Design and Technology Curriculum Statement

Our Vision for Design and Technology

At Laira Green Primary, our Design and Technology curriculum intends to encourage our children to use their creativity and imagination as they design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. By doing so, children will acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art.

The aims of our Design and Technology curriculum are to develop children who:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- 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
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

Curriculum Organisation and Progression

At Laira Green Primary, we use Kapow as our scheme of work for Design and Technology. Each unit of work involves the 'Design, Make, Evaluate' approach to the teaching of DT, as outlined in the National Curriculum Programmes of Study. The technical skills which we teach encompass the following areas:

- Structures
- Mechanisms
- Textiles
- Electrical Systems
- Digital World
- Cooking and Nutrition.

Early Years Foundation Stage

Children in our Reception and Preschool classes begin to develop their understanding of Design and Technology (DT) from the very beginning. Through independent learning, children explore a range of tools, materials and techniques, developing an understanding of how to select and use the most appropriate tools for a particular purpose. DT is woven throughout our continuous provision and independent learning opportunities, allowing children to design, make, experiment, problem-solve and refine their ideas at their own pace.

Throughout the year, children have access to a well-resourced creative area where they can explore materials, investigate different joining techniques and develop their skills as designers and makers. They are encouraged to make independent choices, test their ideas and discover how different tools and materials can be used to achieve their intended outcomes.

Weekly challenges, linked to the term's themes, provide further opportunities for children to apply and develop their DT skills. These experiences encourage children to think creatively, explore possible solutions and develop their understanding of how things are made and how they work.

In both Preschool and Reception, children are supported to develop their confidence in planning, designing and creating, while increasingly explaining their choices and the thinking behind their

designs. Through purposeful play and independent exploration, they develop their ability to select appropriate materials, use tools safely, solve problems and adapt their ideas as they work.

Throughout the year, daily Plan, Do and Review sessions further strengthen these skills. Children are encouraged to plan their ideas, put them into practice and reflect on what they have achieved, considering what has worked well and what they might change or improve. These experiences lay the foundations for the critical thinking, creativity and problem-solving skills essential for future success in Design and Technology.

Teaching and Learning in Design Technology

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed in each of these areas to engage in an interactive process of designing, making and evaluating. Our DT curriculum scaffolds children's learning and builds upon previous learning to ensure that every child can access rich, challenging and engaging lessons. Each of the areas that we teach are revisited and built upon in order to consolidate learning and allow children to progress and extend their knowledge, skills and understanding. For example, children in Year 1 learn how to join fabrics in a variety of ways and the running stitch is introduced in this unit of learning. By the time children get to Year 6, they have developed their competence in the running stitch and these skills are developed further as they work towards making a bag.

Digital Literacy and Technology

Our curriculum goes beyond basic digital literacy by giving children hands-on experience with digital tools and programmable technologies.

Through the Digital world key area, children develop confidence in coding, Computer-Aided Design (CAD) and control systems. This supports building the skills to design, monitor and adapt real-world products in a digitally connected world.

Design Technology Beyond the Classroom

We provide additional learning opportunities through a number of Design and Technology focused extra-curricular clubs including, a 'make it' club for our Reception and Key Stage 1 children as well as a Lego club for Years 2, 3 and 4 and an Arts and Crafts club for our older children. Children are also encouraged to use the skills they have acquired to take part in exciting projects throughout the year, such as creating toilet roll characters for World Book Day or designing and making items for Science competitions.