

## Durham Gilesgate Primary School

### Computing

#### Intent

At Durham Gilesgate Primary School our intent (In line with the 2014 National Curriculum for Computing) is to provide a high-quality computing curriculum which equips children to use computational thinking and creativity to understand and change the world. The curriculum we deliver will teach children key knowledge about how computers and computer systems work, and how they are designed and programmed.

By the time they leave Durham Gilesgate Primary, our intent is that children will have gained key knowledge and skills in the three main areas of the computing curriculum. The core of computing is computer science, through which pupils will be taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Learning about Information technology (using computer systems to store, retrieve and send information) will allow our children to find, explore, analyse, exchange and present information. It is also our intent that children develop the skills necessary to be able to use information technology in a discriminating and effective way and that they learn how to use existing and emerging technologies in a safely and appropriately. Thus, Computing also ensures that pupils will become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable to be active participants in a digital world.

The objectives within each strand support the development of learning across the Key Stages, ensuring a solid grounding for future learning and beyond. We recognise that Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems and it is our intent to capitalise on these cross-curricular links throughout the whole curriculum.

#### Implementation

At Durham Gilesgate Primary School the Computing curriculum ensures a balanced coverage of computer science, information technology and digital literacy. In the first half of each term, all classes are taught digital literacy and computer science is taught in the second half of each term. Information technology is taught using a thematic approach across each term.

This stranded approach, ensures the children are taught all three elements in each year group, and that the subject knowledge becomes increasingly specific and more in depth, with more complex skills being taught, thus ensuring that learning is built upon. For example, children in Key Stage 1 learn what algorithms are, which leads them to the design stage of programming in Key Stage 2, where they design, write and debug programs, explaining the thinking behind their algorithms. We have also identified subject specific (tier 3) vocabulary that we introduce and which children learn and use in their spoken and written language.

Our curriculum drivers underpin the Computing curriculum; the driver '*heritage and opportunity*' helps children to see the possibilities of future careers, the driver '*growth mind-set*' enables children to learn about perseverance and the driver '*values*' ensures that children learn about using technology in socially acceptable and appropriate way.

## Impact

We want children to know more, remember more and understand more in computing so that they leave primary school computer literate. Therefore, we expect that the majority of children will achieve at age related standards in computing at the end of each year. We recognise that some children may not achieve this standard, but we will expect that they have made good progress from their starting point. We also recognise that some other children will exceed age related standards and we will have deepened learning for these children. Our approach to the curriculum results in a fun, engaging, and high-quality computing education.

Much of the subject-specific knowledge developed in our computing lessons equip pupils with experiences which will benefit them in secondary school, further education and future workplaces. The learning of research methods, use of presentation and creative tools, critical thinking, computing and systematic problem solving at Durham Gilesgate Primary gives children the building blocks that enable them to pursue a wide range of interests and vocations in the next stage of their lives.