Technology Year 7 Knowledge and Skills

Cantell SCHOOL

Area of study	Your child will … (Knowledge)	Your child will be able to… (Skills)
Rotations		
Food: Health, Safety and Hygiene	• **Explain** how bacteria spreads • **Describe** how to control bacteria levels and why it is important (Personal hygiene, the food prep environment, temperature control) • **Name** the difference between food origins (caught, reared, processed)	• **Use** tools and equipment (Knife, hob, grill and oven) • **Follow** health and safety (Risk assessments, PPE) • **Make** a range of dishes (Fruit Salad, French Bread Pizza, Bread, Pasta Salad, Chicken Goujons, Pithivier)
Resistant Materials: Wooden Storage Tray	• **Name** the properties of wood • **Describe the terms** Softwood, Hardwood and Manufactured Boards • **Describe** the methods of manufacture (Rabbet Joint, Corner Halving Joint, Panel pins) • **Explain** environmental impact of developing and manufacturing new products (Sustainability, The 6 R's)	• **Use** tools and equipment (Steel Rule, Try-Square, Marking Gauge, Tenon Saw, Coping Saw, Multi Purpose Drill) • Follow **health and safety** (Risk assessments, PPE) • Accurately Mark out • Accurately Cut • **Make** a Wooden Storage Tray
Design: CAD Design	• **Explain** the design process, including the use of templates (Design Brief, Specification, Design Development, Templates) • **Describe** different production methods (vacuum forming, blow moulding) • **Name** the properties of plastic • **Describe the terms** Thermoplastic and Thermo-setting plastic • **Describe** the design features of Packaging	• **Sketch** a range of design ideas with detailed annotation • **Produce** a final design using CAD software • **Make** a Plastic Chocolate Mould • **Develop** a packaging design

Technology Year 8 Knowledge and Skills

Cantell SCHOOL

Area of study	Your child will … (Knowledge)	Your child will be able to… (Skills)
Rotations		
Food: International Food	• **Describe** what type 2 diabetes is and the key risk factors for developing it (lifestyle, diet, culture, medical) • **Explain** the impact of food miles, food waste, seasonality and provenance • **Know** how to plan effectively to complete a practical outcome independently • **Describe** how yeast works and what it requires to become active	• **Use** tools and equipment (Develop knife, hob and oven) • **Use** intermediate skills (Kneading, Sauté, Caramelising, Working with high-risk foods and hot oil) • **Follow** health and safety (Risk assessments, PPE) • **Make** a range of dishes (chips and dips, apple crumble, Ultimate Garlic Bread, Stir Fry, Fresh Bread Pizza)
Resistant Materials: Metal Copper Bracket	• **Describe the terms** Ferrous, Non-Ferrous and Alloy • **Name** the properties of metal • **Describe** the methods of manufacture(marking out, cutting, drilling, bending, forming, finishing and assembling) • **Describe the terms** Structure, stability and function • **Explain** the design process (design ideas, phototyping, manufacturing)	• **Make** a template • **Make** a prototype • **Use** tools and equipment (Engineer's square, tin snips, hand file, engineer's vice, scriber, centre punch, battery drill, screwdriver) • Follow **health and safety** (Risk assessments, PPE) • **Make** a bracket with copper and pinewood
Textiles: Cushion Cover	• **Explain** where fabric comes from (origins) • **Describe the terms** Smart Materials, Sustainability • **Name** the parts of a sewing machine • **Describe** a range of Decorative Techniques (Hand Sewing, Tie Dye, Machine Sewing, Printing)	• **Use** research to **sketch** design ideas • **Use** tools and equipment (Needle, Scissors, Sewing Machine) • Follow **health and safety** (Risk assessments, PPE) • **Make** a Fabric Cushion Cover

Technology Year 9 Knowledge and Skills

Cantell SCHOOL

Area of study	Your child will … (Knowledge)	Your child will be able to… (Skills)
Rotations		
Food: A Balanced Diet	• **Explain** the role of the essential nutrients and the eatwell guide in a balanced diet (The essential nutrients, Macro and micro nutrients, The Eatwell guide) • **Know** some of the key attributes of fine dining plating (colour, portion control, position, organoleptic)	• **Use** tools and equipment (Revise and develop knife, hob and oven, small electrical equipment) • **Use** intermediate skills (Kneading, Piping, Whisking, Making a complex sauce) • Follow **health and safety** (Risk assessments, PPE) • **Make** a range of dishes (Spring Rolls, Fresh Pasta, Risotto, Swiss Roll, Curry, fruit pie)
Engineering Manufacture : CAD/CAM and Electronics - Amplifier	• **Describe** how a simple circuit works • **Explain** the components in the circuit • **Describe the term** composite material • **Explain** how the Laser Cutter works • **Explain** the benefits of CNC production • **Know** how to plan effectively to complete a practical outcome on CNC (Production Plan)	• **Use** soldering equipment to make a circuit (Soldering iron, wire strippers, wire cutters, pliers) • **Revise and Develop** CAD skills (casing design, orthographic drawing) • **Assemble** component parts • **Make** an Amplifier
Engineering Design: Product Design - Torch	• **Name** the stages of the design cycle (Identify, Design, Optimise, Validate) • **Describe the terms** anthropometric and ergonomic • **Demonstrate** how to communicate a design (Drawing techniques, Labelling, Annotation) • **Know** how to plan and develop a prototype	• **Develop** design ideas using 2D/3D drawing techniques (isometric/oblique/1 & 2 point perspective) • **Use** labelling and annotation to communicate design ideas • **Use** CAD to produce a design proposal (Google sketchUp) • Follow **health and safety** (Risk assessments, PPE) • **Use** tools and equipment (Craft Knife, Hand file, Rasp, needle Files)