

ACET Junior Academies

Scheme of Work for Design Technology
Y5 Food - Celebrating culture and seasonality



About this unit: In this unit pupils will learn about a variety of food from around the world. They will investigate a range of products, including seasonal, locally sourced and Fair Trade products. They will evaluate products that could be added to a basic recipe and will consider how they affect the taste, appearance, texture and smell. Pupils will continue to develop skills in using a range of equipment and utensils to prepare ingredients and will follow a basic recipe to make a product. Children will design a healthy eating product for an intended user and purpose by adding ingredients to a basic recipe. They will apply their learning from the unit to make their product and will evaluate their completed products, judging the extent to which they have met the original design criteria.

Final piece ideas: savoury scones, biscuits, muffins - pupils add to a basic recipe (Link - Science - Nutrition, Transport of nutrients)

Unit structure

1. Investigate and Evaluate
2. Focused Tasks
3. Designing
4. Making
5. Finishing
6. Evaluating

Links to previous and future National Curriculum units

- KS1 - Preparing fruit and vegetables
- LKS2 - Healthy and varied diet

1: Investigate and Evaluate

Links to previous learning	Knowledge	Skills, Concepts and Vocabulary:	Assessment criteria:	Curricular links:
<p>Pupils will have knowledge and understanding about food, hygiene, nutrition, healthy eating and a varied diet.</p> <p>Pupils will be able to use appropriate equipment and utensils and apply a range of techniques for measuring out, preparing and combining ingredients.</p>	<p>Substantive knowledge: (<i>What students should know.</i>)</p> <p>That food ingredients have a range of qualities which can be used to alter a basic recipe. Know that different foods have different substances needed for health Understand how key chefs have influenced eating habits to promote varied and healthy diets.</p> <p>Second order concepts: (<i>What students should understand</i>)</p> <p>Nutrition Seasonality</p>	<p>Skills</p> <ul style="list-style-type: none"> • Carry out thorough evaluations of food products and ingredients, considering their sensory properties and cost to make. • Name some foods that are grown, reared or caught in the UK, Europe and wider world. • Understand and explain how the seasons can affect food produce • Understand how food is processed into ingredients that can be eaten or used in cooking • Describe some of the different substances in food and drink, and how they can affect health <p>Key vocabulary/concepts: https://20353.stem.org.uk/Nuffield%20Glossary2/index.html</p>	<p>Can your children:</p> <p>Evaluate a range of existing food products and ingredients based on taste, smell, texture and appearance. Identify how products have been made and the effect of certain ingredients. Identify who the food product has been made for and the main purpose of the product.</p>	<p>Horizontal:</p> <p>Spoken language - understand and use of technical and sensory vocabulary Geography - distribution of natural resources - Food Science - Nutrition</p> <p>Vertical:</p>

		Evaluate, user, purpose, product, function, functionality, design decisions, research			
Suggested activities:		Resources:	Useful links:		
<p>Pupils sample different kinds of scones/muffins/biscuits and consider the nutritional value of each. Children carry out sensory evaluations of a variety of ingredients that could be added to a basic scone/biscuit/muffin recipe. Include a range of locally sourced and seasonal products. Present results in tables, charts or graphs and by using evaluative writing. Pupils consider e.g. <i>Which ingredients are sourced locally/in the UK/from overseas? How have ingredients been processed?</i></p> <p>Use a range of questions to support children's ability to evaluate food ingredients, e.g. <i>What ingredients would help to make a product spicy/crisp/crunchy etc? What is the impact of added ingredients/finishes/shapes on the finished product?</i></p> <p>Research key chefs and how they have promoted healthy eating, locally sourced products and seasonality.</p>		Range of existing food products to taste and evaluate.	http://www.mrjennings.co.uk/teacher/DT/D&T%20Upper%20KS2%20project%20sheets.pdf		

