity**
- **Computer networks**
- **Communication and collaboration**
- **Productivity**
- **Online safety**

Each of these areas should be given equal weighting and should be rooted in technical knowledge. Children should be introduced to, and encouraged to use relevant technical vocabulary, allowing children to explore in real life contexts, giving meaning to their learning.

During the Early Years Foundation Stage (EYFS) pupils explore and use a variety of computing and digital resources through a combination of child initiated and adult directed activities. In addition, 'Switched On ICT in the Early Years' is used to underpin learning, through 7 specifically chosen activities which link directly with the 'Switched On Computing' curriculum for KS1.

In Key Stage 1 children will access the Computing curriculum through six cross-curricular units, one for each half-term.

In Key Stage 2 children will access the Computing curriculum through six cross-curricular units, one for each half-term.

Each unit gets children to solve a real-life problem using digital technology with plenty of 'wow' moments. There are three units each on computing science and information technology, with digital literacy throughout.

Our definition of learning is that our children will know more, remember more and understand more about Computing.

Implementation

One of the great strengths of our Computing curriculum is its flexibility. Units typically include some cross-curricular connections to things pupils will be studying elsewhere in the curriculum, helping them to see how computing can be applied in a wide range of contexts, but also doing much to promote retention in both domains as pupils make and reinforce the connections between new ideas.

Our curriculum recognises that computing is, at its heart, a practical and creative subject, with pupils learning best when they're consciously engaged in digital artefacts to share with others. These can be as simple as digital images or musical compositions through to complex collaborative projects and sophisticated, well-tested programs of their own. Throughout the scheme, pupils develop skills in working with others, including contributing to and leading shared group work. They become adept at giving constructive, critical feedback, and on acting on feedback they receive from their peers.

### Planning

- Long term plans map out the units to be covered each term, during each Key Stage.
- Medium term plans identify learning objectives and outcomes for each unit, as well as indicating the skills being taught and key vocabulary.
- Short term plans prepared by each teacher highlight the skills and objectives of the lesson and identify resources and appropriate differentiation.

### Structure of a lesson

1. Warm-up to the lesson which activates prior knowledge and vocabulary encountered, in order to increase the power of working memory. This will reinforce which of the three, inter-related aspects of the Computing curriculum is being covered in the session.

2. A metacognitive approach to teaching and learning:

- Explicitly teach metacognitive strategies - activating prior knowledge, independent practice and structured reflection.
- Modelling by the staff, verbalising their thinking and scaffolding tasks in relation to Computing
- Setting an appropriate level of challenge.

- Promoting and developing metacognitive talk in the classroom – language development and acquisition.
- Explicitly teaching children how to organise and effectively manage their learning.

3. Task – independent / paired / group.

4. Plenary

### Resources

'Switched On Computing' is resourced in accordance with the Resource List which accompanies the scheme.

### Assessment

In Computing assessment is continuous. From the beginning of every lesson, teachers and teaching assistants will be assessing what their pupils are, or are not understanding and use this to scaffold each segment of the lesson. Interventions will be both planned for and 'live', meaning that misconceptions are dealt with immediately and high attaining pupils are challenged appropriately.

In addition, 'Switched On Computing' provides an 'End-of-Unit Quiz' which can be used for whole-class assessment and Pupil Self-Assessment worksheets can be a useful tool.

Subject leaders to have a termly meeting with the class teacher to track progress.

### Foundation Stage

- Staff's ongoing observational assessments ascertain a baseline when each child begins EYFS which then informs subsequent teaching and learning for each child.
- Future attainment is noted using photographs and observational notes. Progress is recorded in each child's Learning Journey and the next steps to be taken are identified. Progress is monitored termly.
- Statutory assessments are made on exit of the EYFS.

KS1 and KS2

- In the Computing lesson, formative assessments are made on a lesson basis. Practitioners observe, question and evaluate lesson outcomes to further determine progress made and the next steps in learning.

#### Monitoring procedures

- The Head teacher and Computing subject leader play a central role in the monitoring and evaluation of the quality of teaching and learning of Computing in the school.
- The subject leader is responsible for monitoring attainment and progress, the outcomes of which are collated in the subject leadership folder and fed back to staff at an appropriate time.
- Evidence of children's learning is compiled in a 'Big Book', including photos, screenshots and documents. Knowledge Organisers and Key Vocabulary documents should precede the evidence, along with the name of the Unit being covered and the relevant, dated Learning Intentions. Examples of presentations and videos are saved in the Staff area on the Server, in a folder named Computing Evidence. Wherever possible, children's learning is saved in their own, personal area on the Server.

#### Impact

As a result, our learners will know more, remember more and understand more about Computing.

By the time children leave our school they will have:

- A life - long passion for learning, in particular in Computing.
- Respect, compassion, trust and perseverance for themselves and for others they are working with and working for.
- The ability to work constructively and productively with others, within a defined time frame.
- The ability to work responsibly, working carefully and safely with the equipment and resources available.
- The ability to choose equipment and resources based upon sound knowledge.
- The ability to apply skills of Maths, Science and DT across the wider curriculum, particularly in Computing.

- The ability to ask questions, carry out research and show initiative to develop a detailed knowledge of the Computing tasks and how they relate to the world around us.
- The ability to develop problem-solving strategies.
- The ability to evaluate their learning, particularly the coding aspects, making the necessary adjustments to the code by debugging.
- The ability to transfer skills learned into other areas of their lives.
- The ability to use technical vocabulary in the correct way.