# Year 1
# Design & Technology
# Curriculum

# Year 1 D&T - Broader Curriculum Aims and Objectives

## Key Themes

- Food Technology
- Mechanisms
- Structures

## Topics of Study

- Making Smoothie
- Sliders - Moving Storybook
- Nets and Axles - Making Windmills

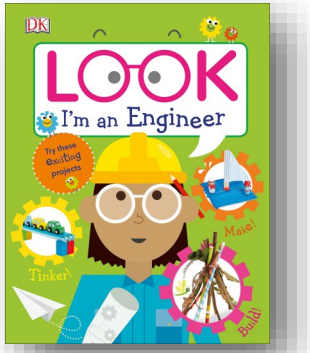
## Key D&T Knowledge and Understanding

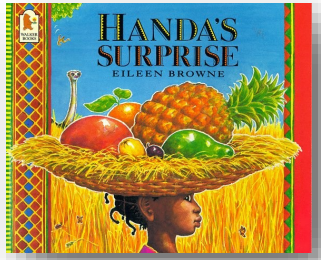
- Know that food comes from plants and animals.
- Know that fruit and vegetables come from all different plants and that we grow them.
- Know a range of fruit and vegetables and their characteristics.
- Know that 5 portions of fruit or vegetables per day are part of a healthy diet.
- Know about the features of hygienic food preparation. Know that fabric is a material. Know some of its basic properties and uses.
- Know that different mechanisms produce different types of movement. Know that simple mechanisms move in a straight line, backwards and forwards, round and round or in a curve.
- Know that a slider is a rigid bar which can be moved backwards and forwards along a straight line.
- Know that a guide or a bridge is used to keep sliders in place and control movement.
- Know how to create wheels that move using an axle. Know the correct tools to cut, shape and join paper and card.
- Know that paper can be folded to make a hinge.
- Know how to use scissors correctly and safely.
- Know how to join two pieces of paper with glue or tape.
- Know that paper can be rolled loosely to make a spiral or tightly to be a strong tube shape.
- Know that a 2D net can be used to make a 3D structure.

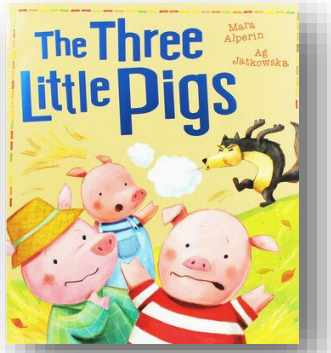
## Vocabulary

Blender, ingredients, carton, peel, peeler, recipe, slice, smoothie, stencil, template. Accurate, axel, axel holder, chassis, design, fix, mechanic, mechanism, model, test, wheel. Assemble, design criteria, evaluation, model, sliders, user. Net, stable, strong, weak, structure, windmill, windmill turbine.

## Quality Literature Links



# Year 1 D&T - Broader Curriculum Aims and Objectives

## Progression of Skills / Disciplinary Knowledge

| Designing | Making | Technical Knowledge | Evaluating and Analysing | Cooking and Nutrition |
|---|---|---|---|---|
| **Understanding Contexts, Users and Purposes. Generating, developing, modelling and communicating ideas** | **Planning, Practical Skills and Techniques** | **Construction and Textiles** | **Own Ideas and Products Existing Products** | **Understand and apply the principles of nutrition and learn how to cook.** |
| • Have own ideas and explain them.<br>• Explain what a product is for and how it will work.<br>• Use pictures and words to plan.<br>• Begin to use models to plan.<br>• Design a product using simple design criteria- provided. | • Explain what is being made and why.<br>• Consider and plan what to do next.<br>• Select tools/equipment to cut, shape, join, finish and explain choices.<br>• Measure, mark out, cut and shape with support.<br>• Choose suitable materials and explain choices.<br>• Use finishing techniques to make a product look good.<br>• Work in a safe manner. | • Measure and join material with support.<br>• Describe some different characteristics of materials.<br>• Suggest ways to make material/product stronger.<br>• Begin to understand how to use wheels and axles. | • Discuss work making links to the planned product.<br>• Talk about existing products considering: use, materials, how they work, audience and where they might be used.<br>• Talk about existing products and express negatives and positives.<br>• Discuss products made by others. | • Describe textures.<br>• Work in a hygienic and safe manner.<br>• Identify where some foods come from e.g. plant/animal.<br>• Describe differences between some food groups.<br>• Discuss how fruit and vegetables are healthy.<br>• Cut, peel and grate safely, with support. |

