Computing at Newfield

Everyone Learning Together

The Newfield Way

Intent

At Newfield, the core of our computing curriculum is computer science, where pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content.

The computing curriculum is designed to nurture ambition in our children to achieve the very best that they can from their own starting points. We provide a coherent, well-planned, sequenced and progressive curriculum from EYFS to year 6, which demonstrates links to Maths, Science, Reading and Writing.

Technology is everywhere and plays a pivotal part in our pupils' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want to equip pupils to use computational thinking and creativity that will enable them to become active participants in the digital world. It is important to us that the children understand how to use the ever-changing technology to express themselves, which will enable them to thrive and have high aspirations in a technology rich world.

We want our pupils to be creators and programmers and our broad curriculum encompassing computer science, information technology and digital literacy reflects this. We value the importance of pupils being able to use technology to share their learning in creative ways. Our knowledge-rich curriculum is balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists.

We encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible. We want our pupils to be fluent with a range of tools to best express their understanding and hope by Upper Key Stage 2, pupils have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers. As pupils move through the school they get opportunities to repeat, rehearse and build on skills from prior learning.

At Newfield Primary School we know that, within the context of SEND, personalisation of the curriculum is key so that each individual's priorities can be considered in order to prepare them adequately for adulthood with the best possible quality of life. Our ambitious curriculum can be successfully adapted to meet the needs of pupils with SEND, developing their knowledge, skills and abilities to apply what they know with increasing fluency and independence. We believe that it is vital that our pupils are equipped with the tools needed to become independent, inquisitive learners in all subjects and that pupils with SEND achieve the very best outcome and reach their full potential.

Implementation

Lessons
We teach Computing in a variety of ways at Newfield, so that all children have access to a curriculum that meets their needs. Computing is taught weekly with the focus for learning changing each half term. The curriculum is broken down into three strands: Computer Science, Information Technology and Digital Literacy. Every half term each class focuses on a different aspect of Online Safety from Education for a Connect World using a program called National Online Safety.

Scheme of work
At Newfield we follow iCompute which ensures we cover all aspects of the National Curriculum. This scheme has been created by subject experts and provides an innovative progression framework and provides support and challenges to enable all pupils to access the curriculum. The pupils use laptops and iPads as part of their computing lessons and participate in some lessons that are unplugged, so they gain an understanding of all aspects of computing.

Online Safety
Every half term we focus on a different aspect of Online Safety from the government document, Education for a Connected World. These aspects are: Self-image and identity, Online Relationships, Online Reputation, Managing Online Information, Health, Well-being and Lifestyle, Privacy and Security and Copyright and ownership. We follow the carefully created lesson plans for each year group to support teachers to deliver these important messages about how to stay safe online. We also use their monthly updates, explainer videos and guidance for parents, when necessary, to ensure that staff, parents and pupils remain up to date with current guidance, technology/apps and trends.

Early Years Foundation Stage

In EYFS pupils use technology to play, to learn in all subjects and across subjects, to explore and to develop their creativity. Pupils begin to develop their digital literacy, selecting a range of tools such as iPads, beebots, online games, cameras, voice recorders and light machines to develop and apply their skills. In EYFS they develop programming skills through the use of beebots, which enable them to create algorithms and use their problem-solving skills to debug. They are also taught how to stay safe online when using technology and to talk to a trusted adult if there is a problem.

Vocabulary
At Newfield, many children arrive into the country with no or very limited English and therefore we ensure that teachers explicitly teach the related vocabulary at the start of every lesson and provide plenty of opportunities for children to practise and embed this vocabulary.

Lesson Sequence
Each year group have a yearly overview of the content they need to cover in accordance with national curriculum expectations. These have been planned to ensure correct coverage of all aspects of the compuitng curriculum as well as building on skills from year to year.

CPD

At Newfield we ensure that staff have focused Computing CPD sessions to share good practice, develop subject knowledge and introduce new concepts to develop computing teaching and learning further. Teachers also use the teacher videos provided by iCompute to support them to teach each lesson. There is also an abundance of CPD available through National Online Safety that provides information on the latest technology and apps, age rating guidance and explainer videos.

Assessment

Summative assessments will be entered into Target Tracker at the end of each year. Teachers will use their professional judgement to determine whether a child is working within age-related expectations, above or below.

Intended Impact

- The majority of pupils are working at age-related expectations in Computing.
- Pupils are digitally literate- they are able to use programs such as word and PowerPoint to record information.
- Pupils are well prepared for the next stage of their education- they are equipped with IT skills to enable them to access learning now and into the future.
- Pupils are aware of and take responsibility for their own safety online.
- Pupils are confident in selecting and using a range of tools, including but not exclusive to word, PowerPoint and scratch to complete work tasks specific to computing and the wider curriculum.
- Pupils are able to use a variety of programs to create algorithms and develop their own code to create movement, games and animation.