



Curriculum Mapping

| Engineering | | | | | | | |
|-------------|--------------------------|---|----------|----------|---|----------|----------|
| | | Term1 | | Term2 | | Term3 | |
| | | Term 1.1 | Term 1.2 | Term 2.1 | Term 2.2 | Term 3.1 | Term 3.2 |
| 7 | Theme | BOX & Jewellery Project | | | Steady Hand Game | | |
| | Skills Knowledge Concept | <p>Theory Box:</p> <ul style="list-style-type: none"> Understanding how to work with metals (Pewter jewellery) Working properties, Surface finishes of Pewter Tolerances & Casting Metal Isometric Drawing Design Strategies/Communication of ideas Evaluation & Analysis Properties of structural wood - plywood <p>Practical Skills Box:</p> <ul style="list-style-type: none"> Use of power machinery, bench drill High quality making accuracy with measurements & tools (tri square, rulers, jigs) Two- and three-dimensional work—isometric drawing <p>Jewellery Theory:</p> <ul style="list-style-type: none"> Understanding Pewter casting <p>Practical Skills Jewellery:</p> <ul style="list-style-type: none"> CAD/CAM –2D design /Laser cutting Design concept- creating a mould Pewter casting Metal work – files, cutting, polishing Setting plastic | | | <p>Theory:</p> <ul style="list-style-type: none"> Understanding simple circuits, components, current, buzzers and switches. Energy Generation & Storage – Renewable & Non Renewable energy, Batteries, Nuclear power , Environmental impact Conductors and non-conductors Plastics – Thermo & Thermosetting Design Strategies/Communication of ideas Evaluation & Analysis Understand renewable energy and fossil fuel. Nuclear energy, wind, tide and solar. <p>Practical Skills</p> <ul style="list-style-type: none"> Soldering Use of Jigs, power machinery and hand tools (drilling machine) Plastic Press forming High quality making accuracy with measurements & tools (tri square, rulers, jigs) Manipulation of Steel – pliers Two- and three-dimensional work— hand drawn design ideas | | |
| 8 | Theme | CAM TOY | | | Bug Toy – Engineering Project | | |
| | Skills Knowledge Concept | <p>Theory:</p> <ul style="list-style-type: none"> Mechanical Devices: Different types of movement Changing magnitude and direction of force: CAMs and Followers, Levers, Linkages, Bell cranks, Push/Pull, Rotary Systems, Simple Gears Learn about linkages, mechanical advantage Learn about cam types and the motion generated. Links to real world. Material properties, Reinforcing materials, Commercially available types and sizes of materials and components. Tolerances Design Strategies/Communication of ideas Evaluation & Analysis <p>Practical Skills:</p> <ul style="list-style-type: none"> Use of power machinery and hand tools (bench drill) High quality making accuracy with measurements & tools (tri square, rulers, jigs) Two- and three-dimensional work—isometric drawing/design ideas | | | <p>Theory:</p> <ul style="list-style-type: none"> Metals & Alloys: Ferrous & Non-Ferrous, properties, sources & origins, uses, Use of automation within technology & production techniques: Automation, CAD/CAM, JIT, FMS SMART & Modern materials Biomimicry – Design strategies Composite/Ceramics Polymers – Dip Coating, powder coating, galvanizing Design Strategies/Communication of ideas Evaluation & Analysis Permanent and non-permanent joining methods of metals. Surface finishes including dip coating. Learn about switches, buzzers, motors and battery boxes. Understand types of batteries current, cell, voltage and current. <p>Practical:</p> <ul style="list-style-type: none"> Soldering Use of power machinery and hand tools (aviation snips, nibblers, metal sheet cutter, junior hacksaw, metal hole punch, spot welder, pliers, pop rivet, use of brazing hearth) Plastic Dip coating High quality making accuracy with measurements & tools (templates, engineers blue) Two- and three-dimensional work— hand drawn design ideas, CAD - Use of Techsoft 2D Design Joining materials – welding, soldering, rivets | | |



| | | | | | | | |
|----|---------------------------|--|--|--|---|---|---|
| 9 | Theme | Phone Stand | | | Designing for Others – Disability Toothbrush | | E Textiles |
