Computing Curriculum

Whole School Overview - Intent:

At Kincraig Primary School, when planning and teaching computing, we believe that it is an essential part of the curriculum. It is a subject that not only stands alone but is woven into many other curriculum subjects and should be an integral part of all learning throughout the curriculum. Due to this, we have enabled all children across Key Stage 2 to have their own iPad either through a leasing scheme or through a 1-1 school scheme.

Computing, in general, is a significant part of everyone's daily life and children should be at the forefront of new technology, with a thirst for learning what is out there. Computing within schools can therefore provide a wealth of learning opportunities and transferrable skills explicitly within the Computing lesson and across other curriculum subjects.

Through the study of Computing, children will be able to develop a wide range of fundamental skills, knowledge and understanding that will actually equip them for the rest of their life. Computers and technology are such a part of everyday life that our children would be at a disadvantage would they not be exposed to a thorough and robust Computing curriculum.

In line with the National Curriculum, we will ensure all children have the opportunities to:

- Understand and apply the essential principles and concepts of Computer Science, including logic, algorithms and data representation;
- Analyse problems in computational term, and have repeated practical experience of writing computer programs in order to solve such problems;
- Evaluate and apply information technology analytically to solve problems;
- Communicate ideas well by utilising appliances and devices throughout all areas of the curriculum.

Year Group Overviews (Implementation)

At Kincraig Primary School, computing is taught using a blocked curriculum approach; ensuring children are able to develop an in depth knowledge and understanding; developing skills and making progress over the duration of each of their computing topics. Teachers use the 'Switched On' Computing scheme, published by Rising Stars, as a starting point for the planning of their computing lessons, which are often linked to the creative curriculum to support the immersion in the theme. Knowledge and skills are mapped across each topic and year group to ensure systematic progression. We currently run a leasing programme across school, whereby children can lease ipads which are then topped up with class sets, to enable all KS2 a full class set, with KS1 sharing a class set. We have access to laptops too. This has supported the delivery of the curriculum and enhanced opportunities for children to use a wide range of devices and programs both within discrete computing lessons and across the wider curriculum. Employing cross-curricular links motivates pupils and supports them to make connections and remember the steps that have been taught. The implementation of the curriculum also ensures a balanced coverage of computer science, information technology and digital literacy. The children will have experiences of all three strands in each year group, but the subject knowledge imparted becomes increasingly

specific and in depth, with more complex skills being taught, thus ensuring that learning is built upon.

Within each age range we will focus on the skills outlined below, to ensure a consistent and embedded approach, that shows a clear progression of skills.

Although computing does not feature in the new EYFS curriculum, here at Kincraig our intention is to immerse children into the world of technology before the National Curriculum requires them to do so. This prepares them for the ever-changing digital world in which they live. Across the EYFS, we want children to acquire basic skills in turning on and operating some Computing equipment as well as starting to operate mechanical toys, e.g. turning the knob on a wind-up toy or pulling back on a friction car. We want them to be aware of the uses of technology through role-play i.e. using mobile phones, pretend tills and cash machines. As they progress into **Pre-School** and **Reception**, we want children to know how to operate simple equipment (e.g. turn on a cd player and use a remote control) and shows an interest in tech toys with knobs or pulleys, or real objects such as cameras/ipads or mobile phones.

Year 1: children will create different styles of digital media (video, paint, e-book, talking book, card)

Year 2: children will collect and display data (research, photos, bugs)

Year 3: children will become programmers (animation, debugging, collecting and analysing data)

Year 4: children will become online producers (wiki page, film, media, music)

Year 5: children will create different online spaces (blogs, art, virtual space)

Year 6: children will plan, research and develop an app.

 Impact:
Our approach to the curriculum results in a fun, engaging, and high-quality computing curriculum. Evidence gathered is used to feed into teachers' future planning, and as an approach continues to be developed, teachers are able to revisit misconceptions and knowledge gaps when teaching other curriculum areas. This supports varied paces of learning and ensures all pupils make good progress, identifying those who need the additional support. The subject-specific knowledge developed in our computing lessons equips pupils with experiences that will benefit them in secondary school, further education and future workplaces. From research methods, use of presentation and creative tools and critical thinking, computing at Kincraig Primary School gives children the building blocks that enable them to pursue a wide range of interests and vocations in the next stage of their lives. The impact of this curriculum design will lead to outstanding progress over time across key stages, relative to a child's individual starting point. Children will therefore be expected to leave Kincraig Primary School reaching at least age-related expectations for Computing.