

Furness Vale Primary and Nursery School



COMPUTING



INTENT

At Furness Vale Primary and Nursery School, we acknowledge the pivotal role that technology currently plays, and will continue to play, in society. Therefore, we want to equip our children with the skills they need to thrive in a digital world. We aim to provide our children with access to high-quality resources and teaching that equips them with the knowledge to work in the rapidly changing digital world and inspires them to pursue roles in the digital technology industry.

The computing curriculum at Furness Vale Primary and Nursery School aims to equip our children to use computational thinking and creativity to enable them to become active participants in the digital world. Our intent is to provide a computing curriculum that is designed to balance acquiring a broad and deep knowledge with opportunities to apply skills in various digital contexts. It is important to us that our children understand how to use the ever-changing technology to express themselves, as tools for learning and to drive their generation forward into the future. We want our children to develop as respectful, responsible, and confident users of technology, with an awareness of measures that can be taken to keep themselves and others safe online.

Beyond teaching computing discreetly, we will give our children the opportunity to apply and develop what they have learnt across wider learning in the curriculum.

IMPLEMENTATION

At Furness Vale Primary and Nursery School, we subscribe to MrPICT.com which has created a comprehensive progression document for staff to follow to best embed and cover every element of the computing curriculum. The knowledge and skills statements build year on year to deepen and challenge our learners.

Throughout the year, each class will choose and complete a range of projects outlined in the D.A.R.E.S scheme of work from MrPICT.com. D.A.R.E.S is an innovative approach to teaching computing which encourages pupils to be critical thinkers, problems solvers and computational thinkers while creating purposeful content to demonstrate how learning can be applied across the wider curriculum. The D.A.R.E.S scheme deepens children's knowledge of computing so they can creatively apply their learning across the curriculum in a personalised and accessible way. Each D.A.R.E.S project may take place in computing lessons over a half term to then allow pupils to apply these creative ideas more regularly across the curriculum. The stages which can be adapted into lessons are as follows:

D - Design: Pupils start to discuss the desired outcome for their project and are given time to tinker with the software before planning what they will do to achieve their outcome.

A - Apply: Pupils are given the opportunity to create, make and produce content using the app or software explored in the Design lesson(s)

R - Refine: Pupils spend time considering ways to modify and improve their projects to get the best results possible.

E - Evaluate: Upon completing their desired outcome, pupils are given the opportunity to reflect and consider how effectively they have achieved their goal.

S - Share: Learners are given the opportunity to publish and exhibit their work to the world embedding skills from the Digital Literacy curriculum.

The computing curriculum aims to equip young people with the knowledge, skills and understanding they need to thrive in the digital world of today and the future. The curriculum can be broken down into 3 strands: computer science, information technology and digital literacy, with the aims of the curriculum reflecting this distinction.

The national curriculum for Computing aims to ensure all pupils:

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

Each D.A.R.E.S project will cover one of the strands listed below:

Computer Science	Information Technology	Digital Literacy
Computational Thinking	Word Processing/Typing	Self Image and Identity
Programming	Data Handling	Online Relationships
Computer Networks	Presentations, Web design and eBook	Online Reputation
Artificial Intelligence	Animation	Online Bullying
	Video Creation	Managing Online Information
	Photography and Digital Art	Health, Wellbeing and Lifestyle
	Augmented Reality and Virtual Reality	Privacy and Security
	Sound	Copyright and Ownership

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At Furness Vale Primary and Nursery School, computing is always part of the curriculum and is taught as both a stand-alone subject and as part of cross-curricular topics.

The majority of computing should be embedded across the curriculum. Cross-curricular links are made where appropriate to deepen children's understanding of how computing is used in the real world. Each timetabled computing session will focus on one of three elements: An Explicit Computer Science lesson, A Tinkering Session, or a D.A.R.E.S project. The computer science part of the computing curriculum will often, but not always, need a more explicit approach. A tinkering session looks at introducing a new app or tool and giving children the opportunity to experiment and familiarise themselves with the different elements and tools before it can be applied in a more focused approach across the curriculum. Therefore, computing can sometimes be covered by using technology to demonstrate learning in other subjects when covering more of the Information Technology and Digital Literacy strands.

To help with our implementation of the computing curriculum, we have invested substantially in technology. We recognise the need to continually maintain, update and develop resources to ensure the effective delivery of the National Curriculum and support the use of technology throughout the school. There are Interactive whiteboards in every classroom and each class has access to a large number of iPads and a range of apps. We have programmable devices such as Bee-Bots and as a school, we also subscribe to online content such as Times Tables Rock Stars, 123Maths and Reading Plus to support learning

in school and remotely through home access. We utilise social media with our community Facebook page where we can celebrate children's successes and keep our local community involved and informed about school life. ClassDojo is also used to connect the classroom and home and communicate with parents in an engaging way.

E-Safety and Digital Citizenship

We encourage our children to become responsible digital citizens and emphasise the importance of online safety. Our children are made aware of how to keep themselves safe and how to report concerns about inappropriate content or cyber-bullying incidents. We take online safety very seriously and we aim to give children the necessary skills to keep themselves safe online. Children have a right to access safe online spaces and to benefit from all the opportunities that a connected world can bring them, appropriate to their age and stage. For children growing up, the online environment plays a significant part in their lives. It is a place for them to enhance their learning, connect with new ideas and discover more about the world around them.

I-vengers

At Furness Vale Primary and Nursery School, we have access to the I-vengers project which is a fully funded initiative through Derbyshire Police & Crime Commissioner and Derbyshire County Council. In school, we have appointed two I-venger on-line safety leaders from Years 5 and 6. With support from the I-vengers online safety platform, our online-safety leaders carry out six missions or tasks each year. These missions are designed to highlight the good and bad elements of digital technologies to our children, teachers and parents and empower children to make smarter and safer choices on their own.

The children at Furness Vale Primary and Nursery School also build online resilience through the use of the 'Project Evolve – Education for a Connected World' framework. This framework aims to support and broaden the provision of online safety education and promote the development of safe and appropriate long-term behaviours, and support educators in shaping the culture within their setting and beyond. The activities empower learners to think critically, behave safely, and participate responsibly in our digital world - 21st-century skills which are essential for children and young people to harness the full potential of technology for learning.

IMPACT

At Furness Vale Primary and Nursery School, we want learners to discuss, reflect and appreciate the impact that computing has on their learning, development, and well-being. The way that the children showcase, share, celebrate and publish their work will best show the impact of our curriculum. We also look for evidence by reviewing their knowledge and skills through observing learning regularly. The children are confident users of technology, with a secure understanding of key computing concepts and skills assessment. Children's attitudes towards computing are positive and they are aware of the importance of online safety both in and out of school. Overall, the computing provision at Furness Vale Primary and Nursery School equips children with the skills and knowledge they need to succeed in an increasingly digital world, preparing them for their future education and beyond.