



### The **BIG** Picture

Teaching children positive eating behaviours during childhood can set them up with healthy eating habits for life. Developing a positive relationship with food, as well as a balanced approach to eating, can lead to better health outcomes in the long run. This unit of study helps to set up these vital foundations for a healthy life through the fun role of dinner party hosts.

### NC Objectives- Key Stage Pupils should be taught:

- \* Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- \* Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.
- \* Understand how key events and individuals in design and technology have helped shape the world.
- \* Understand and apply principles of a healthy and varied diet.
- \* Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques

### Key Questions

- What is cross-contamination?
- What do we mean by flavour?
- In farming, what does **reared** mean?
- What does processed food mean?
- What contributes to a healthy diet?

### What do we already know? What can we already do?

This unit of study follows on from the Year 5 unit, What Could Be Healthier?, in which the children begin to consider nutritional differences between similar meals.

### Key vocabulary & understanding:

equipment  
flavours  
ingredients  
method  
research  
recipe  
bridge method  
cookbook  
cross-contamination  
farm to fork  
preparation  
storyboard

### Specific unit outcomes

- Find a suitable recipe for their course.
- Record the relevant ingredients and equipment needed.
- Follow a recipe, including using the correct quantities of each ingredient.
- Write a recipe, explaining the process taken.
- Explain where certain key foods come from before they appear on the supermarket shelf.

### Key Skills

- Writing a recipe, explaining the key steps, method and ingredients Including facts and drawings from research undertaken.
- Following a recipe.
- Adapting a recipe based on research.
- Working to a given timescale.
- Working safely and hygienically with independence.
- Evaluating a recipe.
- Taste testing and scoring final products.
- Suggesting and writing up points of improvements in productions.
- Evaluating health and safety in production.

### Key Knowledge

- To know that 'flavour' is how a food or drink tastes.
- To know that many countries have 'national dishes'.
- To know what 'processed food' means.
- To understand why it is important to wash fruit and vegetables.
- To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork).





### The BIG Picture

Machines and mechanisms are an integral part of our lives and this unit will help the children to understand how design and technology has helped to shape the world around them.

### What do we already know? What can we already do?

This unit of study continues the learning of mechanical systems in Y4 (Slingshot cars).

### Key vocabulary & understanding:

accurate assembly-diagram automata axle bench hook  
cam clamp component cutting list diagram dowel drill  
bits exploded-diagram Finish follower frame function  
hand drill jelutong  
linkage mark out measure mechanism model research  
right-angle set square tenon saw

### NC Objectives- Key Stage Pupils should be taught:

- \* Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- \* Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- \* Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- Investigate and analyse a range of existing products.
- \* Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- \* Understand how key events and individuals in design and technology have helped shape the world.
- \* Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

### Key Questions

What is an automata?  
What is a cross-sectional diagram?  
What is an exploded diagram?  
How does an automata toy work?

## Specific unit outcomes

Mark, saw and cut out the components and supports of their toy with a varying degree of accuracy to the intended measurements.

Follow health and safety rules, taking care with the equipment.

Attempt a partial assembly of their toys using an exploded-diagram, following a teacher's demonstration.

Develop a design idea with some descriptive notes.

Explore different cam profiles and choose three for their follower toppers with an explanation of their choices.

Create neat, decorated follower toppers with some accuracy.

Measure and cut panels that fit with some inaccuracies to conceal the inner workings of the automata.

Decorate and finish the automata to meet the design criteria and brief.

Evaluate their finished product, making descriptive and reflective points on function and form.

## Key Skills

Experimenting with a range of cams, creating a design for an automata toy based on a choice of cam to create a desired movement.

Understanding how linkages change the direction of a force.

Making things move at the same time.

Understanding / drawing cross-sectional diagrams to show the workings of a design.

Measuring, marking and checking the accuracy of the jelutong and dowel pieces.

Measuring, marking and cutting components accurately using a ruler and scissors.

Assembling components accurately to make a stable frame.

Understanding that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles. Selecting appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set.

Evaluating the work of others and receiving feedback on own work.

Applying points of improvement to their toys. Describing changes they would make/do if they were to do the project again.

## Key Knowledge

To understand that the mechanism in an automata uses a system of cams, axles and followers.

To understand that different shaped cams produce different outputs.

To know that an automata is a hand-powered mechanical toy.

To know that a cross-sectional diagram shows the inner workings of a product.



The BIG Picture

Textiles encourages students to explore, enjoy, and develop their creative thinking and design skills. It provides visual, tactile and sensory experiences as well as teaching useful life skills. In this unit, our children will design and create a tie-dye waistcoat. They will follow a criteria to make a visually pleasing, casual item of clothing for an informal event.

NC Objectives- Key Stage Pupils should be taught

- \* Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- \* Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design.
- \* Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.
- \* investigate and analyse a range of existing products.
- \* Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Key Questions

- What do we mean by an objects form?
- What is a template?
- What is meant by target audience?
- What is the join where two pieces of fabric connect called?

What do we already know? What can we already do?

This unit builds on the skills and knowledge developed in the Year 4 unit, Fastenings, in which the children designed, made and decorated a fabric book sleeve.

Key vocabulary & understanding:

adapt,  
annotate,  
detail, fabric,  
fastening, knot,  
properties,  
running-stitch,  
seam, sew,  
shape, target  
audience,  
target  
customer,  
template,  
thread, unique,  
waistcoat,  
waterproof

Specific unit outcomes

- Consider a range of factors in their design criteria and use this to create a waistcoat design.
- Use a template to mark and cut out a design.
- Use a running stitch to join fabric to make a functional waistcoat.
- Attach a secure fastening, as well as decorative objects.
- Evaluate their final product.

Key Skills

- Design according to specification and criteria.
- Annotating designs.
- Using a template when pinning.
- Marking and cutting fabric accurately.
- Sewing a strong running stitch, making small, neat stitches.
- Tying strong knots.
- Decorating a waistcoat – attaching objects using thread and adding a secure fastening.

Key Knowledge

- To understand that it is important to design clothing with the client/target customer in mind.
- To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric.
- To understand the importance of consistently sized stitches.

