

Autumn 2 - Remarkable Recipes	
Previous learning	
This project teaches children about sources of food and tools used for food preparation. They also discover why some foods are cooked and learn to read a simple recipe. The children choose and make a new school meal that fulfils specific design criteria.	
Substantive Knowledge	Disciplinary knowledge
Children from Patrington Primary Academy will be able to participate fully in an increasingly technological world and have an understanding of how to be critical and reflective consumers. They will be able to use their practical, creative and reflective skills to become consumers and innovators who are well informed and can use their own skills to develop products for the future.	By the end of Key Stage Two, children at Patrington Primary Academy will be able to: prepare ingredients safely and hygienically and cook nutritious food. They will be able to design their own products using a range of materials and evaluate their product against success criteria. The children will generate their own product ideas by reflecting upon existing products and then developing prototypes. Finally, in order to make successful products, the children will have a secure understanding of mechanical structures, such as: gears, pulley systems and levers.
Lesson 1	Technical Knowledge <ul style="list-style-type: none"> Know that food comes from two main sources: animals and plants. Cows provide beef, sheep provide lamb and mutton and pigs provide pork, ham and bacon. Examples of poultry include chickens, geese and turkeys. Examples of fish include cod, salmon and shellfish. Milk comes mainly from cows but also from goats and sheep. Most eggs come from chickens. Honey is made by bees. Fruit and vegetables come from plants. Oils are made from parts of plants. Sugar is made from plants called sugar cane and sugar beet. Plants also give us nuts, such as almonds, walnuts and hazelnuts Can identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables). Can select the appropriate tool for a task and explain their choice. Know that a healthy diet should include meat or fish, starchy foods (such as potatoes or rice), some dairy foods, a small amount of fat and plenty of fruit and vegetables. Can describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal.
Lesson 2	Design <ul style="list-style-type: none"> Know that some ingredients need to be prepared before they can be cooked or eaten. Can generate and communicate their ideas through a range of different methods. Know that there are many ways to prepare ingredients: peeling skins using a vegetable peeler, such as potato skins; grating hard ingredients, such as cheese or chocolate; chopping vegetables, such as onions and peppers and slicing foods, such as bread and apples.
Lesson 3	Make <ul style="list-style-type: none"> Know that different tools have characteristics that make them suitable for specific purposes. For example, scissors are used for cutting paper because they have sharp, metal blades that can cut through thin materials. Are able to prepare ingredients by peeling, grating, chopping and slicing
Lesson 4	Evaluate <ul style="list-style-type: none"> Know that finished products can be compared with design criteria to see how closely they match. Improvements can then be planned. Can explain how closely their finished products meet their design criteria and say what they

	could do better in the future.	
	Vocabulary	Sticky Knowledge
	<ul style="list-style-type: none">• Starch, dairy, peeling, grating, chopping, slicing, blades, sharp and varied diet	<ul style="list-style-type: none">• Can identify the origin of some common foods• Know that food comes from two main sources: animals and plants.• Know that a healthy diet should include meat or fish, starchy foods.

Spring 2 - Beach Hut structures

Previous learning

In design and technology, children connect their understanding of human features at the coast. Children learn about methods of strengthening and joining materials and develop their woodworking skills to make box frames. This project teaches children about the visual elements of flowers, including shape, texture, colour, pattern and form. They also explore various artistic methods, including drawing, printmaking and 3-D forms, using paper and clay.

Substantive Knowledge

Children from Patrington Primary Academy will be able to participate fully in an increasingly technological world and have an understanding of how to be critical and reflective consumers. They will be able to use their practical, creative and reflective skills to become consumers and innovators who are well informed and can use their own skills to develop products for the future.

Disciplinary knowledge

By the end of Key Stage Two, children at Patrington Primary Academy will be able to: prepare ingredients safely and hygienically and cook nutritious food. They will be able to design their own products using a range of materials and evaluate their product against success criteria. The children will generate their own product ideas by reflecting upon existing products and then developing prototypes. Finally, in order to make successful products, the children will have a secure understanding of mechanical structures, such as: gears, pulley systems and levers.

Lesson 1

Technical Knowledge

- To know that ideas can be communicated in a variety of ways, including written work, drawings and diagrams, modelling, speaking and using information and communication technology.

Lesson 2

Technical Knowledge

- To be able to generate and communicate their ideas through a range of different methods
- To know that properties of components and materials determine how they can and cannot be used. For example, plastic is shiny and strong but it can be difficult to paint

Lesson 3

Design

- To know that structures can be made stronger, stiffer and more stable by using cardboard rather than paper and triangular shapes rather than squares. A broader base will also make a structure more stable
- Explore how a structure can be made stronger, stiffer and more stable

Lesson 4

Make

- To explore how a structure can be made stronger, stiffer and more stable
- To be able to choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect.

