

Design and Technology – Year 5

Content- Food- Celebrating culture and seasonality

Big Question: Is seasonality important when creating a recipe?

NC objectives - areas of study	End point of area of study	Vocabulary		
		Basic	Adventurous	Technical
<p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the create expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to:</p> <ul style="list-style-type: none"> -Understand and apply the principles of a healthy and varied diet. -Prepare and cook a variety of predominately-savoury dishes using a range of cooking techniques. -Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. -Use research to develop design criteria to inform designs 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, 	<p>Food</p> <p>Children can combine food ingredients appropriately. E.g. kneading, rubbing in and mixing. They know when these techniques should be used and how they will affect certain ingredients. Children can explain what times of year particular foods are in season and where they come from. Children continue to build upon how to preserve foods and begin to look at dietary requirements. Children can follow step-by step recipes with less support. Children know how to use utensils and equipment including heat sources to prepare and cook food. Children will be able to make and decorate their products in order to present the dish appropriately. They understand why it is important to ensure products are aesthetically pleasing in order for users to purchase. Children can use sensory and technical vocabulary to describe their own product or existing products. (Tier 3 vocabulary)</p>	<p>Pour, stir, mix, sprinkle, crumble, dairy, whisk, beat, nutrients.</p>	<p>Seasonality, prove, kneading, combine, fold,</p>	<p>Yeast, dough, bran, wholemeal, unleavened, gluten, carbohydrate, vitamins, varied, allergy, knead, whisk, beat.</p>

<p>cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <p>-Select from and use a wide range of ingredients according to their functional properties and aesthetic qualities.</p> <p>-Investigate and analyse a range of existing products.</p> <p>-Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>-Understand how key events and individuals in design and technology have helped shape the world.</p>				
---	--	--	--	--

Knowledge

Substantive Knowledge	Disciplinary Knowledge
<p>Food- concepts- Functionality and Innovation</p> <p>Lesson 1- <u>LO: To understand seasonality of food products and the source of different food products.</u> Vocabulary- seasonality, ingredients, whole meal, (Retrieval from KS1 and KS2- What food products are grown in Lincolnshire?) Children to explore ingredients and understand seasonality of food products and how this can affect ingredients used in recipes or food products. Explore where different ingredients may come from and what seasonality means. Reflect upon the diversity. Lesson 2: <u>LO: To understand the importance of research when creating an innovative and functional product.</u></p>	<p>Each lesson: Tell chn- Explain to the children that today they are going to be nutritionists/chef/market researcher who will be create a new product for a specific purpose. The children will need to include research around existing products to help them to generate their own design brief, criteria and specification. This may include children visiting local bakeries/supermarkets to find out about existing products but also help them to identify where the ingredients for each product comes from- e.g. locally, UK or overseas. The children will then need to conduct their own research to support their product development and ensure it meets its true function. They may also identify some negatives about existing products that they might want to change and improve. Encourage children to think outside of the box when it comes to designing a product. When children are being nutritionists, children will look into dietary requirements and explore how to cater for these needs.</p> <p>Throughout the unit, children will draw upon other subject disciples such as</p>

Vocabulary- cultural, dietary needs, organic

Children use first hand and secondary sources to carry out relevant research into existing products to include personal/cultural preferences, ensuring a healthy diet, meeting dietary needs and the availability of locally sourced/seasonal/organic ingredients. This could include a visit to a local bakery, farm, farm shop or supermarket e.g. *What ingredients are sourced locally/in the UK/from overseas? What are the key ingredients needed to make a particular product? How have ingredients been processed? What is the nutritional value of a product?*

Lesson 3:

LO: To know how to use sensory evaluations to evaluate existing bread products.

Vocabulary- sensory evaluation, carbohydrates,

Children carry out sensory evaluations of a variety of existing food products and ingredients relating to the project. The ingredients could include those that could be added to a basic recipe such as herbs, spices, vegetables or cheese. These could be locally sourced, seasonal, Fair Trade or organic. Present results in e.g. tables/graphs/charts and by using evaluative writing. Use a range of questions to support children's ability to evaluate food ingredients and products e.g. *What ingredients help to make the product spicy/crisp/crunchy etc? What is the impact of added ingredients/finishes/shapes on the finished product?*

(Retrieval year 3- Children have previously worked with bread products to create a healthy sandwich. Ask children what they remember from sensory evaluation during this project. How are wholegrain products healthy?)

