



Subject Long Term Plan 2019-20

Subject Leader: Mr Anderton

Additional Subject Teachers: N/A

Teaching Assistants: Ms Moore/Ms Concannon

Year 7	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p>Design & Technology</p> <p>Introduction to Construction Materials</p> <p>Students will design and make a wooden Racing Car using a range of machinery and workshop tools.</p> <p>They also learn about the properties of softwood and hardwood.</p>	<p>Introduction to Food Technology</p> <p>Students will learn a range of basic cookery skills, and how to safely use a range of kitchen equipment.</p> <p>Students will develop their knowledge of health and hygiene requirements in a catering environment.</p>	<p>Design & Technology</p> <p>Students use the CAD/CAM programme 2D Design to create a keyring made from acrylic. They also learn about different polymers and what they can be used for. They will also make their own mould to be used on the vacuum former.</p>	<p>Food Technology</p> <p>Students follow the design cycle to make their own pizza product.</p> <p>Students will research and examine the functions of the ingredients when making pizza and then follow the process of making pizza dough. Students will add toppings of their own choice.</p>	<p>Design & Technology</p> <p>Students will investigate how to create circuits and develop their knowledge of the functions of circuit components. Students will construct a decorative light which incorporates a circuit to illuminate a silhouette around an acrylic feature.</p>	<p>Food Technology</p> <p>Students will investigate the properties and uses of staple ingredients such as flour, sugar, butter and margarine and pasta.</p> <p>Students will examine the effects of adding heat on these ingredients.</p>

Year 8/9	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p>Design & Technology</p> <p>Students build on their knowledge of polymers to cut, shape and form an acrylic fan.</p> <p>Students will also gain an understanding of circuit components and control systems when creating a circuit to alter the speed of the fan.</p>	<p>Food Technology</p> <p>Students will develop their knowledge of food commodities.</p> <p>They will gain an understanding of the nutrients and sources of food commodities.</p> <p>Students will also develop their preparation, cooking and presentation skills.</p>	<p>Design & Technology</p> <p>Students will develop their understanding of construction materials and processes.</p> <p>Students will design and construct a wooden bird feeder while investigating methods of joining, cutting and smoothing wooden components. They will also study how ferrous metal is softened and shaped using heat treatment.</p>	<p>Food Technology</p> <p>Students will examine the uses of different raising agents.</p> <p>Students will investigate the functions and properties of biological, chemical and mechanical methods of leavening a number of different products.</p>	<p>Textiles Technology</p> <p>Students will study the sources, properties and uses of different natural and synthetic fabrics.</p> <p>Students will investigate techniques of dyeing and printing onto fabric. They will also practice techniques to sew, stitch and hem the edges of fabric when making cushions.</p>	<p>Food Technology</p> <p>Food from around the world.</p> <p>Students will examine different cuisines, ingredients and preparation techniques originating from different countries.</p>
Year 10 GCSE Design & Technology	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p>Design and technology and our world Students will study:</p> <p>The impact of new</p>	<p>Electronic systems and programmable components. Students will study:</p> <p>How electronic</p>	<p>Natural and manufactured timber. Students will study:</p> <p>The categorisation and properties of</p>	<p>Ferrous and nonferrous metals. Students will study:</p> <p>Students will investigate the</p>	<p>Thermoforming and thermosetting polymers. Students will study:</p> <p>The categorisation of thermoforming and</p>	<p>Electronic systems and programmable components. Students will study:</p> <p>Products that include the use of electronic</p>

	<p>and emerging technologies. How energy is generated and stored.</p> <p>Developments in modern and smart materials, composite materials and technical textiles.</p> <p>Students will design and make a product using polymorph.</p>	<p>systems provide functionality to products and processes, including sensors and control devices.</p> <p>The functions of mechanical devices, to produce different sorts of movement, changing the magnitude and direction of forces.</p> <p>Students will use technical Lego to investigate how mechanical devices increase or decrease speed of movement, or change the magnitude or direction of force or movement.</p>	<p>hardwoods, softwoods and manufactured boards.</p> <p>Students will investigate the properties of woods considering: strength, grain structure, surface finish and absorbency when making a storage box using a variety of construction methods.</p>	<p>working properties of ferrous metals, nonferrous metals and alloys when constructing a padlock.</p> <p>During the padlock project, students will investigate the hardness, elasticity, toughness, ductility, tensile strength and malleability of metals.</p>	<p>thermosetting polymers.</p> <p>The properties of polymers.</p> <p>Students will compare the differences in marking out, forming and shaping, smoothing and finishing when working with acrylic, plywood and aluminium to make a layered clock.</p>	<p>components. Students will gain an awareness of the importance of electronic and programmable components to the product designer and end user. They will investigate how such components are integrated into the everyday products we use.</p>
Year 11 GCSE Design & Technology	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p>Students will begin the WJEC GCSE controlled assessment task.</p> <p>Identify and investigate design possibilities.</p>	<p>Students will continue to complete the controlled assessment task.</p> <p>Manufacture of a prototype.</p>	<p>Students will continue to complete the controlled assessment task.</p> <p>Continue the manufacture of a prototype.</p>	<p>Students will continue to complete the controlled assessment task.</p> <p>Continue the manufacture of a prototype.</p>	<p>Revision</p>	

	<p>Develop a design brief and specification.</p> <p>Generate and develop design ideas.</p>			Analyse and evaluate design decisions and prototypes.		
Year 10 GCSE Food Preparation & Nutrition	<p>Autumn 1 Core Knowledge Students will study:</p> <p>The principles of nutrition.</p> <p>Diet and good health.</p> <p>The science of cooking food.</p> <p>Food spoilage.</p>	<p>Autumn 2 Core Knowledge Students will study:</p> <p>Food provenance and food waste.</p> <p>Cultures and cuisines.</p> <p>Technological developments.</p> <p>Factors affecting food choice.</p>	<p>Spring 1 Basic mixtures Students will study:</p> <p>Cake making, pastry making, sauces, batters, bread making, setting, cream whipping, roux sauce and gelatinisation.</p>	<p>Spring 2 Commodities</p> <ul style="list-style-type: none"> . Cereals . Fruit and vegetables . Milk, cheese and yoghurt. . Meat, poultry, fish and eggs. 	<p>Summer 1 Commodities</p> <ul style="list-style-type: none"> . Beans, nuts and seeds, soya and tofu. . Butter, oil, margarine, sugar and syrup. 	<p>Summer 2 Food investigations.</p> <p>Students will practice planning, executing and evaluating scientific food investigations.</p>
Year 11 GCSE Food Preparation & Nutrition	<p>Autumn 1 Students will start controlled assessment 1.</p> <ul style="list-style-type: none"> . Task analysis. . Research the task. . Making an hypothesis. . Plan of action. 	<p>Autumn 2 Students will continue completing controlled assessment 1.</p> <ul style="list-style-type: none"> . Experiments . Conclusions 	<p>Spring 1 Students will start Controlled assessment Task 2.</p> <ul style="list-style-type: none"> . Analyse the task description. . Research ideas and analyse the results. . Create a plan of action. . Trialling recipes. 	<p>Spring 2 Students will continue with the controlled assessment task by:</p> <ul style="list-style-type: none"> . Creating a list of final dishes. . Creating a shopping list and time plan . Completing the practical cookery task. . Assessment evaluation. 	<p>Summer 1 Revision</p>	<p>Summer 2</p>