

DT curriculum in Y1 - Cooking and Nutrition

Rationale

A range of opportunities and experiences are provided in Y1 to ensure that all pupils begin to understand that food comes from plants and animals and to begin to understand that some foods are healthy and why. To also be helped to begin to be involved in basic food preparation both safely and with a good sense of hygiene.

| Prior Knowledge | Learning | Future Learning |
|--|---|---|
| <p>In EYFS pupils are taught to:</p> <ul style="list-style-type: none"> • Begin to develop a food vocabulary using taste, smell, texture and feel. • Think about the need for a variety of foods in a diet. | <p>In Y1 pupils are taught to:</p> <ul style="list-style-type: none"> • Talk about what he/she eats at home and begin to discuss what healthy foods are. • Say where some food comes from and give examples of food that is grown. • Use simple tools with help to prepare food safely. | <p>In Y2 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand the need for a variety of food in a diet. • Understand that all food has to be farmed, grown or caught. • Use a wider range of cookery techniques to prepare food safely. <p>In Y3 pupils are taught to:</p> <ul style="list-style-type: none"> • Talk about the different food groups and name food from each group. • Understand that food has to be grown, farmed or caught in Europe and the wider world. • Use a wider variety of ingredients and techniques to prepare and combine ingredients safely. <p>In Y4 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active. • Understand seasonality and the advantages of eating seasonal and locally produced food. |

| | | |
|--|--|--|
| | | <ul style="list-style-type: none"> • Read and follow recipes which involve several processes, skills and techniques. <p>In Y5 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat. • Select appropriate ingredients and use a wide range of techniques to combine them. • Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product. <p>In Y6 pupils are taught to:</p> <ul style="list-style-type: none"> • Confidently plan a series of healthy meals based on the principles of a healthy and varied diet. • Use information on food labels to inform choices. • Research plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills. |
| <p><u>Key Vocabulary</u> <i>food vocabulary using taste, smell, texture and feel plants, animals, home, healthy, grown, diet, safe, peel, chop, spread, utensils and tools</i></p> | | |

DT curriculum in Y1 - Processes

Rationale

Over the year a range of opportunities and experiences are provided in Y1 to ensure that all pupils build on skills using a range of materials and processes. With some support, children will begin to explore and use simple mechanisms in models, for example, axles and wheels to make them move. To be helped to build structures, joining components together to create a finished product. To also consider existing products and see how the aesthetics can be as important as the quality of a product in appealing to us as consumers.

| Prior Knowledge | Learning | Future Learning |
|---|--|---|
| <p>In EYFS pupils are taught to:</p> <ul style="list-style-type: none"> • Learn how to weave with a range of different fabrics. • With support, begin to incorporate moving parts into models. For example, use split pins to make body parts move. • Begin to build structures with a range of materials inside and out. | <p>In Y1 pupils are taught to:</p> <ul style="list-style-type: none"> • Use pictures and words to describe what he/she wants to do. • Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. • Use a range of simple tools to cut, join and combine materials. • Ask simple questions about existing products and those that he/she has made. • Build structures, exploring how they can be made stronger, stiffer and more stable. • Use wheels and axles in a product. | <p>In Y2 pupils are taught to:</p> <ul style="list-style-type: none"> • Design purposeful, appealing products for himself/herself and other users based on design criteria. • Generate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. • Choose appropriate tools, equipment, techniques and materials from a wide range. • Safely measure, mark out, cut and shape materials and components using a range of tools. • Evaluate and assess existing products and those that he/she has made using a design criteria. • Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable. <p>Explore and use mechanisms e.g. levers, sliders, wheels and axles in his/her products.</p> <p>In Y3 pupils are taught to:</p> <ul style="list-style-type: none"> • Use knowledge of existing products to design his/her own functional product. • Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes. • Safely measure, mark out, cut, assemble and join with some accuracy. |

| | | |
|--|--|---|
| | | <ul style="list-style-type: none">• Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them.• Investigate and analyse existing products and those he/she has made, considering a wide range of factors.• Strengthen frames using diagonal struts.• Understand how mechanical systems such as levers and linkages or pneumatic systems create movement. <p>In Y4 pupils are taught to:</p> <ul style="list-style-type: none">• Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience.• Create designs using exploded diagrams.• Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks.• Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user.• Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas.• Understand and use electrical systems in products. <p>In Y5 pupils are taught to:</p> <ul style="list-style-type: none">• Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product.• Create prototypes to show his/her ideas. |
|--|--|---|

