

## Design and Technology Curriculum Map – Year 7

Curriculum gift – Bringing Ideas to Real Life		
	Food (18 sessions)	Product Design (18 sessions)
Fertile Question	<ul style="list-style-type: none"> <li>• Where does our food come from?</li> <li>• How do I use an oven?</li> <li>• How do we weigh and measure accurately?</li> <li>• How do we use a recipe?</li> <li>• What are the main 8 guidelines to healthy eating?</li> <li>• What are the main nutrients and their functions and what foods they can be found in?</li> <li>• Can you identify a range of factors that can affect a person’s food choice?</li> </ul>	<ul style="list-style-type: none"> <li>• How do we stay safe in the workshop?</li> <li>• Where does wood come from?</li> <li>• How does the structure of wood affect its working properties?</li> <li>• What are the categories of wood?</li> <li>• What are the advantages of manufactured board?</li> <li>• Is wood a sustainable material?</li> <li>• How would wooden toys be made commercially?</li> </ul>
Key Content linking to assessment objectives at KS4	<p>(Assessment Objective AO, showing where this is linked to the Vocational Certificate in Food and Cookery at KS4)</p> <p>To carry out 10 hours of cooking making a range of dishes using a range of tools and equipment;</p> <p><i>AO Units 1,2,3,4</i> - A range of food preparation and cooking skills  <i>AO Units 1,2,4</i> - Principles of food safety and hygiene when preparing, cooking and serving foods.  <i>AO Units 1,2,3</i> - Healthy eating guidelines explaining the principles of the new eat well guide and making comparisons to the old eatwell guide.  <i>AO Units 2,3</i>- Nutrients and their functions, including scientific principles such as oxidation and coagulation  <i>AO Units 2,3</i> - Applying the 8 tips for healthy eating to their own diet  <i>AO Units 2,3</i>- Looking at the factors that can affect food choice  <i>AO Units 1,2,4</i>- Be able to apply knowledge of ingredients to design and prepare a dish for a specific purpose and justify their choice</p>	<p>(Assessment Objective AO, showing where this is linked at GCSE)</p> <p><i>AO2</i>- To use hand and machine tools to accurately measure, mark out, cut, shape, finish and assemble a wooden toy train.  <i>AO4</i>- Health and Safety in the workshop including use of appropriate PPE  <i>AO4</i>- Structure of wood- link to planning.  <i>AO4</i>- Hardwood (oak and beech) and softwood (pine and spruce). Core technical principles  <i>AO4</i>- Tools for woodworking  <i>AO4</i>- Jigs and batch production  <i>AO3</i>- Ecological and social footprint-is wood a sustainable material?  <i>AO4</i>- Flow charts and quality control checks</p>
Subject specific skills	<p>During year 7 students are to learn the basic skills of how to prepare and cook food</p> <ul style="list-style-type: none"> <li>• Hygiene</li> <li>• The 4 C’s</li> <li>• Eat well guide</li> <li>• Nutrients</li> <li>• Use of the cooker/hob and grill</li> <li>• Evaluations</li> <li>• Taste Testing</li> <li>• Knife skills</li> <li>• Weighing and measuring</li> <li>• Deseeding/peeling</li> <li>• Mix and combine</li> <li>• Rolling out</li> <li>• Grate</li> <li>• Whisk</li> <li>• Draining</li> <li>• Know where our food comes from, (from farm to fork).</li> <li>• Follow/modify/create a recipe</li> <li>• Evaluative writing using sensory terminology</li> </ul> <p>Keywords will be used on the front of module sheet where they will learn their meanings and therefore developing their technical language.</p>	<p>During year 7 students are to develop basic hand and machine skills using woodworking tools found in the school workshop.</p> <p>Students will be taught the following techniques: -</p> <ul style="list-style-type: none"> <li>Measuring using a steel rule</li> <li>Marking out using a try square and a marking gauge</li> <li>Cutting using a tenon saw and a bench hook and/or bench vice</li> <li>Using a paring chisel and mallet</li> <li>Using a pillar drill</li> <li>Using a belt facer</li> <li>Using a Hegner fret saw</li> <li>Using a screw driver</li> <li>Sanding by hand</li> </ul> <p>Keywords will be used on the front of module sheet where they will learn their meanings and therefore developing their technical language.</p>
OAB Skills & Cross	<p>Beautiful books Resilient learners</p>	<p>Resilience Independent</p>

curricular links	Independent learning To adapt and cook healthy meals Team work especially when washing/tidying up	Beautiful. Links to maths through measuring
Assessment	Students will be assessed on their designing and making skills in Product design and in Food they will be assessed on their making and evaluative skills with both also assessing subject knowledge during their modules. The making activities will account for 50% of their final end of year grade in line with GCSEs. Students will also have specific questions in their Autumn and Spring Exams to test subject knowledge and this will be based on how the examination will look like at GCSE Level.. The written test will be worth 30% with both the designing in Product design and evaluative writing in food worth 20%	
Home Learning	<ul style="list-style-type: none"> <li>• Bringing in ingredients.</li> <li>• Eatwell guide</li> <li>• Equipment research</li> <li>• It will be explained that during this term that homework will be to use any feedback whether self, peer or teacher to improve the quality of the work and to hand it back in a week later if they are unable to finish it within the lesson time allocated.</li> </ul> <p>New government curriculum was used to formulate this programme and is also part of the school food programme introduced in 2014 and had to be in place by 2015.</p>	Students to produce an annotated leaflet (A4) explaining the difference between hardwood and softwood – teacher assessed. Students to use the Forest Stewardship Council (FSC) website to research answers to questions set on a worksheet. Peer marked in lesson.
Memorable Learning	Food experiments such as oxidation Cooking lessons – having pride in their final outcomes	Using tools in the workshop. Workshop rules and routines. Art straw model of tree structure. Class debate on sustainability of wood.

