

KS1 Design and Technology Detailed Progression of Skills and Knowledge Year A

Structures: Windmill

Year 1 D&T Unit: Pupils learn to design and construct a windmill using stable structures and rotating sails. They explore strength, stability, and how to improve a design.

Prior learning: None stated

Suggested next steps: Structures: Baby Bear's chair

Lesson	Learning Objectives	Core Knowledge	Core Skills	Key Vocabulary
1: Windmills	To create a stable structure.	Know what a structure is and that stability is important in design.	Build a simple, stable structure using materials provided.	structure, stable, strong, base
2: Making the sails	To use tools and equipment accurately to make part of a structure.	Understand how sails or blades catch the wind and rotate.	Use tools safely to cut and shape materials.	sails, rotate, blades, wind
3: Attaching the sails	To join parts of a structure.	Know different joining methods and how to make moving parts.	Attach sails securely to the structure so they can move.	join, attach, rotor, movement
4: Evaluating windmills	To evaluate a structure.	Understand how evaluation improves designs.	Test and suggest improvements to the windmill.	evaluate, test, improve

Cooking and Nutrition: Smoothies

Year 1 D&T Unit: Pupils explore fruits and vegetables and learn how to prepare ingredients to design and make a smoothie. They practise safe cutting and food handling skills.

Prior learning: Cooking and nutrition: Soup

Suggested next steps: Cooking and nutrition: Balanced diet

Lesson	Learning Objectives	Core Knowledge	Core Skills	Key Vocabulary
1: Fruits	To identify fruits.	Know what fruits and vegetables are and how to identify them.	Sort and name a range of fruits and vegetables.	fruit, vegetable, plant, seed
2: Growing	To describe where fruits and vegetables grow.	Know that fruits and vegetables grow in different places (trees, vines, underground).	Describe and match fruits to where they grow.	grow, tree, vine, root, leaf
3: Cutting and juicing	To practise food preparation skills.	Know how to safely use utensils to prepare food.	Use knives and juicers safely to prepare fruits.	cut, chop, slice, juice, blender
4: Testing ingredients	To select ingredients for a recipe.	Understand how to select and combine ingredients for taste and texture.	Taste and evaluate flavour combinations.	taste, flavour, ingredients, recipe
5: Making smoothies	To apply food preparation skills to a recipe.	Know how to follow a recipe to make a smoothie.	Prepare and blend ingredients to create a smoothie.	smoothie, blend, healthy, mix
6: Evaluating	To evaluate against the design brief.	Understand how evaluation helps improve products.	Reflect on design choices and final product.	evaluate, improve, design

Mechanisms: Fairground

Year 2 D&T Unit: Pupils explore wheels, axles, and rotating mechanisms to design and construct a fairground wheel. They apply problem-solving and design evaluation skills.

Prior learning: Mechanisms: Wheels and axles

Suggested next steps: Mechanisms: Making a moving monster

Lesson	Learning Objectives	Core Knowledge	Core Skills	Key Vocabulary
1: Design a fairground wheel	To explore wheel mechanisms and design a fairground wheel.	Know that axles help wheels rotate.	Design a fairground wheel that can turn on its axle.	wheel, axle, rotate, design brief
2: Planning the build	To select materials with appropriate properties.	Understand the importance of material selection for strength and function.	Plan which materials to use for different parts of the wheel.	materials, properties, plan
3: Building the frame and wheels	To build and test a moving wheel.	Know how to assemble and test mechanisms.	Build and test a working wheel and frame structure.	build, test, frame, mechanism
4: Surveying design opinions	To conduct a simple survey to gather opinions.	Know that surveys can help improve designs.	Create and tally survey results to inform improvements.	survey, tally, opinion
5: Adding pods and decoration	To finish and evaluate a structure with a rotating wheel.	Know how to adapt designs based on feedback.	Add decorative elements and evaluate the design.	decorate, evaluate, adapt