

The Northway Curriculum

Year

Design Technology

Unit One

Levers and Pulleys



LO: Investigate and research Rube Goldberg

LO: Analysing a lever

LO: Analysing a pulley

LO: Which is better for moving stones for Stonehenge, lever or pulley?

LO: Making our device

LO: Testing and evaluate our device

Year

Design Technology

Designing

- Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user.
- Use annotated sketches and prototypes to develop, model and communicate ideas.

Making

- Order the main stages of making.
- Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.
- Select from and use finishing techniques suitable for the product they are creating.

Evaluating

- Investigate and analyse books and, where available, other products with lever and linkage mechanisms.
- Evaluate their own products and ideas against criteria and user needs, as they design and make.

Technical knowledge and understanding

- Understand and use lever and linkage mechanisms.
- Distinguish between fixed and loose pivots.
- Know and use technical vocabulary relevant to the project.

Technical Vocabulary

mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output
linear, rotary, oscillating, reciprocating
user, purpose, function, prototype, design criteria

Prior Learning

- Explored and used mechanisms such as flaps, sliders and levers.
- Gained experience of basic cutting, joining and finishing techniques with paper and card.

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Year 3

Design Technology

Unit Two

2D to 3D product



LO: Investigate different pencil cases, what makes them good?

LO: Practice different stitches and joining techniques for material

LO: Design a pencil case based on the design criteria decided

LO: Measuring, cutting and sewing materials

LO: Evaluate pencil case based on design criteria, how could it be made better next time?

Year
Design Technology

Design

-Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose.

-Use appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.

Making

-Plan the main stages of a recipe, listing ingredients, utensils and equipment.
-Select and use appropriate utensils and equipment to prepare and combine ingredients.
-Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.

Evaluation

-Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs.
-Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.

Technical Knowledge and Understanding

-Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.
-Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eatwell plate.
-Know and use technical and sensory vocabulary relevant to the project.

Technical Vocabulary

fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance

Prior Learning

Have joined fabric in simple ways by gluing and stitching.

- **Have used simple patterns and templates for marking out.**
- **Have evaluated a range of textile products.**

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Year

Design Technology

Unit Three



Investigate different foods used in Greek cooking

Tasting session- Trying different types of Greek food, what are the different sugar/ salt/ calorie contents? What ingredients do we need in our wrap?

Making a wrap, cutting and preparing ingredients for our healthy wrap.

Taste testing our wraps, which was the best and why?

How would we make it differently next time?

Year

Design Technology

Designing

- Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s.
- Produce final product sketches and pattern pieces.

Making

- Plan the main stages of making.
- Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing.
- Select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern.

Evaluating

- Investigate a range of 3-D textile products relevant to the project.
- Test their product against the original design criteria and with the intended user.
- Take into account others' views.
- Understand how a key event/individual has influenced the development of the chosen product and/or fabric.

Technical Knowledge and Understanding

- Know how to strengthen, stiffen and reinforce existing fabrics.
- Understand how to securely join two pieces of fabric together.
- Understand the need for patterns and seam allowances.
- Know and use technical vocabulary relevant to the project.

Technical Vocabulary

name of products, names of equipment, utensils, techniques and ingredients
hygienic, seasonal, harvested healthy/varied diet

Prior Learning

- Know some ways to prepare ingredients safely and hygienically.
- Have some basic knowledge and understanding about healthy eating and The eatwell plate.
- Have used some equipment and utensils and prepared and combined ingredients to make a product.