| | | |
|--|--|--|
| | | <ul style="list-style-type: none">• Make careful and precise measurements so that joins, holes and openings are in exactly the right place.• Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques.• Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work.• Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable.• Understand how to use more complex mechanical and electrical systems. <p>In Y6 pupils are taught to:</p> <ul style="list-style-type: none">• Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products.• Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.• Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities.• Use technical knowledge accurate skills to problem solve during the making process. |
|--|--|--|

| | | |
|--|--|---|
| | | <ul style="list-style-type: none"> • Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made. • Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. • Apply his/her understanding of computing to program, monitor and control his/her product. |
| <p><u>Key Vocabulary</u> <i>pictures, words</i> <i>tools, equipment, cutting, shaping, joining, finishing, aesthetics, quality</i> <i>build, construct, structures, stronger, stiffer, stable</i> <i>wheels, axles, join, construct</i></p> | | |

| DT curriculum in Y2 - Cooking and Nutrition | | |
|---|--|--|
| <p>Rationale A range of opportunities and experiences are provided in Y2 to ensure that all pupils begin to understand that we need variety in our diet. Understanding how food ends up on our plate and where it started will be important. They will be helped to see that food needs to be prepared in different ways - washed, chopped, diced, cooked, raw etc.</p> | | |
| Prior Knowledge | Learning | Future Learning |
| <p>In EYFS pupils are taught to:</p> <ul style="list-style-type: none"> • Begin to develop a food vocabulary using taste, smell, texture and feel. • Think about the need for a variety of foods in a diet. <p>In Y1 pupils are taught to:</p> | <p>In Y2 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand the need for a variety of food in a diet. • Understand that all food has to be farmed, grown or caught. • Use a wider range of cookery techniques to prepare food safely. | <p>In Y3 pupils are taught to:</p> <ul style="list-style-type: none"> • Talk about the different food groups and name food from each group. • Understand that food has to be grown, farmed or caught in Europe and the wider world. • Use a wider variety of ingredients and techniques to prepare and combine ingredients safely. <p>In Y4 pupils are taught to:</p> |

- Talk about what he/she eats at home and begin to discuss what healthy foods are.
- Say where some food comes from and give examples of food that is grown.
- Use simple tools with help to prepare food safely.

- Understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active.
- Understand seasonality and the advantages of eating seasonal and locally produced food.
- Read and follow recipes which involve several processes, skills and techniques.

In Y5 pupils are taught to:

- Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat.
- Select appropriate ingredients and use a wide range of techniques to combine them.
- Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product.

In Y6 pupils are taught to:

- Confidently plan a series of healthy meals based on the principles of a healthy and varied diet.
- Use information on food labels to inform choices.
- Research plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills.

Key Vocabulary - farmed, grown or caught food vocabulary using taste, smell, texture and feel plants, animals, home, healthy, grown, diet, safe, peel, chop, spread, utensils and tools

DT curriculum in Y2 - Processes

Rationale

A range of opportunities and experiences are provided in Y2 to ensure that all pupils can begin to build structures with some independence exploring how they can be made stronger, stiffer and more stable. Children will need to be helped in seeing how structures can be strengthened and why. Children will be helped to create a product which combines a simple mechanism such as a lever or slider and have a purpose for this. They will also begin to sew using a range of basic stitches.

| Prior Knowledge | Learning | Future Learning |
|--|---|---|
| <p>In Y1 pupils are taught to:</p> <ul style="list-style-type: none"> • Use pictures and words to describe what he/she wants to do. • Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. • Use a range of simple tools to cut, join and combine materials. • Ask simple questions about existing products and those that he/she has made. • Build structures, exploring how they can be made stronger, stiffer and more stable. • Use wheels and axles in a product. | <p>In Y2 pupils are taught to:</p> <ul style="list-style-type: none"> • Design purposeful, appealing products for himself/herself and other users based on design criteria. • Generate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. • Choose appropriate tools, equipment, techniques and materials from a wide range. • Safely measure, mark out, cut and shape materials and components using a range of tools. • Evaluate and assess existing products and those that he/she has made using a design criteria. • Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable. | <p>In Y3 pupils are taught to:</p> <ul style="list-style-type: none"> • Use knowledge of existing products to design his/her own functional product. • Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes. • Safely measure, mark out, cut, assemble and join with some accuracy. • Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them. • Investigate and analyse existing products and those he/she has made, considering a wide range of factors. • Strengthen frames using diagonal struts. • Understand how mechanical systems such as levers and linkages or pneumatic systems create movement. <p>In Y4 pupils are taught to:</p> <ul style="list-style-type: none"> • Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience. • Create designs using exploded diagrams. |

