Design and Technology – Year 4

Content- Food- Healthy and Varied Diet

Big Questions: Which sense is the most significant when creating a recipe?

NC objectives - **areas of study**	End point of area of study	Vocabulary		
		Basic	Adventurous	Technical
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: 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, cross-sectional and exploded	**Food** Children can identify a range of food and ingredients and identify where in the UK and other countries they come from. They will continue to build upon their knowledge of how food reaches our plate, thinking about their local area. E..g farming, rearing, harvesting, processing, caught etc. They know how to measure and weigh ingredients appropriately to prepare and cook a range of savoury dishes. They can make healthy choices and explain why it is important- linking to The Eatwell Plate. Children can use the relevant sensory and technical vocabulary to describe their products. Children can prepare products hygienically, mixing, slicing, grating, peeling, chopping, spreading and baking. Children can explain some of the processes that foods go through and how to preserve them. (Science link- linking to bacteria, virus that can affect humans if not stored or cooked correctly. This will continue to build upon their understanding of following hygiene procedures.	Caught, grown, harvested, cook, prepare, weigh, measure, bake, healthy, grown	Texture, appearance, seasonal, reared,	Innovation, processed, sensory evaluation, sensory evaluation.

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

Knowledge

Substantive Knowledge

Food- concepts- Innovation

Lesson 1:
LO: To know reared, grown or caught food products.
LO: To know how to store food correctly.
Vocabulary: reared, caught, grown, harvested, seasonal
(Retrieval element Year 1 and 2- Children to recall bought and home-grown food and understand that some fruit and vegetables are grown in Lincolnshire- e.g. blueberries, strawberries, leeks, potatoes and broccoli.)
Children to know how a variety of ingredients in food products have been grown, harvested, reared, caught or processed.
Children to understand that processed food is when ingredients have been changed in some way to enable them to be eaten or used in food preparation or cooking.
Questions to consider:
Where and when are the ingredients grown?

Disciplinary Knowledge

Each lesson: Tell chn- Explain to the children that today we are going to be market researchers who will create a new product for a specific focus group. This may include creating a new and exciting salad that will encourage school children to eat healthily using home grown herbs and ingredients or a new exciting snack bar that includes healthy ingredients for school children. Children will be able to conduct market research to find out likes, preferences and needs of focus groups whilst creating a new and original product.

Throughout the unit, children will draw upon other subject disciplines such as Mathematics, Science, Writing and PSHE. This will include measuring out ingredients using g/kg. They will understand what a balanced and healthy diet looks like and how ingredients fit within the Eatwell Plate of their new product. Children will draw upon their knowledge of food processes and how storing certain ingredients will keep food products for longer without affecting users. Children will also write their own recipes and plan the stages they will follow to create their product.

Where do different meats/fish/cheese/eggs come from? How and why are they processed? Children to understand that certain food products may have to be stored differently due to the ingredient used. E.g. cheese is dairy so needs to be stored in the fridge to ensure it is kept cool as bacteria can cause it to go off. How would this affect people? **(Link to Science and PSHE knowledge)** (Retrieval year 2 and 3- Links to the Eatwell Plate. Can children match ingredients to the parts of the Eatwell Plate?) Discuss the local produce found in and around Boston. **Lesson 2:** **LO: To know existing snack bar products and understand the ingredients that have been used.** **Vocabulary: healthy, sensory, processed, varied diet, innovative** Children to carry out sensory evaluations on the contents of the food from e.g. a variety of bought food products such as healthy snack bars. Children to record results, for example using a table. Use appropriate words to describe the taste/smell/texture/appearance e.g. *How do the sensory characteristics affect your liking for the food?* Children can then gather information about existing products available relating to your product. Could children have a visit to their local supermarket or invite supermarket representive to find out how research is conducted when making an innovative product. Ensure children understand concept innovation- Link to year 3 innovate design of apron. How would tasting existing products be impacted if we didn't have all our senses? **Lesson 3:** **LO: To understand how to use sensory evaluation to support their design of a snack bar.** **Vocabulary: sensory evaluation, evaluate, texture, appearance** Children to understand that sensory evaluation is when you evaluate existing products using taste, smell, texture and appearance. Children to try a range of healthy snack bars and discuss ingredients used- linking to Eatwell Plate. Is it healthy? What ingredients have been used? How does it taste, smell, feel or look?	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.

Children to then use preference test and decide the ingredients they will use in their design. Children to then draw annotated drawings and designs linking to research and sensory evaluation. How does their innovative design meet the users need? E.g. Children need a healthy snack bar to have on their breaks that include 3 of their five a day but also elements of fibre to give them brain power for the rest of their morning lessons. **Lesson 4:** **LO: To know the main stages of a recipe.** **LO: To know how to plan a recipe and know the utensils and equipment they will need.** **Vocabulary: prepare, weigh, measure, bake, cook** Children to consider the main stages of making their food product. Children to select their ingredients and the range of techniques as appropriate to the ingredients chosen? (Retrieval year 2 and 3- grating, chopping, slicing, cutting, spreading, bridge and claw technique.) Children will learn and know that certain ingredients may need different utensils- e.g. strawberries will need a strawberry huller or they will need to combine and mix certain ingredients together. Will we need to bake our snack bars? What will this look like? How will this change our ingredients? Children to discuss basic food hygiene practices when handling food, including the importance of following instructions to control risks. E.g. What should we do before we work with food> Why is following instructions important? Children to write their recipe. **Lesson 5:** **LO: To know how to make a healthy snack bar and combine ingredients.** Children to make their healthy snack bar and use their knowledge of combining ingredients and preparing foods. **Vocabulary: combine, innovation, prepare** Express their happiness of creativity. **Lesson 6:**	

LO: To know how to conduct a sensory evaluation to test the finished product. **Vocabulary: recap all** Evaluate as the assignment proceeds and the final product against the intended purpose and user, reflecting on the design criteria previously agreed. Consider what others think of the product when considering how the work might be improved.	

Concepts

Functionality	Authenticity	Innovation	Significance
		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.	

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.