| | Skills Knowledge Concept | <p>Theory:</p> <ul style="list-style-type: none"> - Manufacturing methods & Processes: Prototype, batch, mass and continuous production runs - Prototype development/modelling - Use primary and secondary data to understand client and/or user needs. - Market research, use of anthropometric & ergonomic data - The use of anthropometric data and percentiles. - How to write a design brief and produce a design and manufacturing specification. - Design Strategies/Communication of ideas - Evaluation & Analysis <p>Practical Skills:</p> <ul style="list-style-type: none"> - High quality making accuracy with measurements & tools (templates, prototypes, tri square, ruler, marking gauge) - Marking out – Using accurate measuring techniques to mark out, use the depth gauge of the bench Drill and vernier callipers. <p>Two- and three-dimensional work— hand drawn design ideas, CAD - Use of Techsoft 2D Design</p> | | | <p>Theory:</p> <p>Preparing students for NEA at GCSE</p> <ul style="list-style-type: none"> - Polymers - origins & sources, properties, manufacturing processes, stock forms, working with and using. - Prototype development – iterative design, CAD modelling - Use of primary & secondary data – anthropometric, ergonomic, market research - Inclusive design (clients needs & wants) - Understanding of enterprise - Understanding of environmental, social and economic challenge: inclusive design, sustainable design, plastics & the environment, carbon footprint - Design Strategies/Communication of ideas - Evaluation & Analysis <p>Practical:</p> <ul style="list-style-type: none"> - Prototyping tools: Tenon saw, hegner saw, tri square, disk sander, sand paper, coping saw - 2D to 3D design techniques: hand drawn designs to using modelling materials – Styrofoam models & CAD - Polymers & surface finishes - CAD/CAM – 2D design, Laser cutting - Line bending | | <p>Theory:</p> <ul style="list-style-type: none"> - industry - Electronic components (PCB, LED, Batteries and conductive cotton) - Cross curricular materials – composites - Modern materials <p>Practical Skills:</p> <ul style="list-style-type: none"> - Using conductive thread, e textiles components - Design techniques use of inspiration |
| 10 | Theme | Metal Square | Mechanical | Pneumatics | Structures | Other | Electronics |
| | Skills Knowledge Concepts | <p>Theory:</p> <ul style="list-style-type: none"> • Stock Sizes and metal profiles • Joining methods for metals, permanent and non-permanent • Measuring tools, micrometer, Vernier callipers, surface block and gauge. Odd leg callipers • Working to a tolerance and understanding why tolerances are used • Understand about surface finishes, painting, galvanising, chrome plating • Metal casting including sand casting, gravity casting, high pressure casting and pewter casting • Testing materials in the real world and in the workshop. Rockwell and Brunel testing methods for hardness. • Mechanical and physical properties of metals and profiles of. • Understand tensile strength, torsion, compression, hardness, stiffness, brittleness, malleability and ductility. • Learn about ferrous, non-ferrous and alloy materials and their properties. Learn about polymers, composites and structural timbers. • Surface finishes including dip coating and the advantages and disadvantages of each. • Learn about testing materials destructive and non-destructive testing. • Orthographic drawings, isometric, 1st and 3rd angle projections. | <p>Theory:</p> <ul style="list-style-type: none"> - Four Motion types and the applications where they are used - Understanding gears, gear trains, worm and helical gear drives - Understanding transmission of power through belt, v-belt, gears and drive shafts. Using bevel gears to transmit power through 90 degrees. - Learn about linkages, mechanical advantage - Learn about cam types and the motion generated. Links to real world. - Use of differential drives - Understanding ratio and speed - Understand tensile strength, torsion, compression, hardness, stiffness, brittleness, malleability and ductility. - Learn about Youngs Modulus and how it is used to calculate stress/strain - Learn about the 3 types of maintenance and why we carry out maintenance - Learn about wasting / material removal, cutting, turning, milling, drilling and chemical etching. - Learn about fabrication methods used in the workshop and the real world. - Learn about monocoque structures <p>Practical Skills:</p> <ul style="list-style-type: none"> - Construction of a crank and slider to a high tolerance. | <p>Theory:</p> <ul style="list-style-type: none"> - Understanding pneumatic systems, how they work and where they are used in the real world - Understanding the