

Year 3
Design
Technology
Autumn 2

Food



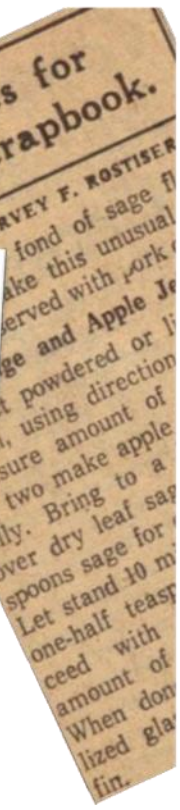
In this unit we will be exploring CAKE!! We will be testing and evaluating different types of cake to find what flavours and textures we like or don't like. We will look at simple cake recipes from wartime Britain and compare these to modern day recipes. We will then look closely at which ingredients were freely available during the war and those which were rationed and use this knowledge to adapt a simple WW2 cake recipe to create our own cake recipe.

Key Vocabulary

| Word | Definition |
|--------------------|---|
| Appearance | The way that something looks. |
| Flavour | The distinctive taste of a food. |
| Texture | The feel or consistency of a food. |
| Rationed | Foods which people were only allowed a small fixed amount of. |
| Ingredients | Foods or substances which are combined to make a particular dish. |
| Recipes | A set of instructions for preparing a particular dish, including a list of the ingredients required. |
| Cream | Mixing butter and sugar together until well-blended, fluffy and pale yellow. |
| Beat | The rigorous mixing of ingredients to thoroughly combine ingredients to incorporate air, making cakes light and fluffy. |
| Mix | Combining ingredients in such a manner that all are distributed evenly among one another. |

Key learning:

- To describe different cakes using their properties.
- That some foods were rationed during World War 2.
- To identify rationed ingredients .
- To compare recipes.
- To follow a simple cake recipe.
- To adapt and change a recipe.
- To design and make a cake which could have been made in World War 2.
- To evaluate a recipe and cake produced.



Structures



In this unit we will be learning about kites. We will explore the work of Homan Walsh using kites to aid the building of the Niagra Falls bridge and the impact this has had on the evolution of kite design. We will look at different styles of kites and the features which they all have in common that allow them to fly. This will then allow us to use our understanding of these features to design and build our own kites.

Key Vocabulary

| Word | Definition |
|------------------|---|
| Tow point | Connection point from the line to the bridle. |
| Bridle | Keeps the kite at the proper angle to the wind. |
| Line | Prevents the kite from blowing away, thicker lines are stronger. |
| Spars | Give a kite structure. Some have special names like 'spine' or 'spreader' |
| Keel | Similar to a bridle, acts like a rudder. |
| Sail | Directs the air to give a kite lift. |
| Tail | Adds drag to keep the kite pointed into the wind. |
| Lift | The wind going head-on into the kite creates a force that pushes up the kite, this is called 'lift'. |
| Drag | Drag is a force caused by wind catching on the kites itself, pushing the kite back in the direction that the wind is going. |

Wrap string around the spars and knot.

Masking tape the dowel onto the sail.

Wrap elastic bands around the spars.

Slot the dowel into the plastic tubing to join it together. You can cut and bend the tubing.

Use some of these methods to join your structure.

- ### Key learning:
- To understand how the work of Homan Walsh has impacted on design and technology.
 - That there are different types/ shapes of kite which all have the same key features: tow point, bridle, line, spars, keel, sail and tail.
 - That a kite needs a large surface area to create lift and drag which helps it to fly.
 - That the shape, size and material used to make a kite will have an impact on how well it will fly.
 - How to use different types of join to put our kite together.
 - That we can evaluate the success of our design by observing how well it can fly.



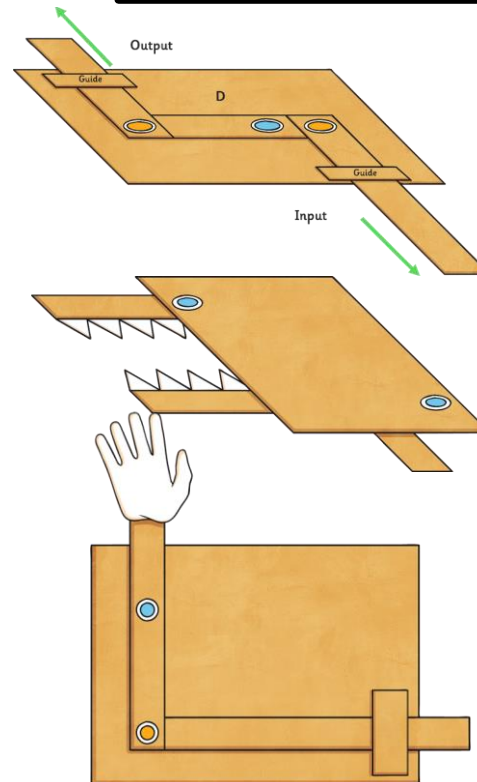
Mechanisms



In this unit we will become paper engineers to make our own pages of a pop up book about different natural disasters. We will look at and explore the different mechanisms used in a range of different pop-up books. We will build our understanding of how these mechanisms are used and their impact. We will look at different types of levers and mechanisms and test drive making them ourselves. We will use what we learn from this to design our own page of a non-fiction book which uses at least one mechanism. From our design we will create a prototype to evaluate before making our final design and combing it with others to create a pop up book.

Key Vocabulary

| Word | Definition |
|--------------------------|---|
| Lever | A projecting arm or handle that is moved to operate a mechanism. |
| Linkages | An assembly of bodies connected to manage forces and movement. |
| Pivot | Joins the levers and linkages together. A pivot can be either fixed or loose. |
| Paper Engineer | An artist who uses various techniques (e.g. cutting, folding and/or gluing) to make paper illustrations move or pop-up. |
| Annotated Diagram | A diagram that contains brief explanations for parts of the diagram. |
| Function | A natural purpose for something. |
| Purpose | Why you do something. |
| Motion | The action of moving. |
| Mechanism | A set of parts that work together. |
| Input | The motion used to start a mechanism. |
| Output | The motion that happens as the result of starting the input. |



Key learning:

- To understand that adding a pop-up to a book can add interest and a three dimensional aspect.
- That there are different types of levers/ mechanisms that can be used.
- That the lever or mechanisms chosen can be dependent on the movement we wish to create.
- How to use precision in cutting and folding paper to ensure our product works.
- That we can evaluate the success of our design by sharing it with other children.