2: Focused Tasks

Links to previous learning	Knowledge	Skills, Concepts and Vocabulary:	Assessment criteria:	Curricular links:
<p>Pupils will have evaluated a range of products in terms of their taste, smell, texture and appearance. They will be able to identify how ingredients are used for a particular effect.</p>	<p>Substantive knowledge: (<i>What students should know.</i>)</p> <p>Know how to use utensils and cooking equipment including heat sources to prepare and cook food. Understand seasonality in relation to food products and the source of different food products. Know and use relevant technical and sensory vocabulary.</p>	<p>Skills</p> <ul style="list-style-type: none"> • Prepare a variety of dishes, safely and hygienically, including a heat source where appropriate • Use a wide range of techniques confidently, such as peeling, chopping, grating, slicing, kneading and mixing • Describe some of the different substances in food and drink, and how they can affect health • Work safely, hygienically and accurately with a wide range of tools. • Know and use the correct technical vocabulary for the projects they are undertaking 	<p>Can your children:</p> <p>Use a range of cooking utensils and equipment to prepare and cook food.</p> <p>Suggest how a basic recipe could be adapted by changing or adding ingredients.</p> <p>Know and use relevant technical vocabulary.</p>	<p>Horizontal:</p> <p>Science - properties of materials and changes of state.</p> <p>Maths - carrying out accurate measuring of mass (kg/g)</p> <p>Spoken language - use of technical vocabulary</p> <p>Vertical:</p>

		Key vocabulary/concepts: Ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, utensils, combine, fold, knead, stir, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble		
Suggested activities:		Resources:	Useful links:	
Follow a basic scone/biscuit/muffin recipe to demonstrate skills in measuring out, combining ingredients, kneading rolling or shaping. Demonstrate how to use appropriate utensils and equipment the children may will need to use safely and hygienically. Pupils follow a simple recipe to practise the skills and techniques modelled. Ask children about ingredients that could be changed or added. Encourage the pupils to consider the changes ingredients might make to texture, taste, appearance and smell. If choosing to use a basic dough recipe, explore making different shapes to change the appearance of the food product and evaluate which shapes are the most appealing.		Basic recipes Suitable tools and equipment to make and cook recipes e.g. weighing scales, measuring jugs, bowls, spoons, baking trays, baking paper, cling film.	http://www.mrjennings.co.uk/teacher/DT/D&T%20Upper%20KS2%20project%20sheets.pdf	
3: Design				
Links to previous learning	Knowledge	Skills, Concepts and Vocabulary:	Assessment criteria:	Curricular links:
Children will be able to use a range of cooking utensils and equipment to prepare and cook ingredients. They will be able to suggest how a basic recipe could be altered by changing or adding ingredients and talk about the effect on the product's taste, texture, appearance and smell. Pupils will understand and use a	Substantive knowledge: <i>(What students should know.)</i> That a design brief outlines what a user wants a product to be like. That research should be carried out to inform design ideas. That responses from research should be used to inform the design specification. The nutritional value and the sensory properties food ingredients. Second order concepts: <i>(What students should understand)</i>	Skills <ul style="list-style-type: none"> Describe the purpose of their product and how it will appeal to the user Gather information about the needs, wants, preferences and values of particular individuals and groups, carrying out surveys, questionnaires etc. Develop a design specification for their design. 	Can your children: Use research, discussion and annotated sketches to develop and communicate design ideas? Develop a design brief and criteria? Make design decisions based on the needs and wants of the intended user? Record the steps, equipment, utensils and	Horizontal: Art and design - use drawing and sketching skills to generate, develop and communicate ideas. Spoken language - participate in discussion to develop and communicate ideas. Writing - record the main stages of

<p>range of appropriate technical vocabulary relevant to the project.</p>	<p>Design brief Design criteria Design specification</p>	<ul style="list-style-type: none"> • Draw on research, including surveys, research to generate innovative ideas • Communicate and represent ideas through annotated sketches • Make design decisions taking into account constraints such as time, resources and cost • Record a step-by-step plan, including a detailed list of tools, equipment, materials and techniques • <p>Key vocabulary/concepts: Design specification, innovative, research, design brief, design criteria, purpose, user, annotated sketch, recipe</p>	<p>ingredients required to make the product?</p>	<p>making - write a recipe Science - Nutrition Vertical:</p>
<p>Suggested activities:</p>		<p>Resources:</p>	<p>Useful links:</p>	
<p>Share a design brief with pupils within a context which is authentic and meaningful for a product e.g. a healthy eating scones/muffins/biscuits for a lunchbox. Children carry out research including surveys, interviews and questionnaires and develop innovative ideas through discussion. Develop a design specification for their food product, carefully considering the purpose and intended user for their product - criteria could relate to nutrition and healthy eating. Pupils could use annotated sketches to communicate their ideas. Pupils could also consider availability of ingredients, cost etc. Pupils produce a design proposal detailing the tools, equipment and ingredients they will use and a step by step plan of how it will be made in the form of a recipe.</p>			<p>http://www.mrjennings.co.uk/teacher/DT/D&T%20Upper%20KS2%20project%20sheets.pdf</p>	