| | | |
|--|--|--|
| | <ul style="list-style-type: none">• Explore and use mechanisms e.g. levers, sliders, wheels and axles in his/her products. | <ul style="list-style-type: none">• Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks.• Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user.• Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas.• Understand and use electrical systems in products. <p>In Y5 pupils are taught to:</p> <ul style="list-style-type: none">• Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product.• Create prototypes to show his/her ideas.• Make careful and precise measurements so that joins, holes and openings are in exactly the right place.• Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques.• Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work.• Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable.• Understand how to use more complex mechanical and electrical systems. |
|--|--|--|

| | | |
|--|--|--|
| | | <p>In Y6 pupils are taught to:</p> <ul style="list-style-type: none"> • Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products. • Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities. • Use technical knowledge accurate skills to problem solve during the making process. • Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made. • Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. • Apply his/her understanding of computing to program, monitor and control his/her product. |
| <p><u>Key Vocabulary</u> <i>design, template, fabric, winding, mechanism, wheels, axles, winder, slider structure, stronger, stiffer, stable, rigid sewing,</i></p> | | |

DT curriculum in Y3 - Cooking and Nutrition

Rationale

In Y3 opportunities are planned for to ensure that all pupils begin to understand that there are different food types and to know some examples of these. It will help to see why we talk about a balanced and varied diet. The children will be helped to see that food often has a journey to make before it ends up on our plates and to consider food to fork as a process. Think about the different ways food needs to be grown, caught etc. Food needs to be prepared in different ways - washed, chopped, diced, cooked, raw, whisked, etc. and this will be a focus in the different stages of food preparation. The children will also be encouraged to see how recipes can be adapted to suit purpose or culture.

Prior Knowledge

In Y1 pupils are taught to:

- Talk about what he/she eats at home and begin to discuss what healthy foods are.
- Say where some food comes from and give examples of food that is grown.
- Use simple tools with help to prepare food safely.

In Y2 pupils are taught to:

- Understand the need for a variety of food in a diet.
- Understand that all food has to be farmed, grown or caught.
- Use a wider range of cookery techniques to prepare food safely.

Learning

In Y3 pupils are taught to:

- Talk about the different food groups and name food from each group.
- Understand that food has to be grown, farmed or caught in Europe and the wider world.
- Use a wider variety of ingredients and techniques to prepare and combine ingredients safely.

Future Learning

In Y4 pupils are taught to:

- Understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active.
- Understand seasonality and the advantages of eating seasonal and locally produced food.
- Read and follow recipes which involve several processes, skills and techniques.

In Y5 pupils are taught to:

- Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat.
- Select appropriate ingredients and use a wide range of techniques to combine them.
- Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product.

In Y6 pupils are taught to:

- Confidently plan a series of healthy meals based on the principles of a healthy and varied diet.

| | | |
|---|--|---|
| | | <ul style="list-style-type: none"> • Use information on food labels to inform choices. • Research plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills. |
| <p>Key Vocabulary – farmed, grown or caught <i>food vocabulary using taste, smell, texture and feel</i> <i>plants, animals, home, healthy, grown, diet,</i> <i>safe, peel, chop, spread, utensils and tools</i></p> | | |

| DT curriculum in Y3 – Processes | | |
|--|---|---|
| <p>Rationale Opportunities are provided in Y3 to ensure pupils can use mechanisms in their projects. They will understand the importance of why structure is important and how to strengthen them as needed. To begin to understand a design criteria and how best to meet it will be supported. To see how design can reflect situations and circumstances in real life and why we need to solve a problem through design. Mechanisms will help to meet the criteria.</p> | | |
| Prior Knowledge | Learning | Future Learning |
| <p>In Y2 pupils are taught to:</p> <ul style="list-style-type: none"> • Design purposeful, appealing products for himself/herself and other users based on design criteria. • Generate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. • Choose appropriate tools, equipment, techniques and materials from a wide range. | <p>In Y3 pupils are taught to:</p> <ul style="list-style-type: none"> • Use knowledge of existing products to design his/her own functional product. • Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes. • Safely measure, mark out, cut, assemble and join with some accuracy. • Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them. | <p>In Y4 pupils are taught to:</p> <ul style="list-style-type: none"> • Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience. • Create designs using exploded diagrams. • Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks. • Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user. • Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas. |

