



Subject Curriculum Overview for Academic Year 2022/2023

| Subject: Design Technology / Cooking & Nutrition | | Subject Leader: Mrs Fox | Year Group: 8 | TERMLY ROTATION |
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| Topic | Key Learning Points | | Key Vocabulary | Assessments |
| <p>Rotation 'A' Traditional woodwork</p>  | <p>'Sweet Dispenser'</p> <p>OUTCOME – To manufacture a sweet dispenser with working mechanism.</p> <p>To recognise sources of materials and make informed choices.</p> <p>Understand the 6 R's of sustainability and how this impacts upon their choices as designers & manufacturers.</p> <p>Will know and understand the 4 types of motion.</p> <p>Will understand the importance of grain orientation & adhesives with regard to structural integrity.</p> <p>Will be able to independently use hand & power tools in a safe manner to produce successful outcomes.</p> <p>Will understand and be able to apply suitable finishes to their work.</p> <p>Students will understand the essential components of packaging, and incorporate these into their own designs.</p> <p>Will test, analyse and evaluate their own finished products against set criteria, as well as peer evaluating completed outcomes.</p> | | <p>Sustainable, reduce, reuse, recycle, rethink, repair, refuse, thermoplastic, thermosetting plastic, softwood, orientation, motion, linear, rotating, reciprocating, oscillating, tenon saw, file, abrasive, pillar drill, drill bit, forstner bit, template, PPE, adhesive, finish, packaging.</p> | <p>Formative assessment, checking understanding & progress during each lesson.</p> <p>'Forms' Summative assessment used half termly to assess understanding of key learning points.</p> |
| <p>Rotation 'B' Electronics / Programmable Systems</p>  | <p>'The Steady Hand Game'</p> <p>OUTCOME – To design and manufacture a bespoke steady hand game, including soldering of electronic components.</p> <p>Know how to explore the design brief and adapt to their own context/design direction.</p> <p>Be able to choose and justify an appropriate target market and research existing solutions in correspondence with this.</p> <p>Recognise the work of Andy Warhol within the Pop Art design movement. Be able to describe key features of this work.</p> <p>Draw a variety of design ideas appropriately aimed at their chosen target market and be able to justify this by annotating these designs.</p> <p>Be able to manufacture the butt joint technique with some precision.</p> <p>Will understand the key material properties of pine, MDF and acrylic, and justify these as chosen materials for their steady hand game manufacture.</p> <p>Will understand the function of each electrical component within the steady hand game circuit, and be able to explain how together, the components make the game work.</p> <p>Will be able to independently solder a circuit board with an operational functioning output.</p> <p>Will understand that some materials conduct electricity and others do not.</p> <p>Will know different types of fixings; temporary & permanent.</p> | | <p>Joinery, housing, butt joint, pine, MDF (medium density fibreboard), Acrylic, electronics, solder, soldering iron, flux, circuit, dry joint, component, conductor, programming, chip, resistor, capacitor, input, output, side cutters, strippers, finger joint, coping saw, tenon saw, scroll saw, strain relief, light emitting diode (LED).</p> | <p>Formative assessment, checking understanding & progress during each lesson.</p> <p>'Forms' Summative assessment used half termly to assess understanding of key learning points.</p> |

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| <p>Rotation 'C' Cooking & Nutrition</p> | <p>Will understand how to use to 2D Design and the laser cutter to create their steady hand game design and integrate this into traditional woodwork practises. Be able to reflect, evaluate and develop, throughout the design and manufacturing process.</p> <hr style="border-top: 1px dashed #000;"/> <p>'A focus on bread and understanding ingredients' Will know the key characteristics of a staple diet within different cultures, and the importance of this within the human diet. Will master practical skills in bread making – including dough preparation, shaping, flavouring and baking. Will understand how the commercial production of wheat filters to create different flour types. Understand there are alternative raising agents to yeast / characteristics compared to yeast and use this knowledge to bake sour dough. Build on prior knowledge of sensory testing and comparisons, by tasting, comparing and analysing three different bread types. Be able to make pasta from raw ingredients and understand how this is commercially produced. Demonstrate key literacy skills, use of adjectives and adverbs, to write a bespoke menu. Master the use of the cooker hob on high heat, by designing, preparing and cooking a stir fry. Understand the importance of local and seasonal foods and explain the advantages and disadvantages of seasonal ingredients. Understand and be able to describe organic foods, and explain the advantages and disadvantages of buying and eating organic produce.</p> | <p>Allergy, analyse, antibacterial, calcium, carbohydrate, Celsius, centigrade, chilling, colander, consistency, contamination, creaming, fibre, food poisoning, glazing, gram, iron, kilogram, kneading, liquidise, litre, millilitre, mineral, nutrition, obesity, pathogen (ic), protein, proving, running-in, seasoning, simmering, spatula, toxin, vitamin.</p> | <p>Formative assessment, checking understanding & progress during each lesson.</p> <p>Hand written summative assessment used half termly to assess understanding of key learning points.</p> |
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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

100 Things to Know About Inventions – Clive Gifford

The Book of Inventions – Tim Cook

Engineering for Teens – Dr Pamela McCauley

KS3 Design & Technology Study Guide – CJP

Foundations KS3 Food Technology – Oxford

The Complete Cookbook for Young Chefs – America's Test Kitchen Kids

Points to note

This is the second year of the KS3 curriculum - 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.