4: Making and Finishing

Links to previous learning	Knowledge	Skills, Concepts and Vocabulary:	Assessment criteria:	Curricular links:
<p>Children will have considered the needs and wants of the intended user and produced a design brief and criteria to guide their thinking. They will have developed and communicated their ideas through discussion, research and annotated drawings. They will have a clear understanding of what they are going to make and will know the steps, equipment, utensils and ingredients required to make it.</p>	<p>Substantive knowledge: (What students should know.) The utensils, equipment and techniques appropriate for the task. How to accurately to measure ingredients. The sensory properties of ingredients. The nutritional value of the foods selected.</p> <p>Second order concepts: (What students should understand) Nutritional value</p>	<p>Skills</p> <ul style="list-style-type: none"> • Work safely, hygienically and accurately with a wide range of tools. • Accurately measure out ingredients. • Prepare a variety of dishes, safely and hygienically, including a heat source where appropriate • Use a wide range of techniques confidently, such as peeling, chopping, grating, slicing, kneading and mixing • Adapt recipes by adding or substituting ingredients to change the appearance, taste, texture and aroma of a dish • Describe some of the different substances in food and drink, and how they can affect health <p>Key vocabulary/concepts: Ingredients (and names) tools, utensils (and names) prepare, combine, slice, peel, mix, grate, bake, bridge and claw, Finish/finishing, appearance, appealing,</p>	<p>Can your children: Select and use appropriate equipment and utensils to measure and combine ingredients? Follow procedures for safety and hygiene? Talk about the ingredients used and explain why they have been included?</p>	<p>Horizontal: Maths - carry out accurate measurement (kg/g) Science - Nutrition</p> <p>Vertical:</p>
Suggested activities:		Resources:	Useful links:	
<p>Give pupils the opportunity to revisit their recipes and recap the order in which they will make their food product.</p>		<p>Suitable equipment and utensils to make and cook recipes such</p>	<p>http://www.mrjennings.co.uk/teacher/DT/D&T%20Upper%20KS2%20project%20sheets.pdf</p>	

<p>Pupils collect the ingredients, tools and utensils required for their product and use their design specification and criteria as an ongoing guide. Encourage the children to evaluate their developing products by referring to the design specification. Pupils make changes to their products to overcome problems or to make improvements. Pupils record any changes made on their plans. Encourage pupil to consider the finish of their product by referring to their design plan e.g. <i>How will you present your product? How will you make it look appealing?</i></p> <p>Pupils complete their products and photograph.</p>	<p>as weighing scales, measuring jugs, bowls, spoons, baking trays,</p>	
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5: Evaluating

Links to previous learning	Knowledge and second order concepts	Skills, Concepts and Vocabulary:	Assessment criteria:	Curricular links:
<p>Pupils will have carried out research and developed ideas based on the needs, wants, preferences and values of an intended user. They will have communicated ideas through drawings and diagrams. Pupils will have considered the stages of making and will have produced a step-by-step plan.</p>	<p>Substantive knowledge: (<i>What students should know.</i>) That evaluations identify the strengths and areas for development in terms of quality of design, manufacture and whether it is fit for purpose. That products are continually developing through evaluating and identifying improvements. That views from the user should be considered when identifying areas for improvement</p> <p>Second order concepts: (<i>What students should understand</i>) Evaluate Develop Evolve Innovative</p>	<p>Skills</p> <ul style="list-style-type: none"> Use their design criteria to critically evaluate their product in terms of quality of design, manufacture and whether it is fit for its intended purpose. Consider the views of others, including intended users, to improve their work. <p>Key vocabulary/concepts: evaluate, design specification, design criteria, intended user, purpose, innovative, improvements,</p>	<p>Can your children: Evaluate their final product referring to design criteria? Consider views of others, including the intended user, when evaluating their product against their original design plan? Identify changes that could be made to further improve the product?</p>	<p>Horizontal: Spoken language - as questions, formulate, articulate and justify answers, arguments and opinions; consider and evaluate different viewpoints</p> <p>Vertical:</p>
Suggested activities:		Resources:	Useful links:	
<p>Pupils evaluate their own final product against the intended purpose and user, reflecting on the design criteria previously agreed e.g. <i>Does the product suit the purpose? Does it suit the intended user? Do the ingredients go well</i></p>			<p>http://www.mrjennings.co.uk/teacher/DT/D&T%20Upper%20KS2%20project%20sheets.pdf</p>	