| | | |
|---|--|--|
| <ul style="list-style-type: none"> • Safely measure, mark out, cut and shape materials and components using a range of tools. • Evaluate and assess existing products and those that he/she has made using a design criteria. • Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable. Explore and use mechanisms e.g. levers, sliders, wheels and axles in his/her products. | <ul style="list-style-type: none"> • Investigate and analyse existing products and those he/she has made, considering a wide range of factors. • Strengthen frames using diagonal struts. • Understand how mechanical systems such as levers and linkages or pneumatic systems create movement. | <ul style="list-style-type: none"> • Understand and use electrical systems in products. <p>In Y5 pupils are taught to:</p> <ul style="list-style-type: none"> • Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product. • Create prototypes to show his/her ideas. • Make careful and precise measurements so that joins, holes and openings are in exactly the right place. • Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques. • Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work. • Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable. • Understand how to use more complex mechanical and electrical systems. <p>In Y6 pupils are taught to:</p> <ul style="list-style-type: none"> • Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products. • Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded |
|---|--|--|

| | | |
|--|--|---|
| | | <p>diagrams, prototypes, pattern pieces and computer-aided design.</p> <ul style="list-style-type: none"> • Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities. • Use technical knowledge accurate skills to problem solve during the making process. • Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made. • Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. • Apply his/her understanding of computing to program, monitor and control his/her product. |
|--|--|---|

Key Vocabulary

design, template, fabric, annotated sketches, cross-section, diagram winding, mechanism, wheels, axles, winder, slider, levers, linkage strengthen, structure, stronger, stiffer, stable, rigid measure, mark out, cut, assemble, join, diagonal, strut mechanical, pneumatic design criteria, problem solving

DT curriculum in Y4 - Cooking and Nutrition

Rationale

In **Y4** opportunities are planned for to ensure that all pupils begin to understand that there are different food types and to know some examples of these which help us in keeping a balanced and varied diet. Children will be helped to see how different foods and drinks provide different substances that the body needs and help to keep people healthy and active. Consider how our bodies would be without. The children will be helped to see that food often has a journey to make before it ends up on our plates but also seasonality. Think about the different ways food needs to be

grown, caught etc.and how far food can come from. Consider the importance and value of locally produced food. Recipes will be varied and there will be a purpose to the food preparation linked to a community event.

| Prior Knowledge | Learning | Future Learning |
|--|--|--|
| <p>In Y2 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand the need for a variety of food in a diet. • Understand that all food has to be farmed, grown or caught. • Use a wider range of cookery techniques to prepare food safely. • <p>In Y3 pupils are taught to:</p> <ul style="list-style-type: none"> • Talk about the different food groups and name food from each group. • Understand that food has to be grown, farmed or caught in Europe and the wider world. • Use a wider variety of ingredients and techniques to prepare and combine ingredients safely. | <p>In Y4 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active. • Understand seasonality and the advantages of eating seasonal and locally produced food. • Read and follow recipes which involve several processes, skills and techniques. | <p>In Y5 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat. • Select appropriate ingredients and use a wide range of techniques to combine them. • Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product. <p>In Y6 pupils are taught to:</p> <ul style="list-style-type: none"> • Confidently plan a series of healthy meals based on the principles of a healthy and varied diet. • Use information on food labels to inform choices. • Research plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills. |

Key Vocabulary – farmed, grown or caught, locally produced,
food vocabulary using taste, smell, texture and feel
plants, animals, home, healthy, grown, diet, active
safe, peel, chop, spread, utensils and tools
recipe
food and drinks

DT curriculum in Y4 - Processes

Rationale

A range of opportunities and experiences are provided in **Y4** to ensure that all pupils can see their designs in different ways such as through exploded diagrams. Children will be helped to understand how this can help develop better thinking skills and focus on smaller details. The children are going to be encouraged to evaluate an existing product and then go on to use their knowledge of this in their design project of a similar product. They will also be helped to build structures with increasing independence and accuracy whilst showing how models can be made stronger and more stable.

