Computing Curriculum Statement

Intent

At Biddick Hall Infants and Nursery School we are committed to equip our children with the knowledge and skills to access the ever developing digital world. We aim to provide firm foundations in Computer Science whilst developing strong Digital Literacy.

Implementation

Computing is taught weekly with skills being developed, practiced and applied throughout the curriculum. This allows our children to embed knowledge and skills whilst utilising them in a range of contexts. These cross-curriculum links have been agreed with Curriculum Leads and is included in medium term planning. Whilst attending Biddick Hall Infants School our children will use ChromeBooks, Ipads, desktop computers as well as other digital hardware (camera and recording devices) and will be supported in using this technology to best meet their needs including the creation, organisation, storing, manipulation and retrieval of digital content.

Fundamental skills are taught starting in Reception where children develop mouse control, keyboard skills, the retrieval, saving and printing of work. They are able to access subject specific content and access creative tools for pictures and collages. These fundamental skills will continue to develop into KS1 within the google suite. Our children will also create, predict and debug simple programmes by applying precise algorithms as well as identifying uses of information technology beyond school. This ultimately prepares our children to live and be active participants within a digital world.

In Key stage 1 children access the Teach Computing Curriculum designed by the National Centre for Computing Education. Learning is structured into units which aim to develop children's understanding of Digital Literacy, Information Technology and Computer Science. Learning Outcomes can be described through a high-level taxonomy of ten strands which are:

- Algorithms — Be able to comprehend, design, create, and evaluate algorithms
- Computer networks — Understand how networks can be used to retrieve and share information, and how they come with associated risks
- Computer systems — Understand what a computer is, and how its constituent parts function together as a whole
- Creating media — Select and create a range of media including text, images, sounds, and video
- Data and information — Understand how data is stored, organised, and used to represent real-world artefacts and scenarios
- Design and development — Understand the activities involved in planning, creating, and evaluating computing artefacts

● Effective use of tools — Use software tools to support computing work

● Impact of technology — Understand how individuals, systems, and society as a whole interact with computer systems

● Programming — Create software to allow computers to solve problems

● Safety and security — Understand risks when using technology, and how to protect individual and systems.

An essential part of our computing curriculum is e-safety which is referred to in all lessons and is discreetly taught during Internet Safety Week. In all year groups children will be taught to be safe and respectful online. Children will be given the tools to communicate any concerns they may have surrounding any content and/or contact the encounter on the internet or on a digital device with strong links to PSHE and Kidsafe. It is vital that children are aware that their personal information is private and this should not be shared online.

To support our computing curriculum we utilise Purple Mash, a creative online space from 2Simple. This site provides curriculum focused activities, creative tools, programmes and games to support and inspire creative learning. We also access Espresso by Discovery Education, an online platform where children are able to research curriculum resources, watch informative videos and complete relevant activities. As both Purple Mash and Espresso are online children are able to continue their learning anywhere at any time.

Specialists from ICT in School work closely with staff to ensure our curriculum and skills remain relevant and up to date. In Reception specialists from the Openzone come into school with the most recent hardware for the children to use, this includes Spheros and a ICT loan box. Children also experience the use of a green screen to record their nativity. In KS1 children visit the Openzone to explore animation and coding whilst experiencing a professional recording studio and green screen

Impact

Our curriculum will:

- Recognise the vital role technology has in the lives of our children and their future in education, their social development and job prospects; promoting high aspirations.
- Appreciate the diverse experiences of access to technology at home, ensuring all children are able to access and achieve regardless of prior experience.
- Ensure safety is at the heart of the curriculum by allowing children to access the most up to date devices and resources.
- Ensure children understand the potential risks online as well as knowing and understanding how to safeguard ourselves online.
- Foster a resilient, inquisitive and problem solving mind set where children are encouraged to have a go and adapt in order to achieve.