



Year 1 Spring

From Field to Fork

Design and Technology (Cooking and Model-Making)

As Designers we will explore where food comes from and understand the basic principle of healthy diets. We will use this knowledge to prepare healthy foods and we will use a range of tools to create the dishes. We will also explore how tractors work and look at how we can recreate a toy tractor. We will explore with measuring, marking, cutting, and joining methods and combine these ideas to create a toy tractor using cardboard and wood.

NC Content

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

<b><u>Materials required for this unit:</u></b>	<b><u>Tools and equipment required for this unit:</u></b>	<b><u>Vocabulary</u></b>
Cooking: <ul style="list-style-type: none"> <li>• Vegetables that can be used in soup.</li> <li>• Different soups to taste.</li> <li>• Stock for making soup.</li> </ul> Model-Making: <ul style="list-style-type: none"> <li>• Card</li> <li>• Cardboard (pre-made packs used for creating the tractor body)</li> <li>• Wooden dowelling (different thicknesses)</li> <li>• Wooden wheels/circular wood.</li> </ul>	Cooking: <ul style="list-style-type: none"> <li>• Chopping boards</li> <li>• Child safety knives.</li> <li>• Graters.</li> <li>• Pans</li> <li>• A blender (if making a smooth soup)</li> <li>• Stirring spoon</li> </ul> Model-Making: <ul style="list-style-type: none"> <li>• Scissors</li> <li>• Pens (for marking)</li> <li>• Hack saws</li> <li>• Sandpaper</li> <li>• Glue</li> </ul>	join design cut peel grate purpose hygiene materials sand/finish drill measure dowelling evaluate

Episode 1 - Food, glorious food!  
(Cooking and Nutrition)

By the end of this learning sequence, children will know:

- That some foods come from animals and others from plants.
- The different food groups – they will be able to sort different foods into the Eat Well Plate.
- How to cut using the claw/bridge technique, and how to peel/grate softer foods.
- How to practise good food hygiene (washing hands/foods, wearing an apron, keeping equipment clean, covering food).
- How to evaluate their design against the design criteria.

Research	Design	Make	Evaluate
<p>Procedural skill: Explore objects and designs to identify likes and dislikes of the designs.</p> <p>NC links: Pupils should be taught to understand where food comes from. Explore and evaluate a range of existing products.</p> <p>Visit to the East Hull Community Farm to explore where different types of food come from.</p> <p>Acknowledge where foods begin and where it comes from: is it from an animal or plant? Link to Hull's fishing history.</p> <p>Acknowledge the different food groups and sort foods into these groups on the Eat Well Plate.</p>	<p>Procedural skill: Cut, peel or grate ingredients safely and hygienically. Assemble or cook ingredients. Design products that have a clever purpose and an intended user. Use software to design. Explore how products have been created.</p> <p>NC Links: Pupils should be taught to use the basic principles of a healthy and varied diet to prepare dishes. Generate, develop, model and communicate their ideas through talking. Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Design Criteria:</p>	<p>Procedural skill: Cut, peel or grate ingredients safely and hygienically. Assemble or cook ingredients. Make products.</p> <p>NC Links: Pupils should be taught to use the basic principles of a healthy and varied diet to prepare dishes. Use a range of tools and equipment to perform practical tasks.</p> <p>Acknowledge the quantity of each ingredient (e.g.1 carrot, 2 leeks).</p> <p>Acknowledge food hygiene (wash hands, wear an apron, keep hair back, wash the food, keep equipment clean, cover the food).</p> <p>Cut (using the claw/bridge), peel and grate the required ingredients to prepare them for the soup. An</p>	<p>Procedural skill: Suggest improvements to existing designs.</p> <p>NC Links: Pupils should be taught to evaluate their ideas and products against design criteria</p> <p>Children to evaluate their soup against the design criteria. Does the soup taste nice? Is it healthy? Does it contain at least 3 of our 5 a day? Use Seesaw to verbally evaluate the soup.</p> <p>Provide children with the opportunity to ask others to try their soup. Acknowledge that sometimes we can make products for other people.</p> <p>Children to identify how their soup could be improved.</p>