Prior Knowledge

In **Y3** pupils are taught to:

- Use knowledge of existing products to design his/her own functional product.
- Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes.
- Safely measure, mark out, cut, assemble and join with some accuracy.
- Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them.
- Investigate and analyse existing products and those he/she has made, considering a wide range of factors.
- Strengthen frames using diagonal struts.
Understand how mechanical systems such as levers and linkages

Learning

In **Y4** pupils are taught to:

- Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience.
- Create designs using exploded diagrams.
- Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks.
- Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user.
- Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas.
- Understand and use electrical systems in products.

Future Learning

In **Y5** pupils are taught to:

- Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product.
- Create prototypes to show his/her ideas.
- Make careful and precise measurements so that joins, holes and openings are in exactly the right place.
- Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques.
- Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work.
- Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable.
- Understand how to use more complex mechanical and electrical systems.

In **Y6** pupils are taught to:

or pneumatic systems create movement

- Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products.
- Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities.
- Use technical knowledge accurate skills to problem solve during the making process.
- Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made.
- Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately.
- Apply his/her understanding of computing to program, monitor and control his/her product.

Key Vocabulary

*design, template, fabric, annotated sketches, cross-section, diagram
winding, mechanism, wheels, axles, winder, slider, levers, linkage girder, rafter, strut
strengthen, structure, stronger, stiffer, stable, rigid
measure, mark out, cut, assemble, join, diagonal, exploded diagram, internal
mechanical, pneumatic, electrical
evaluate,
product*

DT curriculum in Y5 - Cooking and Nutrition

Rationale

In Y5 opportunities are planned for to ensure that all pupils begin to understand that there are different processes for food preparation in order to keep us safe and well. To focus on processed foods and examples of this. Children will be helped to see how different foods and drinks provide different substances that the body needs and help to keep people healthy and active. Think about the different way food needs to be grown, caught etc. and how far food can come from. Consider the importance of different techniques in food preparation and how food can change when combined.

| Prior Knowledge | Learning | Future Learning |
|---|---|--|
| <p>In Y3 pupils are taught to:</p> <ul style="list-style-type: none"> • Talk about the different food groups and name food from each group. • Understand that food has to be grown, farmed or caught in Europe and the wider world. • Use a wider variety of ingredients and techniques to prepare and combine ingredients safely. • <p>In Y4 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active. • Understand seasonality and the advantages of eating seasonal and locally produced food. | <p>In Y5 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat. • Select appropriate ingredients and use a wide range of techniques to combine them. • Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product. | <p>In Y6 pupils are taught to:</p> <ul style="list-style-type: none"> • Confidently plan a series of healthy meals based on the principles of a healthy and varied diet. • Use information on food labels to inform choices. • Research plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills. |

| | | |
|--|--|--|
| <ul style="list-style-type: none"> • Read and follow recipes which involve several processes, skills and techniques. • | | |
| <p>Key Vocabulary – farmed, grown or caught, locally produced, processed, combined <i>food vocabulary using taste, smell, texture and feel</i> <i>plants, animals, home, healthy, grown, diet, active</i> <i>safe, peel, chop, spread, utensils and tools</i> <i>recipe</i> <i>food and drinks</i></p> | | |

| DT curriculum in Y5 - Processes | | |
|--|--|--|
| <p>Rationale Pupils will be given a range of opportunities and experiences in Y5 to ensure that all pupils can respond to design criteria and suggest designs to problems. They will be introduced to the notion of a prototype and how this can help support a project and tackle issues which may arise. Mechanisms will be studied but in the form of a pop up book rather than a structure. Pupils will be encouraged to build innovative, functional, appealing, structures that are fit for purpose. Children will be helped to consider and use finishing techniques to strengthen and improve the appearance of their models/projects.</p> | | |
| Prior Knowledge | Learning | Future Learning |
| <p>In Y4 pupils are taught to:</p> <ul style="list-style-type: none"> • Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience. • Create designs using exploded diagrams. • Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks. • Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user. | <p>In Y5 pupils are taught to:</p> <ul style="list-style-type: none"> • Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product. • Create prototypes to show his/her ideas. • Make careful and precise measurements so that joins, holes and openings are in exactly the right place. | <p>In Y6 pupils are taught to:</p> <ul style="list-style-type: none"> • Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products. • Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. |

| | | |
|---|---|--|
| <ul style="list-style-type: none"> • Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas. • Understand and use electrical systems in products | <ul style="list-style-type: none"> • Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques. • Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work. • Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable. • Understand how to use more complex mechanical and electrical systems | <ul style="list-style-type: none"> • Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities. • Use technical knowledge accurate skills to problem solve during the making process. • Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made. • Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. • Apply his/her understanding of computing to program, monitor and control his/her product. |
|---|---|--|

