

<u>Timeline</u>	<u>Topic</u>	<u>Key concepts and knowledge</u>	<u>Skills development</u>	<u>Rationale</u>
YEAR 8 OVERVIEW – carousel so students may carry out activities in different order				
Y8 – Term 1	Food and Nutrition	<ul style="list-style-type: none"> • Basic food hygiene rules. • Safety rules. • Bridge and claw technique. • Fry, sauté, boil, simmer & bake. • Safe use of the cooker. • Eat well guide. • Creaming method • Melting method. • Rubbing in method • Binding • Shaping and dividing • Storing, handling & cooking meat • Eatwell theory • Nutrition theory - Macronutrients • Food groups theory - Meat, fish and cereals 	Literacy (technical vocabulary) Numeracy - weighing, measuring & timing Independent work - Self-management Team work Co-operation Use of specialist equipment Sequencing – order of work Testing ('doneness') Problem solving Time management Problem solving	During year eight students will develop their confidence and independence in practical cookery. Students will be given a choice of dishes to demonstrate similarities in recipes and how skills are transferable. They will also learn about healthy eating (Eatwell) and basic nutrition and food groups.
Y8 – Term 2	Mechanisms, motion, CAD, CAM (Design technology and Engineering Design)	<ul style="list-style-type: none"> • Techsoft 2D Design (2D CAD) • Solidworks modelling (3D CAD) • Introduction to 3D printing • Advantages and disadvantages of CAD • Types of motion • Mechanisms • How motion and mechanisms make things work 	Accuracy working in 3D and 3D CAD Literacy (technical vocabulary) Numeracy (drawing to scale) Digital skills Specialist CAD software Communication skills creativity Understanding how products work/move Self management	This project is an introduction into 3D CADmodelling. Students will be familiarised with the 3D modelling environment before learning how to construct 3D models with levels of precision. 3D modelling is the starting point for 3D printing so students gain awareness of the 3D printing process and how it works. Finally the students will start to gain knowledge about types of motion and how this can be applied to a variety of mechanisms to make products move in different ways.

<p>Y8 – half term 5</p>	<p>Lamp project (Textile application) DT – textiles and smart materials</p>	<ul style="list-style-type: none"> • Characteristics of a range of materials • Product manufacture and assembly sequence • Smart materials • Safe use of specialist tools and equipment (textiles) • Use of over locker, digital printing • create lamp shade cover • Work of others past and present designers/ diversity • Design development • Hand embellishment • Safe use of sewing machine • Characteristics of a range of smart materials 	<p>Use of specialist tools and equipment Literacy (technical vocabulary) Numeracy (hems and seams) Sequencing Accuracy Problem solving Communication skills (design) Digital skills Creativity Teamwork Self-management</p>	<p>This project works in harmony with the lamp base element to create a mixed material project. The focus of this section is to work with different fabric based materials to embellish the lampshade with surface decoration techniques, Students will base their lamp design on the designer they have researched. Students will recap basic sewing skills and develop new skills using various textile machinery creating applique, embroidery stitches and creating a hem. They will also develop knowledge of digital printing. These new skills learned will develop their knowledge further at KS4</p>
<p>Y8 – half term 6</p>	<p>Lamp project (part 2) DT – woodwork, electronics and programmable systems</p>	<ul style="list-style-type: none"> • Characteristics of a range of materials (timbers and paper/boards) • Marking out techniques/tools • Material removal • Product manufacture and assembly sequence • accuracy • Systems approach to design • Safe use of specialist tools and equipment • Electronic components and systems • soldering 	<p>Use of specialist tools and equipment Literacy (technical vocabulary) Numeracy (marking out and measuring) Sequencing Accuracy Problem solving Team work Self-management Quality control</p>	<p>This project works in harmony with the textiles element to create a mixed material project. The focus of this section is to work with timbers to create the structure of the lamp. Students will need to use a range of marking out and manufacturing techniques to manufacture the lamp base before moving on to study basic electronic systems and identify some electronic components. Students will join electronic components for their lamp by soldering and complete a workshop risk assessment for this task.</p>