Lesson 4:

LO: To know how to use research to support the designing process when creating a new product.

Vocabulary- Retrieval of Science vocabulary EatWell Plate Carbohydrates,

Develop a design brief (Link to seasonality) and simple design specification with the children within a context that is authentic and meaningful. This can include design criteria relating to nutrition and healthy eating. Draw upon the knowledge taken from the sensory evaluation from other bread products-

Science – properties of materials and changes of state.

Mathematics – measuring mass kg/g. Understand and use approximate equivalences between metric and imperial units.

Spoken language – new technical vocabulary and developing relevant vocabulary including sensory descriptors. Give well-structured explanations.

Mathematics and computing – making use of mathematical and computing skills to present results of sensory evaluations graphically, handling and interpreting data. They will measure mass using kg/g and understand and use approximate equivalence of metric and imperial units.

Science – using and developing skills of observing, questioning, changing state of ingredients. They will recognise the impact of diet on the way their bodies function.

Geography – distribution of natural resources i.e. food.

Computing – use technology purposefully to retrieve digital content.

Mathematics – measurement of mass kg/g; understand and use approximate equivalence of metric and imperial units.

Art- Use of developing drawings and designs.

Children to follow the four aspects of Design and Technology- research, design, make and evaluate whilst building upon technical knowledge to make their finished product.

which product had the best texture and why? How could you incorporate this into your design.

Discuss the purpose of the products that the children will be designing, making and evaluating and who the products will be for.

Ask children to generate a range of ideas encouraging innovative responses.

Agree on design criteria that can be used to guide the development and evaluation of the children's product.

Using annotated sketches, discussion and information and communication technology if appropriate, ask children to develop and communicate their ideas.

(Retrieval from year 3 and 4- Use of the Eatwell Plate, ingredients they wish to use in their bread product that is healthy but also link to seasonality.)

Note- Children could be given a simple bread recipe but they substitute one ingredient to change the taste or choose an ingredient that links to seasonality.

Lesson 5:

LO: To know how to knead ingredients and understand its importance when baking bread.

LO: To know how to follow a bread recipe and make a bread product following the design criteria.

Vocabulary- knead, yeast, gluten

Children to use their design to create their bread product using the techniques of kneading. Ensure children understand that the purpose of kneading is to strengthen the gluten (the protein in grain such as wheat). It normally takes about 10-12 minutes by hand. When ready the dough will be smooth, elastic and hold its shape.

Ensure children are able to use the correct utensils to create their bread product and understand the importance of weighing out ingredients accurately.

Lesson 6:

LO: To use sensory evaluation to evaluate finished products.

Vocabulary- Recap all vocabulary from unit

Evaluate the work as it progresses and the final product against the intended purpose and user reflecting on the design specification previously agreed.
 Evaluate created things.

Concepts

Functionality

Pupils should design and make products that work/function effectively in order to fulfil users' needs, wants and purposes.

- Understand the meaning of 'functionality' and its importance to design and technology.
- Know how functionality is relevant to the product they are designing.
- Know how the materials and components they use assist the functionality of the product.
- Contrast the functional properties of materials and components with their aesthetic qualities.
- Understand that how products work affects how they are used.

Authenticity

Innovation

- When designing and making, pupils need some scope to be original with their thinking.
- Projects that encourage innovation lead to a range of design ideas and products being developed and are characterised by engaging open-ended starting points for learning.
- Demonstrate some originality when designing and making.
- Learn how to take creative risks.
- Understand the meaning of 'innovation' within design and technology.
- Understand how innovation is an important part of the process of designing and making products.

Significance

ASSESSMENT

KNOW MORE, REMEMBER MORE, DO MORE...

In this unit of learning, progress has been made when a learner knows more. This 'distance travelled' from the starting point is evidenced through them remembering more and doing more: in books, low stakes quizzes, retrieval, use of mind maps, answering the big question and being able to feel more confident about this unit.