

Design & Technology Whole School Curriculum Overview

KS1 Curriculum Overview

Unit	Area of D&T	What Children Make	Key Learning Outcomes	Progression Towards KS2
Bridges	Structures	A model bridge designed to span a gap and support weight	• Explore how bridges are made strong and stable. • Investigate joining and strengthening techniques. • Design, make and test a bridge. • Evaluate and improve a structure.	Foundation for shell structures and sustainable bird feeders. Introduces stability, strength and structural design.
Fruit and Vegetable Snacks	Food Technology	Rainbow fruit skewers, vegetable sticks with dips and layered breakfast pots	• Identify fruits and vegetables. • Practise basic food preparation skills. • Understand healthy eating. • Design and make healthy snacks.	Develops food preparation, cutting and nutrition knowledge ready for more complex food products.
Puppets	Textiles	A hand puppet using simple sewing and joining techniques	• Explore fabrics and textile products. • Use simple sewing and decorating techniques. • Design and make a puppet for a purpose. • Evaluate a finished product.	Introduces sewing and textile construction skills developed further in functional textile products.
Smoothies	Food Technology	Fruit and vegetable smoothies	• Select ingredients for a smoothie. • Use food preparation skills safely. • Combine and blend ingredients. • Evaluate taste and appearance. • Understand healthy food choices.	Introduces combining ingredients and evaluating products before progressing to baking and recipe development.
Moving Pictures	Mechanisms	A moving picture using sliders and levers	• Explore sliders and levers. • Understand simple mechanisms. • Design and make an interactive picture. • Create movement for a purpose.	Introduces mechanical movement and understanding of simple mechanisms.
Wind Turbines	Engineering / Sustainable Design	A simple model wind turbine and blade prototypes	• Explore how wind creates movement. • Investigate simple turbine designs. • Build and test models. • Understand renewable energy.	Introduces sustainability and engineering concepts developed further in KS2 wind turbines.

KS2 Curriculum Overview (Years 3–4)

Unit	Area of D&T	What Children Make	Key Learning Outcomes	Progression from KS1
Shell Structures	Structures	A reinforced shell structure (e.g. gift box, shelter or packaging structure)	- Investigate shell structures in the real world. - Understand nets and strengthening techniques. - Design, build and evaluate a shell structure. - Improve structural stability.	Builds on bridge construction by introducing more complex structures, nets and reinforcement techniques.
Seasonal Savoury Scones	Food Technology	Cheese straws, cheese scones and a seasonal savoury scone product proposal	- Investigate seasonal ingredients. - Taste and evaluate products. - Measure ingredients accurately. - Follow recipes and bake products. - Evaluate and improve food designs.	Progresses from simple food preparation to baking, recipe following, product evaluation and food product development.
Sustainable Energy: Wind Turbines	Engineering / Sustainable Design	Working model wind turbines with tested and improved blade designs	- Understand how renewable energy is generated. - Investigate turbine blade design. - Build, test and improve working turbines. - Evaluate engineering solutions.	Extends KS1 understanding of wind power through testing, redesigning and engineering principles.
Functional Textile Products	Textiles	A functional textile product such as a pencil case, pouch, wallet or glasses case	- Investigate functional textile products. - Develop sewing and joining techniques. - Select materials and fastenings. - Design, make and evaluate a functional product.	Builds on puppet-making through increased sewing accuracy, sewing techniques and designing for a user.
Sustainable Bird Feeders	Structures / Sustainable Design	A wooden bird feeder for use in the school grounds or local environment	- Investigate products designed for wildlife. - Test materials for outdoor use. - Use woodworking skills safely. - Construct and evaluate a wooden bird feeder. - Consider sustainability and environmental impact.	Extends structural understanding from bridges and shell structures while applying sustainability concepts from wind turbines.

Progression of Knowledge and Skills

Area	KS1	KS2
Designing	Draw and explain simple ideas.	Create annotated designs and respond to design briefs.
Making	Use simple tools and materials safely.	Use a wider range of tools, materials and techniques accurately.
Evaluating	Talk about what works well and what could be improved.	Evaluate against design criteria and suggest improvements.
Technical Knowledge	Explore simple structures, textiles, food and mechanisms.	Apply understanding of structures, materials, sustainability and food technology to solve problems.

