Computing

Intent



At Mapperley Plains Primary school we aim to prepare our learners for their future by giving them opportunities to gain knowledge and develop skills that will equip them for an ever changing world. Our Computing curriculum focuses on a progression of skills in digital literacy, computer science, information technology and online safety to ensure that children become competent in safely using, as well as understanding, technology. These strands are revisited repeatedly through a range of themes during the children's time in school to ensure the learning is embedded and skills successfully developed. Our intention is that Computing also supports children's creativity and cross-curricular learning to engage children and enrich their experiences in school.

We offer a Computing curriculum which equips our children with key skills, knowledge and vocabulary motivated by our curriculum drivers:

- **Initiative -** We encourage our children to develop their independence, empowering them to act and be responsible for their own learning about which they can clearly state and explain their opinions.
- **Inclusivity -** We pride ourselves on being an inclusive school that cares for every individual child. In doing so, we promote and deliver a range of strategies to ensure that we value everyone. We want the children to recognise and celebrate diversity existing in our world, instilling pride in individuality.
- **Resilience -** We relentlessly focus on developing children who are resilient, who can adapt to and recover from tough or challenging situations. We encourage the children to try their best in all that they do.
- **Possibilities -** We encourage the children to build aspirations, identify talents and know possibilities for their future lives.

We ensure the curriculum is **Relevant and Memorable.** The unique needs of our children, along with our culture, climate and events shape our curriculum. When planning lessons, we consider the following: 'Because our children...we…'

Our aim is to ensure that the children leaving Mapperley Plains Primary school will access and modern and relevant computing education where their learnt skills will enable them to be successful citizens of the 21st century. Our aim is to:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

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Implementation

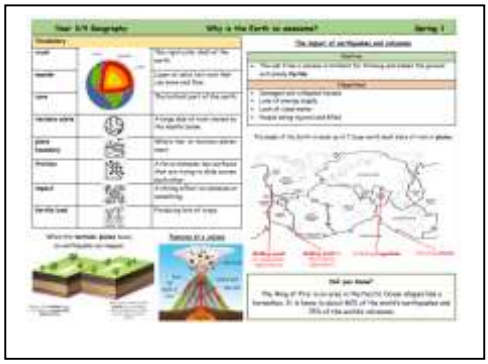
As a school, we follow our Progression Map for Computing, devised from the Early Years Framework and National Curriculum Guidelines. This ensures all aspects, knowledge and skills of Computing are taught across all year groups.

We teach skills and knowledge progression from the National Curriculum, supported by Teach Computing scheme of work. The curriculum has been designed to be progressive and engaging for all year groups; skills and knowledge are built on year on year and sequenced appropriately to maximise learning for all children.

To ensure a broad range of skills and understanding, Computing is taught across three main strands: digital literacy, computer science and information technology. We also teach a range of Computing vocabulary to support children in their understanding.

We ensure our children leave us not only with the skills needed for the next part of their journey, but with a rich body of knowledge both **substantive** (the factual knowledge for each subject) and **disciplinary** knowledge (the action taken within a subject to gain knowledge e.g. geographical fieldwork and map work).

Whilst taught as a stand-alone subject, Computing is also valued as a teaching and learning tool across the curriculum. It significantly enhances teaching and learning in all subjects by enabling rapid access to knowledge, information and experiences from a wide range of sources. We endeavour to teach pupils to be selective in their choice of information sources and to understand that not everything on the internet is valid. We are committed to keeping children safe on line; online safety is taught within lessons and as part of a dedicated day during the school year.



In the future, as part of each topic, a Knowledge Organiser which includes essential sticky knowledge, is shared with both children and families. The Knowledge Organiser is used frequently in lessons to support with the transference of knowledge from the working memory into the long term memory. Key knowledge is re-visited as part of regular retrieval opportunities throughout the theme and across the year.

Developing the use of the correct vocabulary in Computing is crucial and so key vocab is identified and listed for each unit of learning. This is then used to assess knowledge and enables pupils to express and communicate their understanding and knowledge clearly and effectively.

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Ongoing formative assessment is used to ensure all lessons are relevant and supports with planning next steps. Children are given lots of opportunities to visit prior learning through low stakes mini-quizzes and other revisit tasks which allow teachers to measure their level of understanding. End of year assessments state whether children are working towards, expected or exceeding age-related expectations.

The Subject Leader is given dedicated non-contact time to use the triangulation model of monitoring to quality assure teaching and learning. Subject Leaders monitor the subject across the school through a range of monitoring activities which might include: learning walks, discussions with pupils, resource audits etc. Subject feedback is shared with teachers and school leaders.

Impact

Through the high quality teaching of Computing, we will see:

- Children that are competent and safe users of ICT with an understanding of how technology works
- Children that have developed skills to express themselves and be creative in using digital media
- Children that are equipped to apply their skills in Computing in different challenges going forward.

Computing and SEND

For children with SEND, adaptations may be made in Computing which are based on the child's individual needs. We ensure that children with SEND are appropriately challenged in Computing by:

- Using teaching methods which match the needs of children.
- Chunking content into smaller steps and ensuring the curriculum is designed to reduce excessive or unhelpful demands on working memory.
- Ensuring adaptations are based on individual needs and aim to retain ambition for children with SEND.
- Understanding that, for children with more complex SEND needs, it may be appropriate to have different curriculum expectations.