Design Technology —Curriculum Overview

Year Group	STEM WEEK 1	STEM WEEK 2
Reception Mouldable materials - Diva lamps (Diwali) Textiles and Materials - design and make card for a special occasion Construction and Structure - Using junk materials, design and make transport models.	**Construction and Structure** What materials make the best house? Lets build a house—Mick Manning Begin to evaluate their product, identifying success and strategies to make changes as needed.	**Cooking and Nutrition** Children will design, develop and make a healthy lunch which they will prepare and eat in class. Begin to evaluate their product, identifying success and strategies to make changes as needed.
Key Concepts	**Structure** 	**Cooking and Nutrition** 
Year 1	**Cooking and Nutrition - Healthy Sandwich** Links to local study of the high street, shops, buying goods, etc.	**Structure - Village Structure** Children will build structures, exploring how they can be made stronger, stiffer and more stable. They will make a large structure to represent their village in a way that the Angel of the North represents an area. Make links to Geography unit about our local village and nearby town and city.
Key Concepts	**Cooking & Nutrition** 	**Structure** 
Year 2	**Cooking and Nutrition - What could be in our fruit salad?** Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.	**Mechanisms - Wheels and Axles** Basing the design on a Victorian vehicle, create a vehicle that moves on axles and wheels. (match box cars)
Key Concepts	**Cooking & Nutrition** 	**Mechanisms** 

Key Concepts in DESIGN & TECHNOLOGY

Pupils will become increasingly competent in designing, making and evaluating products. They will investigate how design has been used to solve problems and create products and structures in the real world, including the techniques used by designers to improve looks and functionality. They will have the opportunity to design their own products in response to design briefs, learn and experiment with a range of techniques before making and evaluating products.

Design 	To design purposeful functional appealing products for themselves and other users based on design criteria.
Make and Develop 	To select from and use a wider range of tools and equipment to perform practical tasks accurately, (for example, cutting, shaping, joining and finalising) refining their work efficiently and effectively.
Evaluate 	To evaluate ideas and products against their own design criteria and consider the views of others to improve their work.

Connecting Key Concepts in ART & DESIGN

Through collaboration with subject leaders and DfE research, each subject has identified key concepts (big ideas) for their subject. These key concepts are the skills and knowledge essential to pupils achieving and exceeding expected standards in that specific subject. Key concepts are subject specific and build progressively as pupils move through the school. When pupils encounter a key concept, they will revisit other topics where they learnt about the same concept to enable them to make connections between different learning and build the schema they need. Below is a summary of the key concepts for Design & Technology.

Cooking & Nutrition 	Pupils will learn where food comes from and how nutritional information can be used to plan a balanced and healthy diet. They will also learn techniques needed to prepare food safely and design dishes and meals for specific purposes.
Structures 	Pupils will learn the technical knowledge used by designers to make structures which are strong and stable. They will learn and apply strengthening techniques, explore the benefits of different shapes and materials and apply this to their own designs and products.
Mechanisms 	Pupils will gain an understanding of how different mechanisms work, evaluate products with different mechanisms and design and make working products to fit a design brief. They will gain the technical knowledge needed to make different mechanisms work effectively.

Design and Technology Teaching Sequence

At St Denys, all Design and Technology projects will follow the same teaching sequence outlined below.

Revisit Prior Projects

Remind the children of the previous projects and the knowledge and skills acquired

Appraise

Children are introduced to their new project and are told what the end point will be. Then, they appraise the work of other designers and of existing products in terms of aesthetics, form and function

Practise

Before the children design, they will practise the skills required to create a prototype/variety of prototypes. Practising the skills will then inform their design

Analyse

Children will analyse the techniques, skills and tools required to create existing products. Then, they will gain the technical knowledge of how the existing products were made/work

Generate Ideas & Design

Children are given a design criteria. They will design a product to meet the design criteria and will generate ideas about materials, tools and techniques to create their product

Develop & Make

Children will follow their designs and apply the knowledge and skills to create a finished product that meets their design brief

Evaluate

Children evaluate their end product against the design criteria and a set of questions/ statements

Feedforward

Purposeful evaluation will feed into future product design.