Lesson 5

Evaluate

- To be able to explain how closely their finished products meet their design criteria and say what they could do better in the future.

Vocabulary

- Diagrams, modelling, shiny, stronger, stiffer, stable, structure.

Sticky Knowledge

- To know that properties of components and materials determine how they can and cannot be used.
- Triangles are a strong shape used in construction.
- Products have been designed for specific tasks.

Summer 1 - Textiles

Previous learning

In this design and technology project, children build on their knowledge of stitching from the Year 1 project Funny Faces and Fabulous Features and materials studied in the Year 2 project uses of materials. Children practise joining fabrics using glue and running stitches. They observe and explore ways to embellish fabrics using simple printing and adding sewn embellishments. Children follow a simple pattern to make a sewn bag tag.

Substantive Knowledge

Children from Patrington Primary Academy will be able to participate fully in an increasingly technological world and have an understanding of how to be critical and reflective consumers. They will be able to use their practical, creative and reflective skills to become consumers and innovators who are well informed and can use their own skills to develop products for the future.

Disciplinary knowledge

By the end of Key Stage Two, children at Patrington Primary Academy will be able to: prepare ingredients safely and hygienically and cook nutritious food. They will be able to design their own products using a range of materials and evaluate their product against success criteria. The children will generate their own product ideas by reflecting upon existing products and then developing prototypes. Finally, in order to make successful products, the children will have a secure understanding of mechanical structures, such as: gears, pulley systems and levers.

Lesson 1

Technical Knowledge

- To be able to explain how an everyday product could be improved.
- To understand that a running stitch is a basic stitch that is used to join fabric. It is made by passing a needle in and out of fabric at an even distance.
- To understand how to use different methods of joining fabrics, including glue and running stitch.

Lesson 2

Design

- To generate and communicate their ideas through a range of different methods.
- To be able to select the appropriate tool for a task and explain their choice

Lesson 3

Make

- To add simple decorative embellishments, such as buttons, prints, sequins and appliqué.

Lesson 4

Evaluate

- To explain how closely their finished products meet their design criteria and say what they could do better in the future.

Vocabulary

- Fabric, sew, thread, needle, join running stitch, cross stitch, appliqué, embellishments.

Sticky Knowledge

- A running stitch is a basic stitch that is used to join fabric.
- To understand how to use different methods of joining fabrics.

Summer 2 - Push and Pull

Previous learning

This project teaches children about three types of mechanism: sliders, levers and linkages. They make models of each mechanism before designing and making a greetings card with a moving part.

Substantive Knowledge

Children from Patrington Primary Academy will be able to participate fully in an increasingly technological world and have an understanding of how to be critical and reflective consumers. They will be able to use their practical, creative and reflective skills to become consumers and innovators who are well informed and can use their own skills to develop products for the future.

Disciplinary knowledge

By the end of Key Stage Two, children at Patrington Primary Academy will be able to: prepare ingredients safely and hygienically and cook nutritious food. They will be able to design their own products using a range of materials and evaluate their product against success criteria. The children will generate their own product ideas by reflecting upon existing products and then developing prototypes. Finally, in order to make successful products, the children will have a secure understanding of mechanical structures, such as: gears, pulley systems and levers.

Lesson 1

Technical Knowledge

- A mechanism is a device that takes one type of motion or force and produces a different one. A mechanism makes a job easier to do. Mechanisms include sliders, levers, linkages, gears, pulleys and cams
- To understand embellishment is a decorative detail or feature added to make it more attractive.
- Products can be improved in different ways, such as making them easier to use, more hardwearing or more attractive.

Lesson 2

Design

- Use a range of mechanisms (levers, sliders, wheels and axles) in models or products.
- Properties of components and materials determine how they can and cannot be used. For example, plastic is shiny and strong but it can be difficult to paint.
- Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect
- Use of a simple software to create a detailed design and mock up as part of the design stage.e

Lesson 3

Make

- Using a range of mechanisms (levers, sliders, wheels and axles) create the designed product from the design stage.
- Use a wide range of tools to create the desired design.

Lesson 4

Evaluate

	<ul style="list-style-type: none"> • Can understand that products can be improved in different ways, such as making them easier to use, more hardwearing or more attractive • Explain how an everyday product could be improved.
Vocabulary	Sticky Knowledge
<ul style="list-style-type: none"> • Mechanism, sliders, levers, linkages, gears, pulleys, cams, components. 	<ul style="list-style-type: none"> • A mechanism is a device that takes one type of motion or force and produces a different one. • To understand embellishment is a decorative detail or feature added to make it more attractive. • Products can be improved in different ways, such as making them easier to use, more hardwearing or more attractive.