**PRIOR LEARNING LINKS**

**EYFS:** Apple crumble & making stewed fruit-Taste testing of fruits and different ingredients using senses. Prepared fruit in groups with support using a range of mixing, copping and peeling skills. Follow simple recipe to make a biscuits.

**Year 1 Design & Technology**

**Unit of Learning:** **Can we make a smoothie?**

**D&T School Theme:** Cooking and Nutrition

**FUTURE LEARNING LINKS**

**Y2 Healthy Wraps**– develop understanding of different food groups and healthy diets. Explore and use different combinations of ingredients to ensure the wrap tastes good and is heathy.

## Teaching Sequence for this Unit.

**Fruit or Vegetable?**

How is a fruit different to a vegetable?

Do fruits always have seeds?

FN TK

**Where do fruit and vegetables grow?**

Which parts of a plant can we eat?

FN TK

**Why are smoothies good for us?**

Can we explore fruit and vegetables using our senses?
What ingredients will we use in our smoothies and why?

FN D

**Can we make a smoothie that includes our chosen ingredients?**

What will we cut, peel or grate?

FN M

**What have we learned from making our smoothies?**

What was hard?
How successful was

E

| Focus for Disciplinary Knowledge | | | | |
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**PRIOR LEARNING LINKS**

**EYFS:** Looked at and read storybooks containing sliders. Joined materials using tape, glue etc. Cut out shapes from within larger shapes.

**Year 1 Design & Technology**

**Unit of Learning:** **Can we make a moving storybook?**

**D&T School Theme:** Mechanisms-Sliders

**FUTURE LEARNING LINKS**

**Y2: Mechanisms-**Wheels and Axles. Making a Ferris wheel. Learning how axles can make a wheel rotate. Designing and selecting appropriate materials. Creating stable structures and assembling a mechanism to a frame.

## Teaching Sequence for this Unit.

**How do sliders make things move?**
Can we explore how side-to-side sliders and up and down sliders work?
Which part of the mechanism will move?
A TK

**How can a slider be used to make a picture move?**
Can we design a moving picture to tell a story without words?
D TK

**What are the steps we will need to follow to make our moving storybook?**
What shall we do first?
How can we make the storyboard template our own?
M TK

**What materials and techniques will we use to make our sliders and assemble our storybook?**
M TK

**How do I know if my moving storybook is a success?**
How could I test it and improve it?
E TK

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**PRIOR LEARNING LINKS**

**EYFS:** 3D modelling linked to fairy stories and traditional tales. Use 3D shapes to make model cottage, bridge, henhouse. Made a moving vehicle using wheels.

**Year 1 Design & Technology**

**Unit of Learning: Can we make a windmill?**

**D&T School Theme:** Structure/Mechanisms- Nets and Axles

**FUTURE LEARNING LINKS**

**Y2: Mechanisms-**Wheels and Axles. Making a Ferris wheel. Learning how axles can make a wheel rotate. Designing and selecting appropriate materials. Creating stable structures and assembling a mechanism to a frame.

**Y3 Structures:** Learnt about the properties of materials that are important for structures. Use of 3D shapes from model and nets to create different features of a structure. Secured features together using tape/ glue and strengthened and stabilised the structure through use of a base.

## Teaching Sequence for this Unit.

**What is a windmill?**

What are the three main parts of a windmill?

What does each part do?

A TK

**Can we design a windmill for a character?**

What does the character like? How will this affect how the windmill should look?

D TK

**What is a net? What is a template?**

Can we use a net and a template to make a windmill structure and turbine?

M TK

**What steps will we follow to assemble our windmill?**

How can we strengthen it using a base?

M A TK

**How can we create a axel so that our wind turbine moves?**

When we put all the parts together, is it strong and stable? Does the turbine turn freely?

M E TK

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