Key Vocabulary

design, template, fabric, annotated sketches, cross-section, diagram, prototype winding, mechanism,, winder, slider, levers, , rafter strengthen, structure, stronger, stiffer, stable, rigid measure, mark out, cut, assemble, join, evaluate, diagonal, strut, exploded diagram, internal, precise mechanical, electrical, complex

DT curriculum in Y6 - Cooking and Nutrition

Rationale

In **Y6** opportunities are planned for to help children plan a series of healthy meals thinking about all that they have learned over the years regarding healthy, varied and balanced diets. To introduce children to the information on food labels and to consider what they would be best

looking for on these. Children will be reminded about how different foods and drinks provide different substances that the body needs and help to keep people healthy and active. To research and plan a savoury dish drawing on their knowledge .

| Prior Knowledge | Learning | Future Learning |
|--|---|---|
| <p>In Y4 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active. • Understand seasonality and the advantages of eating seasonal and locally produced food. • Read and follow recipes which involve several processes, skills and techniques. • <p>In Y5 pupils are taught to:</p> <ul style="list-style-type: none"> • Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat. • Select appropriate ingredients and use a wide range of techniques to combine them. • Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product. | <p>In Y6 pupils are taught to:</p> <ul style="list-style-type: none"> • Confidently plan a series of healthy meals based on the principles of a healthy and varied diet. • Use information on food labels to inform choices. • Research plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills. | <p>To be better prepared for maintaining a healthy and varied diet in order to live a healthy lifestyle understanding the reasons for this.</p> <p>To know and use several food techniques in food preparation.</p> |

| | | |
|---|--|--|
| | | |
| <p>Key Vocabulary – farmed, grown or caught, locally produced, processed, combined <i>food vocabulary using taste, smell, texture and feel</i> <i>plants, animals, home, healthy, grown, diet, active</i> <i>safe, peel, chop, spread, utensils and tools</i> <i>recipe, food labels</i> <i>food and drinks – savoury and sweet</i></p> | | |

| DT curriculum in Y6 | | |
|---|---|---|
| <p>Rationale A range of opportunities and experiences are provided in Y6 to ensure that all pupils will be able to evaluate existing products and apply this knowledge to given design criteria in order to solve a problem and produce a product which meets the design needs. This will include a textiles project which may involve the skill of pinning and tacking fabric pieces together and joining some by over-sewing. They will be helped to make quality products with increasing accuracy and independence. The children are also to be helped to understand how inventions in the past have helped to make our life be as it is now and how these designs have made life easier for others. Children will also have an understanding of a range of mechanisms and be encouraged to be individual in their responses and have an increasing independence and ability in meeting design needs. They will be helped to build innovative, functional, appealing, stable structures that are fit for purpose and to demonstrate confidently how to reinforce and strengthen a 3D framework drawing on knowledge acquired in previous projects.</p> | | |
| Learning | | |
| <p>Prior Knowledge In Y5 pupils are taught to:</p> <ul style="list-style-type: none"> • Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product. • Create prototypes to show his/her ideas. • Make careful and precise measurements so that joins, holes and openings are in exactly the right place. | <p>In Y6 pupils are taught to:</p> <ul style="list-style-type: none"> • Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products. • Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, | <p>Future learning: Children will be able to consider design criteria and know how best to respond to this drawing on knowledge of previous projects.</p> |

| | | |
|--|---|--|
| <ul style="list-style-type: none"> • Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques. • Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work. • Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable. • Understand how to use more complex mechanical and electrical systems. | <p>prototypes, pattern pieces and computer-aided design.</p> <ul style="list-style-type: none"> • Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities. • Use technical knowledge accurate skills to problem solve during the making process. • Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made. • Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. • Apply his/her understanding of computing to program, monitor and control his/her product. | <p>To show their understanding through drawings, exploded diagrams, annotated sketches and prototypes.</p> |
|--|---|--|

Key Vocabulary

design, template, fabric, annotated sketches, cross-section, diagram, prototype, innovative, functional, aesthetic winding, mechanism, wheels, axles, winder, slider, levers, linkage, cross brace, cantilever strengthen, structure, stronger, stiffer, stable, rigid measure, mark out, cut, assemble, join, evaluate, effective diagonal, strut, exploded diagram, internal, precise mechanical, pneumatic, electrical, complex design criteria, function