<p>together? Have the ingredients been prepared using the best process? How has the product been presented? Does it look appealing? Is it an innovative design? Encourage pupils to consider improvements to their project e.g. Did anything not work well? How could the product be improved?</p> <p>Pupils take part in peer evaluation expressing opinions about others' work and taking into account what others think of their product when considering how the product might be improved. Where possible, include the views of the intended user. Pupils complete a written evaluation of their product.</p>		
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5: Finishing

Links to previous learning	Knowledge	Skills, Concepts and Vocabulary:	Assessment criteria:	Curricular links:
<p>Pupils will have constructed an electrical or mechanical system using pulleys or gears to create movement.</p> <p>Pupils will have constructed the product, building in the pulleys or gears.</p> <p>Pupils will have used problems solving skills to overcome mistakes or problems.</p>	<p>Knowledge: Select from and use a range of materials and techniques to make products that are well finished. Evaluate evolving work using problem solving skills to overcome problems.</p> <p>Second order concepts: <i>(What students should understand)</i></p>	<p>Skills - Making:</p> <ul style="list-style-type: none"> • Accurately apply a range of finishing techniques, including those learnt in Art • Demonstrate problem solving skills when encountering a mistake or practical problem <p>Key vocabulary/concepts: Design brief, design criteria, design decisions, finish/finishing techniques, appearance, appealing, innovative,</p>	<p>Can your children: Accurately apply a range of finishing techniques suitable for the product they are making, including those learned in Art? Evaluate their developing products and use problem solving skills when things go wrong?</p>	<p>Horizontal:</p> <p>Vertical:</p>
<p>Suggested activities:</p>		<p>Resources:</p>	<p>Useful links:</p>	
<p>Give pupils opportunity to review their design plans and the intended finishing techniques intended. Pupils evaluate initial ideas, identify an changes to the finish, explaining their reasons.</p> <p>Pupils select appropriate materials and decorating finishing techniques to produce a well finished final product that matches the intended user and purpose. Pupils evaluate their ongoing work, using problem solving skills when they encounter mistakes or problems.</p>		<p>Finishing resources, e.g. pens, pencils, paint, glue,</p>	<p>http://www.mrjennings.co.uk/teacher/DT/D&T%20Upper%20KS2%20project%20sheets.pdf</p>	

6: Evaluating -

Links to previous learning	Knowledge and second order concepts	Skills, Concepts and Vocabulary:	Assessment criteria:	Curricular links:
<p>Children will have generated and developed ideas for their product. They will have explored different mechanical and electrical systems and designed a product with an intended purpose for an intended user. They will have chosen techniques to make and finish their product. They will have evaluated their evolving work and overcome problems using problem solving skills.</p>	<p>Knowledge: (What students should know.) Compare the final product to the original design specification. Test products with intended users and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. Consider the views of others to improve their work.</p> <p>Second order concepts: (What students should understand)</p>	<p>Skills - Evaluating own products:</p> <ul style="list-style-type: none"> • Use their design criteria to critically evaluate their product in terms of quality of design, manufacture and whether it is fit for its intended purpose • Consider the views of others, including intended users, when evaluating their product against their original design specification <p>Key vocabulary/concepts: Evaluate, design criteria, design brief, innovative, user, purpose, authentic, innovative, function, product, ideas, appeal, finish, improve</p>	<p>Can your children: Use their design criteria to critically evaluate their product in terms of quality of design, manufacture and whether it is fit for the intended purpose? Consider the views of others when evaluating their work and identifying improvements that could be made.</p>	<p>Horizontal:</p> <p>Vertical:</p>
Suggested activities:		Resources:	Useful links:	
<p>Pupils evaluate their final products, comparing it to the original design specification. They should critically evaluate the quality of design, the manufacture, functionality, innovation and fitness for the intended user and for purpose. against the design criteria. They consider the extent to which the product meets the needs of the intended user and suits the intended purpose.</p> <p><i>Does the product suit the purpose? Does it suit the intended user? Does the mechanism work smoothly? Is it the right kind of movement? How well has the product been made? Are the materials suitable for the product? How could the product be made more appealing?</i></p> <p>Where possible allow feedback from the intended user.</p> <p>Pupils complete an evaluation for their own product.</p>		<p>Final products Evaluation resources</p>	<p>http://www.mrjennings.co.uk/teacher/DT/D&T%20Upper%20KS2%20project%20sheets.pdf</p>	

