



Design Technology at Orchard Academy – YEAR 5

Autumn Term	<p>Cams – Viking Longboat</p> <p>Design:</p> <ul style="list-style-type: none"> • Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. • Develop a simple design specification to guide their thinking. • Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. <p>Make:</p> <ul style="list-style-type: none"> • Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. • Work within the constraints of time, resources and cost. <p>Evaluate:</p> <ul style="list-style-type: none"> • Compare the final product to the original design specification. • Test products with the intended user, where safe and practical, and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. • Consider the views of others to improve their work. • Investigate famous manufacturing and engineering companies relevant to the project. <p>Technical Knowledge:</p> <ul style="list-style-type: none"> • Understand that mechanical systems have an input, process and an output. • Understand how cams can be used to produce different types of movement and change the direction of movement. • Know and use technical vocabulary relevant to the project. 	Mechanical Systems
Spring Term	<p>Frame Structures – Shelter Building</p> <p>Design:</p> <ul style="list-style-type: none"> • Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. • Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. • Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. <p>Make:</p> <ul style="list-style-type: none"> • Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. • Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. • Use finishing and decorative techniques suitable for the product they are designing and making. <p>Evaluate:</p> <ul style="list-style-type: none"> • Investigate and evaluate a range of existing frame structures. • Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. • Research key events and individuals relevant to frame structures. <p>Technical Knowledge:</p> <ul style="list-style-type: none"> • Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Know and use technical vocabulary relevant to the project. 	Structures
Summer Term	<p>Celebrating Culture and Seasonality – Savoury Food</p> <p>Design:</p> <ul style="list-style-type: none"> • Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. • Explore a range of initial ideas and make design decisions to develop a final product linked to user and purpose. • Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas <p>Make:</p> <ul style="list-style-type: none"> • Write a step-by-step recipe, including a list of ingredients, equipment and utensils • Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. • Make, decorate and present the food product appropriately for the intended user and purpose <p>Evaluate:</p> <ul style="list-style-type: none"> • Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. • Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. • Understand how key chefs have influenced eating habits to promote varied and healthy diets. <p>Technical Knowledge:</p> <ul style="list-style-type: none"> • Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in relation to food products and the source of different food products. • Know and use relevant technical and sensory vocabulary. 	Food