



Achievement Cycle Overview

Curriculum: Design & Technology

*Excellence.
No Excuses.*

Year	AC1 – Resistant Materials	AC2 – Resistant Materials	AC3 - Textiles	AC4 - Food
8	<p>Topic Overview: RM Systems focus: Electronics Context: Clients and Target Groups Design Brief: Design and make a mood light suitable for a teenagers bedroom.</p> <p>NC links: Design: develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations. Make: select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties. Evaluate: investigate new and emerging technologies. Technical knowledge: understand how more advanced electrical and electronic systems can be powered and used in their products.</p> <p>GCSE Links:</p> <ul style="list-style-type: none"> • Powering systems • Electronic systems • Quality control' • Production systems – CAD/CAM • Shaping techniques • PCB production and surface treatments • Product sustainability 	<p>Topic Overview: RM Processes focus: Casting Context: Design strategies Design Brief: Design and make a small gift suitable for mail order on a popular e-commerce website. Packaging and branding of the product should also be considered during the design process</p> <p>NC links: Design: develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools Make: select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture Evaluate: test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups Technical knowledge: understand and use the properties of materials and the performance of structural elements to achieve functioning solutions</p> <p>GCSE Links:</p> <ul style="list-style-type: none"> • Scales of production • Shaping techniques • Production systems • Properties of paper and board • Working with paper and board • Paper and board finishes • Design briefs and specifications • Design strategies • Exploring and developing an idea • Manufacturing specifications 	<p>Topic Overview: Materials focus: Textiles Context: Understanding User Needs Design Brief: Design and make a Puppet for a specific target group.</p> <p>NC links: Design: identify and solve their own design problems and understand how to reformulate problems given to them Make: select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture Evaluate: test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups Technical knowledge: understand and use the properties of materials and the performance of materials and components to achieve functioning solutions</p> <p>GCSE Links:</p> <ul style="list-style-type: none"> • Properties of materials • Understanding user needs • Product Analysis • Exploring and developing a design idea • Working safely • Production aids • Shaping techniques • Standard components 	<p>Topic Overview: Project: Pastry Focus: Understanding the properties that fat bring to a recipe. Design Brief: To produce and evaluate a pastry product.</p> <p>NC links: Principles of nutrition and health: Understanding the risks of having too little or too much fats and carbohydrates in the diet. Healthy and varied diets: A range of different recipes from different cultures and from main meals to desserts. Cooking techniques: Rolling out, shaping, glazing, sealing, using the oven safely, reduced sauces, thickening with flour Bridge Hold, Flat side down, Knife skills, Avoiding cross contamination, Frying, Sweating, Boiling, simmering, Beating, creaming, sieving, Rinsing, draining, grating, Melting method, Whisking, Folding, dusting Understanding ingredients: Understanding food processing, Food waste and how it can be reduced.</p> <p>GCSE Links: Nutrition: Understanding the functional properties of fats and carbohydrates. The relationship between diet, nutrition and health. Food (Food Provenance and Food Choice): Food processing and production and development of culinary influences. Cooking and food preparation: Understanding the nutritional properties, sensory qualities and food safety considerations. Skill required (preparation and cooking techniques): Knife skills, cooking methods, sauces, raising agents and dough</p>