<p>Acknowledge that everyone should eat at least 5 portions of fruit and vegetables a day.</p> <p>Taste a range of different flavoured/textured soups and note favourites.</p>	<p>The school cook wants a delicious new soup recipe for dinner time. The soup must use healthy ingredients and contain at least 3 of your 5 a day.</p> <p>Identify the key ingredients in making soups. Sort these ingredients onto the Eat Well Plate to decide if the soup is healthy.</p> <p>Acknowledge reasons why it is important to wash our hands and the foods, and why we should keep our equipment clean. Acknowledge why we need to wear aprons and cover food.</p> <p>Children to taste individual ingredients, both raw and cooked (Note: only use ingredients that are safe to eat raw.) Acknowledge how cooking can alter the taste/texture. Children to use this to choose which ingredients they will use in their soup. Use Seesaw to allow children to take a picture of their ingredients and explain why they have chosen them.</p> <p>Practice cutting (using the claw/bridge technique), peeling and grating the identified ingredients. (It</p>	<p>adult to then prepare the stock and supervise the cooking of the soup. If required, an adult to use a blender and explain to the children that this will create a smooth texture.</p>	
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	<p>may be easier to cook certain ingredients first, i.e. cooking and cooling potatoes first will make them softer to cut and allow the skin to be peeled using fingers). Use Seesaw to take a picture of the tools and children to acknowledge which they used for each of the above processes.</p> <p>Create a food hygiene video to instruct others on how to prepare food hygienically.</p>		
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Episode 2 - Tractors  
(Model-Making)



For support/ideas: <https://inventorsof tomorrow.com/2021/11/09/build-a-car/>

By the end of this learning sequence, children will know:

- How tractors move and who invented the wheel.
- How to measure using a size guide, mark out, cut (using scissors/hacksaws) and join (using glue/hinges) when using cardboard and wood.
- How to create products that are fit for purpose.
- How to use a simple mechanism (a wheel) in their product.
- How to evaluate their product against a design brief.

Research	Design	Make	Evaluate
<p>Procedural skill: Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs. Explore how products have been created.</p> <p>NC links:</p>	<p>Procedural skill: Design products that have a clever purpose and an intended user. Use software to design. Explore how products have been created. Create products using levers, wheels and winding mechanisms. Use materials to practise drilling, and gluing materials to make and strengthen products.</p>	<p>Procedural skill: Make products. Create products using levers, wheels and winding mechanisms. Use materials to practise drilling, and gluing materials to make and strengthen products. Cut materials safely using tools provided. Measure and mark out.</p>	<p>Procedural skill: Suggest improvements to existing designs. NC Links: Pupils should be taught to: evaluate their ideas and products against design criteria.</p> <p>Children to evaluate their design against the design criteria. Is it fit</p>

<p>Pupils should be taught to: Explore and evaluate a range of existing products.</p> <p><b>Lesson 1/Experience day</b> Visit to a farm with tractors. Acknowledge what tractors are used for and how they move (wheels).</p> <p><b>Lesson 2 - Look at a range of toy tractors (some wooden ones if possible).</b> How do they work/move? How can we make these better? How are they fit for purpose? (E.g. look at design and colour compared to the age range) Children to fill in evaluation sheet</p> <p><b>Lesson 3 – Research wheels</b> Compare vehicles and their wheels - Acknowledge who invented the wheel and why this is a useful invention.</p>	<p>Cut materials safely using tools provided. Measure and mark out. Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).</p> <p>NC Links: Pupils should be taught to: Generate, develop, model and communicate their ideas through talking. Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p><b>Lesson 4 – Practical – practising skills needed</b> Design Criteria: You are going to design a toy tractor for younger children. Some parts of the tractor must be made out of wood and must be able to move.</p> <p>Practise different ways to create the box shape of a tractor. Experiment with marking and measuring card and cardboard. Use scissors to practise cutting the materials, and</p>	<p>Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).</p> <p>NC Links: Pupils should be taught to: Use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction materials. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <p><b>To be completed in small groups</b> Create the tractor design on the pre-made required pieces. Ensure this matches their plans and meets the design criteria. (E.G. discuss that if it's for young children, it should be bright and colourful).</p> <p>Use glue/hinges to join the pieces of card/cardboard together to create the body of the tractor.</p>	<p>for purpose? (Is it suitable for children? Are parts of it wooden? Can it move?) Use Seesaw to verbally evaluate the product.</p> <p>Children to identify how their tractor could be improved.</p>
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	<p>experiment with joining using glue and hinges (folded card).</p> <p>Practise measuring, marking and cutting different thicknesses of dowelling using junior hack saws. Experiment with sanding the edges using sandpaper.</p> <p><b>Lesson 5 – designing their tractor</b></p> <p>Create a drawing of what their tractor will look like, including the design of the tractor. Take a picture of this and explain using Seesaw the materials and tools they will use (including how they will cut and join the pieces), and how their tractor will work. Take a picture of the materials and tools they will use and explain what they are and how they will use them.</p>	<p>Measure and mark out the dowelling required to create the wheel axel. This can be done using a size guide for the children to follow.</p> <p>Use junior hack saws to cut the dowelling to the right size. Use sandpaper to finish the edges.</p> <p>Choose the correct size drill bit to match their chosen dowelling. Mark the position for the hole in the wheels (using a guide) and drill a straight hole using a hand drill. (Adult to support with using a clamp to keep the wheel in place)</p> <p>Place the dowelling through the holes in the tractor frame and then glue the wheels to either side.</p>	
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