

The Dingle Primary School

Design and Technology Subject Summary

In design and technology pupils are taught to develop the creative, technical and practical expertise needed to perform everyday tasks confidently, and to participate successfully in an increasingly technological world. At The Dingle, children will build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. Children will also critique, evaluate and test their ideas and products and the work of others.

Our Curriculum also provides the opportunity for pupils to learn about nutrition and cooking. As part of their work with food, pupils will be taught how to cook and apply the principles of nutrition, healthy eating and seasonality. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

At The Dingle, design and technology begins in the Reception Year. During this time children will have the opportunity to design and make models and other artefacts, either that have been asked of them by their teachers or in response to their own ideas and creativity. Children will have the opportunity to use large blocks, Lego and other similar resources as well as to use resources such as card, material and natural objects in their work. They will be introduced to various tools such as scissors and art resources and explore how things can be stuck together using glues and sellotape, for example. They will also have the opportunity to cook simple items such as biscuits and explore seasonality through themes such as Harvest and growing their own vegetables, and about arable and non arable farming.

In Years 1 and 2, children will complete a variety of creative and practical activities to teach the children the knowledge, understanding and skills needed to engage in an interactive process of designing, making and evaluating their work. This will include using needles for stitching, creating working mechanisms, such as wheels and axles, levers and sliders. They will be taught to be critical of their work and in particular, to look how their models and structures could be stiffer, stronger and more stable.

Children will have opportunity to develop basic cooking skills such as chopping and slicing, with a particular focus on seasonal British fruits and grains at Harvest time, as well as others available from other countries.

In Years 3 and 4, children will build upon their prior knowledge and be taught about more complex mechanisms, using innovations such as cams and levers. They will then have the chance to design and make their own creations, evaluating the technical aspects of artefacts such as levers used on shadufs in Egyptian times, the invention of arches in Roman times and how houses were built in ancient historical times and in comparison to today. Using a wider range of tools and equipment to

create their models, they will develop their knowledge and skills in cutting, shaping, joining and finishing.

During the cooking element of design and technology, children will recap the basic cooking skills learnt in Year 1 and 2 and start to develop this further by preparing and cooking a variety of predominantly savory dishes using British seasonal vegetables, as well as developing an understanding of foods from other cultures and locations of the World. Children will also be introduced to concepts such as food miles and sustainability.

Children in years 5 and 6 continue to recap and develop skills learnt in previous years. Again, they will have access to a wider range of tools and equipment and create increasingly complex mechanisms. They will be taught about pulleys, gears and levers with a focus on their use in the Industrial Revolution. Their work may also incorporate electrical equipment, such as motors when designing their own artefacts. They will also look at buildings and technical developments that provide strength. This may include how columns were used since Ancient Greek/Egyptian times and how buildings are designed to withstand natural disasters, such as Earthquakes.

During the cooking element, children will continue to develop their knowledge and understanding of where food comes from and the impact of historical events and trade on the availability of food at different times in History. For example, children may look at ingredients available during the Second World War and how people overcame shortages due to rationing, and the ingredients available during Viking times in comparison to modern day. We also look closely at local manufacturing of food, what and how it is made and how it is marketed.

Throughout their time at The Dingle, the children will be taught how to use all tools and equipment safely and will know the technical vocabulary associated with both the tools, equipment and the products they are making. They will become more independent using these tools as their fine motor skills develop and their confidence of using the tools increases.

Design and technology is a very creative area of the curriculum and uses and range of skills and thought processes not used in other subjects. There are also many cross-curricular links within design and technology, such as maths, science, art and history. We expect the skills and knowledge that we teach within our design and technology curriculum will create a solid foundation of learning and a genuine interest in the subject that children can build upon throughout their time in education and beyond.

“Design is not just what it looks like and feels like. Design is how it works.”

- Steve Jobs