Subject Curriculum Overview for Academic Year 2022/2023

Subject: Design Technology / Cooking & Nutrition	Subject Leader: Mrs Fox	Year Group: 7	TERMLY ROTATION
Topic	**Key Learning Points**	**Key Vocabulary**	**Assessments**
Rotation 'A' **Traditional woodwork**	**END POINT: Manufacture a Lego style box using a rebate joint and drop lid** *The Lego box* Students will: • Learn how to analyse a brief for designing / manufacturing for a client's needs. • Learn to analyse existing solutions and materials (aesthetics, durability, usability). • Learn to mark out material using core mathematics skills (measuring in millimetres, using a try square to measure within 1 degree of a 90-degree angle) i.e. preparing wood for cutting without waste. • Learn how to be correct & safe using hand and power tools (saws, files, drills, hammers, sanding equipment). • Learn about simple wood joints; uses and manufacturing, e.g. using rebate joint, butt joint or dowel joint. • Learn about different types of fixings; temporary & permanent (screws, nails, panel pins, wood glue, hot glue & contact/grab adhesives). • Learn the computer programme 2D Design, how to measure shapes accurately for output on the laser cutter. • Learn about, and how to integrate CADCAM (computer aided design/manufacture) into traditional woodwork practises. • Learn the importance of, and be able to, apply finishes well (vanish, wax, paint, spray paint etc). • Learn to self and peer evaluate via production plan targets	Design brief, renewable, durability, brittle, hardwood, softwood, man-made board, solutions, precision, millimetres, right angle, degrees, tenon saw, rebate joint, adhesive, pine, MDF, panel pin, perimeter, scroll saw, PPE, pillar drill, dowel joint, laser cutter, finish, abrasive, filler, drill bit, primer.	Formative assessment, checking understanding & progress during each lesson. 'Forms' Summative assessment used half termly to assess understanding of key learning points.
Rotation 'B' **Product Design**	**END POINT: Make a bespoke working analogue clock, using CADCAM** *Bespoke designed Clock* Students will: • Learn what a design brief is and be able to explore this context. • Learn about target markets (gender, age group, inclusivity) and why this is important for good design. • Learn about the work of Ettore Sottsass within the Memphis design movement and know how to describe key features of his work.	Design brief, analysis, client, properties, durable, tactile, hard wearing, grain, veneer, acrylic, man-made board, MDF, refine, graphics, gradient, inspiration, presentation, innovative, development, consideration, CADCAM, precise, assembly, mechanism, analogue, fixing, net, adhesive, engrave, tabs,	Formative assessment, checking understanding & progress during each lesson. 'Forms' Summative assessment used half termly to assess understanding of key learning points.

	• Draw a variety of design ideas appropriately aimed at a chosen target market and be able to justify this by annotating these designs. • Learn how to use the 2D Design computer programme by accurately measuring shapes and using tools appropriately to replicate a design. Understand how this translates onto the laser cutter. • Learn about the properties of man-made boards such as MDF, ply and chipboard, and some plastics such as acrylic, Perspex and acetate. (Material property • es such as durability, aesthetics, cost, ease of manufacture). • Learn about the suitability of MDF (medium density fibreboard) and acrylic as construction materials. • Learn why a specification is important to good design principles using 'ACCESSFM' as key aims – Aesthetics, Cost, Customer, Environment, Size, Safety, Function, Materials/Manufacture) and be able to reflect and evaluate progress via these specification targets.	requirement, specification, evaluate.	
Rotation 'C' **Food Preparation & Nutrition**	**END POINT: To confidently and safely prepare and cook basic food dishes** *An introduction to Cooking & Nutrition* Students will: • Learn specific kitchen knife skills and when they should be used e.g. bridge and claw technique. • Learn a variety of food preparation skills such as the rubbing in method, creaming method, shaping, cutting, rolling, kneading and proving. • Know how to identify hazards and understand safety rules in a kitchen. • Be able to name kitchen equipment and correctly identify its uses. • Know and understanding the 4Cs for good food hygiene (cleaning, cross-contamination, cooking, and chilling). • Learn how bacteria grows using the 4 key factors; warmth, moisture, food, time. • Safely and confidently know how to use all parts of the cooker (hob, grill, oven). • Know and understand the importance of eating breakfast – healthy/unhealthy, energy, Vitamin B and calcium intake. • Be able to use the 'Eatwell Plate' demonstrating an understanding of portion sizes of protein, carbohydrates, fruit & vegetables, dairy, sugar & fats, and link these to a balanced diet.	Allergy, analysis, antibacterial, bacteria, baking, boiling, budget, calcium, carbohydrate, chilling, consistency, contamination, fibre, glazing, hygiene, liquidise, mineral, nutrition, obesity, pathogen, protein, simmering, staple, stewing, toxin, vitamin.	Formative assessment, checking understanding & progress during each lesson. Hand written summative assessment used half termly to assess understanding of key learning points.

	• Understand different methods of cooking including the effects of cooking methods on food e.g. nutrient loss, ways to cook food to retain flavour and nutrients. • Learn how to shop for food using a budget. • Understand sensory analysis (sight, smell, taste) using a star diagram, and how this helps to test and improve food. • Know how to design a menu for specific client requirements considering culture, allergies, and dietary preferences. • Understand the causes and prevention of food waste within society.		

How parents can support learning in the subject this academic year

- Support independent practical skills by practising recipes / encouraging cooking dinner.
- Support independent practical skills by helping with household DIY / using tools to manufacture ideas within the home.
- Practise using subject specific vocabulary in a sentence.
- Watch cooking, design and manufacturing programmes to encourage enthusiasm and motivation within these subjects.
- Acknowledge and discuss the benefits of these subjects within the wider careers industry, supporting future aspirations.
- Encourage excellent page presentation and explore / research during homework tasks.

Recommended Reading

- You Can Draw – Tom Gates with Liz Pichon
- The Book of Inventions – Tim Cook
- KS3 Design & Technology Study Guide – CJP
- The Complete Cookbook for Young Chefs – America's Test Kitchen Kids
- 100 Things to Know About Inventions – Clive Gifford
- Engineering for Teens – Dr Pamela McCauley
- Foundations KS3 Food Technology – Oxford

Points to note

Years 7 & 8 study a different Technology specialism each term. There are approximately 12 weeks of study for traditional woodwork, product design or electronics, and cooking & nutrition. We welcome students taking their products home with them at the end of the rotation, and food at the end of each practical lesson. Whilst we supply all materials for manufacture, batteries may need to be purchased by yourselves for products requiring them. Cooking ingredients should be purchased by yourselves, and will be uploaded to epraise a minimum of 2 days before they are needed in school.