Progression by D&T Area

Area	KS1 Unit & Outcome	KS2 Unit & Outcome
Structures	Bridges – Model bridge	Shell Structures – Reinforced shell structure
Structures & Sustainability	Wind Turbines – Simple turbine model	Sustainable Bird Feeders – Wooden bird feeder
Food & Nutrition	Fruit & Vegetable Snacks – Fruit skewers, vegetable sticks and layered breakfast pots	Seasonal Savoury Scones – Cheese straws, cheese scones and a seasonal scone proposal
Food & Nutrition	Smoothies – Fruit and vegetable smoothies	Seasonal Savoury Scones – Baking, evaluating and developing recipes
Textiles	Puppets – Hand puppet	Functional Textile Products – Pencil case, pouch, wallet or glasses case
Engineering	Wind Turbines – Simple turbine model	Sustainable Energy: Wind Turbines – Working turbine with improved blade design
Mechanisms	Moving Pictures – Slider and lever picture	Knowledge revisited through engineering investigations and product design challenges

Food & Nutrition Progression

Unit	What Children Make	Key Skills Developed
Fruit & Vegetable Snacks (KS1)	Rainbow fruit skewers, vegetable sticks with dips and layered breakfast pots	Washing, peeling, cutting, assembling, tasting and understanding healthy eating.
Smoothies (KS1)	Fruit and vegetable smoothies	Selecting ingredients, combining foods, blending and evaluating products.
Seasonal Savoury Scones (KS2)	Cheese straws, cheese scones and a seasonal scone product proposal	Measuring, baking, following recipes, evaluating products and adapting designs for a customer.

Design & Technology End Points

End of KS1 (Year 2)

By the end of KS1, pupils will be able to:

Designing

- Generate simple design ideas through discussion, drawing and modelling.
- Explain who a product is for and what it should do.
- Use simple design criteria to guide their work.

Making

- Select and use basic tools safely.
- Measure, cut, shape and join materials with increasing accuracy.
- Use simple mechanisms, structures, textiles and food preparation techniques to make products.

Evaluating

- Talk about existing products and explain what they like and dislike.
- Evaluate their own products against simple success criteria.
- Suggest improvements to make products better.

Technical Knowledge

- Understand how simple structures can be made stronger and more stable.
- Understand how sliders and levers create movement.
- Know that different materials have different properties.
- Understand the importance of healthy eating and basic food hygiene.
- Recognise that wind can be used to create movement and generate energy.

End Products Experienced

Children will have designed and made:

- A bridge structure
 - Healthy fruit and vegetable snacks
 - Smoothies
 - A puppet
 - A moving picture
 - A simple wind turbine
-

End of KS2 (Year 4)

By the end of Year 4, pupils will be able to:

Designing

- Carry out research and investigate existing products.
- Develop design criteria based on a user, purpose and function.
- Generate and communicate ideas through annotated sketches and design plans.
- Use evaluation findings to improve future designs.

Making

- Select and use a wider range of tools, equipment, materials and components accurately.
- Measure, mark out, cut, shape, join and finish materials with increasing precision.
- Apply practical skills when working with structures, textiles, food and engineering projects.
- Follow recipes and construction plans independently.

Evaluating

- Investigate and evaluate existing products.
- Test and refine products throughout the making process.
- Evaluate products against design criteria.
- Explain how products could be improved.

Technical Knowledge

- Understand how structures can be strengthened and reinforced.
- Understand how materials are selected for different purposes.
- Use sewing and joining techniques to create functional textile products.
- Understand seasonality and apply principles of healthy eating.
- Understand how renewable energy systems work.
- Understand how sustainability influences product design.
- Apply woodworking and construction techniques safely.

Sustainability and Real-World Design

- Explain how designers solve problems for users.
- Understand that products should be functional, attractive and fit for purpose.
- Consider environmental impact when selecting materials and designing products.
- Understand how engineering and design can support sustainability and wildlife.

End Products Experienced

Children will have designed and made:

- A reinforced shell structure
- Cheese straws and savoury scones
- A functional textile product

- A working wind turbine
- A wooden bird feeder