## Design and Technology Curriculum Map – Year 8

Curriculum gift – Bringing Ideas to Real Life		
	Food (18 sessions)	Product Design (18 sessions)
Fertile Question	<ul style="list-style-type: none"> <li>Can you describe the principles of food safety and hygiene when preparing and cooking ingredients?</li> <li>Why is the eatwell guide an important tool when planning and preparing a meal?</li> <li>Can you explain the functions of nutrients needed by the body?</li> <li>Why does energy needs required vary throughout the life stages?</li> <li>Why is water important in the diet?</li> <li>What is the consequence of an imbalance of nutrients?</li> <li>What factors can affect an individual's food choice and what could the consequence be?</li> <li>Can you explain the scientific terms, coagulation, dextrinisation, caramelisation, gelatinisation mean?</li> <li>What is a raising agent?</li> </ul>	<ul style="list-style-type: none"> <li>How does casting work?</li> <li>What are the key stages of the casting process?</li> <li>Where does metal come from?</li> <li>What are the categories of metal?</li> <li>Is metal a sustainable material?</li> <li>What are the advantages of CAD/CAM?</li> <li>How can you design and make jewellery that is comfortable for the user?</li> </ul>
Key Content	<p>(Assessment Objective AO, showing where this is linked to the Vocational Certificate in Food and Cookery at KS4)</p> <p><i>AO Units 2,3,4</i> - Explain principles of the eatwell guide and relate it to the meals and menus created.  <i>AO Units 2,3</i> - Explain sources of water, the importance of hydration and apply to their own diet.  <i>AO Units 2,3</i> - Looking at energy, why it is needed, different sources and describes and evaluates the energy needs throughout different life stages.  <i>AO Units 2,3</i> - Looking at dietary recommendations and how it relates to their diet and the diet of others.  <i>AO Units 2,3</i> - Factors of food choice and the effects it may have on health  <i>AO Units 1, 2,3, 4</i> - To use a wide range of tools and equipment;  <i>AO Units 1, 2,3, 4</i> - To demonstrate a greater range and build on the skills used in year 7 in food preparation and cooking skills  <i>AO Units 1, 2,3, 4</i> - To apply food safety and hygiene.  <i>AO Units 1, 2, 4</i> - To be familiar with the scientific principles when cooking</p> <ul style="list-style-type: none"> <li>- Raising agents</li> <li>- Caramelisation</li> <li>- Dextrinisation</li> <li>- Coagulation</li> <li>- Gelatinization</li> <li>- Mallard reaction</li> </ul> <p><i>AO Units 1, 2, 4</i> - Evaluative writing using sensory terminology</p>	<p>(Assessment Objective AO, showing where this is linked at GCSE)</p> <p><i>AO2</i>- To design and make a pewter pendant/key fob using CAD/CAM to produce the mould</p>
Subject specific skills	<p>During year 8 students build on the skills of how to prepare and cook food and use more precision and presentation skills:</p> <ul style="list-style-type: none"> <li>Hygiene</li> <li>The 4 C's</li> <li>Eat well guide</li> <li>Nutrients</li> <li>Use of the cooker/hob and grill</li> <li>Evaluations</li> <li>Taste Testing</li> <li>Knife skills</li> <li>Weighing and measuring</li> <li>Deseeding/peeling</li> <li>Mix and combine</li> <li>Rolling out</li> <li>Grate</li> <li>Drain</li> <li>Whisk</li> <li>Draining</li> <li>Scientific principles when cooking</li> </ul>	<p>During year 8 students will learn how to use Techsoft 2D design to draw and size their mould.            Students will be taught the following techniques:-            Health and Safety regarding the casting process including the use of appropriate PPE            Finishing techniques for metal            Extension-</p>

	<ul style="list-style-type: none"> <li>- Caramelisation</li> <li>- Dextrinisation</li> <li>- Coagulation</li> <li>- Gelatinization</li> <li>- Mallard reaction</li> </ul> <ul style="list-style-type: none"> <li>• Know where our food comes from, (from farm to fork).</li> <li>• Follow/modify/create a recipe</li> <li>• Evaluative writing using sensory terminology</li> </ul> <p>Keywords will be used on the front of module sheet where they will learn their meanings and therefore developing their technical language.</p>	
OAB Skills & Cross curricular links	<p>Beautiful books Resilient learners Independent learning To adapt and cook healthy meals Team work especially when washing/tidying up</p>	<p>Beautiful books and high quality of finish on practical work Resilient learners Independent learners Links to science through metals - alloys and pure; ferrous and non-ferrous</p>
Assessment	<p>Students will be assessed on their designing and making skills in Product design and in Food they will be assessed on their making and evaluative skills with both also assessing subject knowledge during their modules. The making activities will account for 50% of their final end of year grade in line with GCSEs. Students will also have specific questions in their Autumn and Spring Exams to test subject knowledge and this will be based on how the examination will look like at GCSE Level.. The written test will be worth 30% with both the designing in Product design and evaluative writing in food worth 20%</p>	
Home Learning	<ul style="list-style-type: none"> <li>• It will be explained that during this term that homework will be to use any feedback whether self, peer or teacher to improve the quality of the work and to hand it back in a week later if they are unable to finish it within the lesson time allocated.</li> <li>• Students will have a choice of activities to choose from over the course of the module</li> <li>• Bringing in require ingredients is also part of the home learning</li> </ul>	<p>Students to produce an annotated A4 page of research for their CAD design.</p>
Memorable Learning	<p>Cooking the meals Scientific experiments around the cooking processes Looking at the amount of energy in foods</p>	<p>Using tools in the workshop. Workshop rules and routines. Casting process. Class debate on sustainability of metal.</p>