

Design and Technology



Intent. We aim to... make Design Technology an inspiring, rigorous and practical subject. We want pupils to be able to design and make products that solve real and relevant problems and be able to evaluate them against a design brief. We aim to create creative, diligent problem solvers who can show resilience when evaluating the success of their products.

We use carefully selected Kapow units to support, plan and deliver high quality lessons, with clear sequences and outcomes to develop and build strong Design and Technology skills.

We focus on Structures, Mechanisms/Mechanical Systems, Cooking & Nutrition and Electrical Systems in KS2. to allow children to develop their skills as they move through the school.

We use cross curricular opportunities to develop our Design and Technology skills to allow children to explore and apply practical skills in other areas.

We ensure children are able to evaluate their work against the design criteria and be able to give reasons for successes and failures seeing both as a valuable contribution to the design process.

We celebrate our work and the work of our friends and recognise the importance of many ideas contributing to a successful final design.

We recognise **Expressive Arts and Design** in the EYFS as the first steps in Design and technology where we introduce basic food and nutrition and junk modeling

Practical Knowledge: We ensure the children know how to manipulate materials, to create strong structures and have basic understanding of how simple mechanisms work. We teach children how to use basic kitchen utensils safely when preparing food and in KS2 how to apply their knowledge of electrical systems practically.

Theoretical Knowledge: We look at designs made by others and see how they have been successful and how notice how designs have changed over time to become more efficient or suit tastes and fashions.

Disciplinary Knowledge: The children recall and apply established fact from other subjects, such as nutrition, healthy lifestyles and electricity to help create a considered design plan.



Implementation: How do we achieve our aims? We will ensure progression in Design and Technology by focusing on key areas that are revisited every 2 years so children can master skills and build upon past experience to inform and develop the best strategies and solutions.

Quality Teaching

We plan our curriculum across two years using selected Kapow units to ensure quality teaching of practical, theoretical and disciplinary knowledge of Structures, Mechanisms/Mechanical Systems, Cooking & Nutrition and Electrical Systems in KS2. We recognise the subject of Design and Technology has many strands and areas and we have chosen to focus our core teaching in these areas to best develop the children's skills and progression through the school.

Cross-curricular teaching

We recognise the huge variety of practical craft skills that are necessary for children to feel confident in creating solutions to design briefs and we aim provide opportunities for children to explore different techniques and media through other subjects. We ensure children are able to explore and develop these skills in guided craft projects while studying other immersive topics.

Whole School DT projects

We recognise the limitations of our focus areas and aim to give children a wider breadth in planned whole school opportunities. Such as learning about textiles through our local heritage of the woolen industry and safe, practical wire cutting when making sculptures with wire. We plan whole school experiences to bring in outside expertise and create links within our communities.

Celebrating DT as a school

We celebrate children's Design and Technology by sharing our work and solution with other in sharing assemblies and open days and stay and learn opportunities for parent to come and share our work.



Assessment

We ensure progression for Design and Technology is seen through focusing on the key areas of Structures, Mechanisms/Mechanical Systems, Cooking & Nutrition and Electrical Systems and revisiting them to imbed prior learning and build upon previous experience. Evaluating designs against the given design brief is key to children's success and we ensure the children contribute to their own assessment of their project. It is however vital that we teach children to understand the evaluation process is part of Design and Technology and a design that may not work as intended is not reflective a child's ability.

SEND

Design and technology is an inclusive and collaborative subject that can allow children who find other subjects more challenging to express their ideas and feelings in a creative way. We recognise the importance for all children to be able to contribute and support children in relation to their needs at any given part of the process.

✓ **Impact:** *how will we know we have achieved our intent?*

Children will be able to talk and evaluate their Design and Technology learning in term of its success to the design brief given. They will see their designs and solutions 'come off the paper' in a real and tangible way and see the link between creativity and practical everyday solutions.



We will See...

The children will see their ideas and plans develop into tangible real life models and meals that children and eat and share with others.



Adults will see children plan and create plans with safety, growing skill and complexity.



We will feel...

The children will feel confident to share their ideas and opinions with others and see how many ideas can build on others to create effective solutions.



Adults will feel confident in teaching units that develop key Design and Technology steps and be know where craft skills and DT skills are different.



We will say...

The children will be able to evaluate their work against clear design criteria and relate the success and failure of their design to the given design brief.



Adults will model language when describing and evaluating designs ensuring the children understand the connection of Design and Technology to the design brief and criteria.



We will explore...

The children will be able to use their prior leaning in science to explore and apply their knowledge in practical and creative ways.



Adults will explore opportunities in other subjects for children to develop practical craft skills safely that will give children the confidence to create designs that are not limited by practical experience.



We will think...

The children will be able to think creatively to solve problems within given parameters and contribute to team thinking strategies.



Adults will contribute to the development of the Design and Technology curriculum and contribute to the yearly review to ensure progression and effective teaching are paramount.

