Rationale for our Design Technology Curriculum

Our Intent

At St Mary of the Angel's Catholic Primary School our aim for the DT curriculum is for children to develop the creative, technical, and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. We aim for them to build and apply a repertoire of knowledge, understanding and skills to design and make age-appropriate prototypes and products for a wide range of users, critique, evaluate and test their ideas and products and the work of others and understand and apply the principles of nutrition and learn how to cook.

Key Stage 1

In Year 1, pupils begin their journey in design technology by generating simple ideas for making products that are appealing to a specific user. They engage in discussions, draw sketches, and create mock-ups, all with a focus on personal experiences. In Food Technology, their work is primarily hands-on and exploratory, allowing them to experiment safely with the basic concepts of making, using simple techniques to peel, cut, and combine ingredients. They also begin to explore the basic principles of evaluating products by tasting and expressing preferences.

As pupils transition to Year 2, they build upon the foundations laid in Year 1. Pupils generate ideas that are slightly more complex, developing criteria informed by their experiences and discussions with peers. They begin learning to plan their making process with a more structured approach while selecting appropriate tools and materials for their projects. In food technology, children further their understanding of healthy eating and diverse diets while employing their techniques to prepare and combine food safely. The concept of evaluating products is also expanded, with children learning to compare their products against design criteria and share their evaluations with classmates.

Key Stage 2

In Year 3, the progression continues with a focus on producing more realistic, functional, and appealing designs. Pupils are encouraged to investigate existing products to inform their design choices and communicate ideas through more formal methods, including annotated drawings and prototypes. The knowledge of food is subsequently deepened with an understanding of where ingredients come from, how they are produced, and basic nutritional principles. In terms of making, children begin to explore constructing more robust structures aligning with their designs, learning about stability and strength and how to join materials securely.

Moving into Year 4, children start to engage in more detailed design specifications, considering factors such as cost and time constraints when generating ideas. Their capacity to evaluate their products critically is heightened; pupils assess their work against original criteria and user feedback. By this stage, their food knowledge expands further to include seasonality and the importance of a healthy diet, thereby linking their kitchen skills with an understanding of nutrition. In addition, children explore making structures with a focus on strength, stability, and mechanisms, developing skills to refine their designs through continuous evaluation.

In Year 5, pupils dive deeper into generating and refining innovative ideas through extensive research. They begin to develop a detailed step-by-step plan to guide their making process, carefully selecting tools and materials based on their suitability. Their understanding of food broadens to include technical knowledge about ingredients and their properties while reinforcing the principles of a healthy diet (making Scouse). In making, pupils demonstrate a higher level of competence by accurately

measuring, cutting, and assembling materials (Viking Longboats). Evaluation becomes integral to their making process, with pupils expected to draw on their findings to refine their products and reflect on their effectiveness through peer discussions.

Finally, in Year 6, pupils are expected to integrate and apply the skills they have honed throughout the previous years. They generate sophisticated design briefs and specifications, culminating in purposeful, functional products for intended users. Via research, they explore various products and techniques, applying their knowledge to enhance their innovative ideas. The evaluation process becomes more analytical; pupils critically assess the quality of their designs, thinking about functionality and user interaction. Their food-related learning prepares them for more complex tasks in the kitchen, including a critical consideration of the nutritional content and origin of their dishes. In effect, Year 6 serves as a culmination of their learning journey, where they can demonstrate their mastery of the subject in both making and evaluating their work thoroughly and creatively.