Key Stage 1: Design and Technology

Term: Autumn 2025 - Summer 2026

National Curriculum: Design and Technology

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:

Design:

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

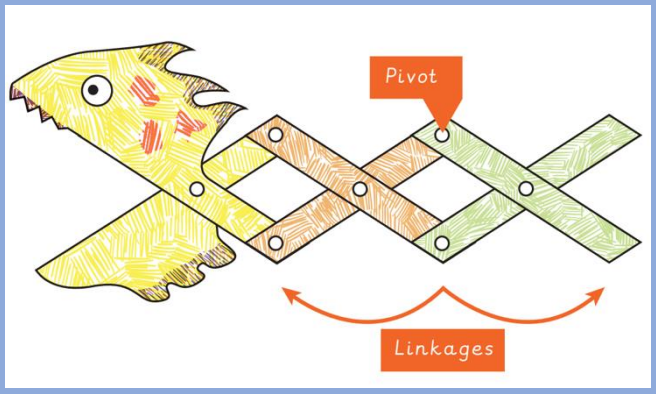
Make:

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]

Topics

Structures: Constructing a Windmill

Mechanisms: Making a Moving Monster



Textiles: Felt Butterflies

Key Vocabulary

Client The person you are designing something for.
Design To make, draw or write plans for something.
Design criteria A set of rules to help you with your ideas and test the success of them.
Evaluation When you look at the good and bad points about something, then think about how you could improve it.
Net A flat 2D shape, that can become a 3D shape once assembled.
Stable Object does not easily topple over.
Strong It doesn't break easily.
Structure Something that has been made and put together.
Test To find out whether something works as it should.
Weak It breaks easily.
Windmill A structure with sails that are moved by wind.
Windmill axle The point from which the turbine or sails move.
Windmill structure The part that makes the windmill stand up.
Windmill turbine The parts that move in the wind.
Input The energy that is used to start something working.

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- select from and use a wide range of materials and components, including
- construction materials, textiles and ingredients, according to their characteristics

Evaluate:

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria Technical knowledge
- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Technical knowledge:

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Key Questions

Can you design the structure of a windmill?

What makes a structure stable?

How do objects move?

Can you design a monster?

Can you make a template?

How can you join two fabrics?

Key Vocabulary

Linkage Lengths of material that are joined together by pivots, so that the links can move as part of a mechanism.
Mechanism A collection of parts that work together to create a movement.
Output The motion that happens as a result of starting the input.
Pivot The central point, pin or shaft on which a mechanism turns or swings.
Survey To ask a group of people questions about something and to use their answers to make improvements.
Accurate Neat, correct shape, size and pattern with no mistakes.
Fabric A natural or man-made woven or knitted material that is made from plant fibres, animal fur or synthetic material.
Knot A join made by tying two pieces of string or rope together.
Felt Fabric made when fibres are matted, rubbed and pressed together.
Running-stitch A simple style of sewing in a straight line.
Sew To join or fasten by stitches made using a needle and thread.
Shape The form of an object.
Stencil A shape that you can draw around.
Template A stencil which you use to help you draw a shape more easily on to different materials.
Thimble A small metal cap to cover and protect your finger when sewing.

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Topic: Structures - Constructing a Windmill.	**Term: Autumn 2025**
1	**Can you design the structure of a windmill?** - To include individual preferences and requirements in my design.
2	**What makes a structure stable?** - To make a stable structure.
3	**Can you assemble your windmill?** - To assemble the components of my structure.
4	**Would you change anything about your windmill?** - To evaluate my project and adapt my design.
Topic: Mechanisms - Making a Moving	**Term: Spring 2026**
1	**How do objects move?** - To look at objects and understand how they move (Pivots, levers and linkages)
2	**Can you make the components of a moving object?** - To look at objects and understand how they move.
3	**Can you design a monster?** - To explore different design options.
4	**Can you use your design to make your monster?** - To make a moving monster.
Topic: Textiles – Felt Butterflies	**Term: Summer 2026**
1	**How do you make a running stitch?** - To sew a running stitch.
2	**Can you make a template?** - To sew a running stitch.
3	**How can you join two fabrics?** - To join fabrics using a running stitch.
4	**Can you decorate your butterfly?** - To decorate a felt butterfly using fabric glue or stitching.