components that make up a circuit. compressor, filter, 2 and 3 port valves, solenoids, single and double acting cylinders. - Differences between pneumatic circuits and hydraulic circuits and advantages and disadvantages of both. - Understanding circuit diagram symbols and been able to explain how they work <p>Practical Skills:</p> <ul style="list-style-type: none"> - Construction pneumatic circuits using technical pneumatic LEGO sets. | <p>Theory:</p> <ul style="list-style-type: none"> - Understand static and dynamic forces that act on a structure - Learn about different bridge types and construction methods. Beam, arch, box section, suspension and cantilever - Understand compression and expansion forces that apply to structures. <p>Practical Skills:</p> <ul style="list-style-type: none"> - Construct a bridge from spaghetti to hold a weight. - Create gusset plates and struts from spaghetti - Use glue gun and card - Design the bridge using 2D design to create a full-size templet - Testing the structure to destruction. | <p>Theory:</p> <ul style="list-style-type: none"> - Understand the maths involved in everyday engineering problem solving. Pythagoras theory, trigonometry and Learn about Youngs Modulus and how it is used to calculate stress/strain. - Calculating pressure to bend materials. - Learn about volume of materials to calculate cost. - Understand quality control and where it is used in the real world - Understand production methods one-off, batch, mass and continuous production - Plastic processes, injection moulding, compression moulding, extrusion and rotational moulding. - Understand renewable energy and fossil fuel. Nuclear energy, wind, tide and solar. - Understand how to interpret graphs and data used in them - Learn about Aerodynamics, thrust and drag over surface material. - Understand production plans, JIT, FIFO, LIFO, canban. <p>Practical Skills:</p> <ul style="list-style-type: none"> - Use the injection moulding machine to make a small wheel - Use the split moulds | <p>Theory:</p> <ul style="list-style-type: none"> - Understand the components of an electronic circuit, resistor, diodes, variable resistors, 7 segment displays, capacitor, LED, wires, battery, cell and transistor NPN and PNP - Understand simple chip technology, 555 timer, op amp, 74 logic - Understand how to create a circuit using breadboard - Understand how to use circuit wizard to simulate a circuit. - Understand how to program an Arduino and the importance of input, output and process devices to control modern day products. - Learn about system diagrams, schematic drawings and flowcharts to represent the workings of a circuit. links to flowall in IT - Power supply, AC, DC Mains and battery power. Step up and step-down transformers. - Learn about switches, buzzers, motors and battery boxes. Understand types of batteries current, cell, voltage and current. - Understand logic gates, AND, NOR, OR, NOT - ADC, analogue to digital programmable devices, FET's and 7 segment displays |



| | | | | | | | | |
|------------------|---------------------------------|--|---|--|--|--|--|--|
| | | Practical Skills: <ul style="list-style-type: none"> Using machine tools and equipment to produce a metal square using 4 different joining methods, | <ul style="list-style-type: none"> Using maths to calculate liner distance from rotary motion Using workshop tools and equipment. Drilling machine Hegner saw, files, sandpaper and nuts and bolts. | | | | modifying programs to increase performance. Practical Skills: <ul style="list-style-type: none"> Construct simple circuits Program the Arduino Use the etching tank to manufacture a small circuit board. | |
| | Theme | NEA Project from AQA's List | | | | Revision for the Exam | | |
| 11 | Skills Knowledge Concepts | <ul style="list-style-type: none"> Problem solving <ul style="list-style-type: none"> a written description of the task that clearly defines what the problem is organised work that communicates ideas evidence of a completed prototype of the design solution. <ul style="list-style-type: none"> Drawings and Conventions <ul style="list-style-type: none"> orthographic (including sectional views) isometric assembly schematics. Production Planning <ul style="list-style-type: none"> a detailed production plan an explanation of each of the stages of production an explanation of the quality control techniques used to produce the product. Engineering Skills <ul style="list-style-type: none"> evidence of the selection and safe uses of appropriate materials, parts, components, tools and equipment required to make their product an explanation of the processes used evidence of the quality control measures taken. Applying Systems Technology <ul style="list-style-type: none"> representations of technological systems used in their product in diagrammatic form block diagrams with explanations of the systems operating within their product. Testing and Evaluating <ul style="list-style-type: none"> evidence of a range of appropriate testing of the product an analysis and evaluation of the completed product, with further explanation as to how and why it could be improved. | | | | Engineering Materials 1 – Metals and Alloys Engineering Materials 2 – Timbers, Ceramics and renewables Engineering Materials 3 – Polymers, Energy production and Engineered Lifespans Revision Calendar | | |
| Wider Curriculum | | See separate STEM Action plan to see how Engineering is promoted across the whole school. Click this link | | | | | | |



| Design | | | | | | | |
|--------|--------------------------|---|----------|----------|--|----------|----------|
| | | Term1 | | Term2 | | Term3 | |
| | | Term 1.1 | Term 1.2 | Term 2.1 | Term 2.2 | Term 3.1 | Term 3.2 |
| 7 | Theme | BOX & Jewellery Project (alternating projects as per rota) | | | Steady Hand Game (alternating projects as per rota) | | |
| | Skills Knowledge Concept | <p>Theory Box :</p> <ul style="list-style-type: none"> - Understanding how to work with natural and manufactured timbers, machine & hand tools - Natural & Manufactured Timber Sources, origin, Types, Conversion, Working properties, Surface finishes - Tolerances & Cutting & Shaping wood - Isometric Drawing - Design Strategies/Communication of ideas - Evaluation & Analysis <p>Practical Skills Box:</p> <ul style="list-style-type: none"> - Use of power machinery and hand tools (hegner saw, tenon saw, sander, benchdrill) - High quality making—accuracy with measurements & tools (tri square, rulers, jigs) - Two and three dimensional work—isometric drawing <p>Jewellery Theory :</p> <ul style="list-style-type: none"> - Work of others – art influence - Understanding Pewter casting - Understanding how to work with metals (Pewter jewellery) - Working properties, Surface finishes of Pewter - Tolerances & Casting Metal <p>Practical Skills Jewellery:</p> <ul style="list-style-type: none"> - CAD/CAM –2D design /Laser cutting - Design concept- creating a mould - Pewter casting - Metal work – files, cutting, polishing - Setting plastic | | | <p>Theory:</p> <ul style="list-style-type: none"> - Understanding simple circuits, components, current, buzzers and switches. - Energy Generation & Storage – Renewable & Non Renewable energy, Batteries, Nuclear power , Environmental impact - Conductors and non-conductors - Plastics properties – Thermo & Thermosetting - Design Strategies/Communication of ideas - Evaluation & Analysis <p>Practical Skills</p> <ul style="list-style-type: none"> - Soldering - Use of Jigs, power machinery and hand tools (hegner saw, coping saw, sander, drilling machine) - Plastic Press forming - High quality making—accuracy with measurements & tools (tri square, rulers, jigs) - Manipulation of materials – pliers - Two and three dimensional work— hand drawn design ideas | | |
| 8 | Theme | CAM TOY (alternating projects as per rota) | | | BUG TOY (alternating projects as per rota) | | |
| | Skills Knowledge Concept | <p>Theory:</p> <ul style="list-style-type: none"> - Mechanical Devices: Different types of movement - Changing magnitude and direction of force: CAMs and Followers, Levers , Linkages, Bell cranks, Push/Pull, Rotary Systems, Simple Gears - Material properties, Reinforcing materials, Commercially available types and sizes of materials and components. - Timber & manufactured boards – properties, sources & origins - Tolerances - Design Strategies/Communication of ideas - Evaluation & Analysis <p>Practical Skills:</p> <ul style="list-style-type: none"> - Use of power machinery and hand tools (hegner saw, tenon saw, sander, benchdrill) - High quality making—accuracy with measurements & tools (tri square, rulers, jigs) <p>Two and three dimensional work—isometric drawing/design ideas</p> | | | <p>Theory :</p> <ul style="list-style-type: none"> - Metals & Alloys: Ferrous & Non Ferrous, properties, sources & origins, uses, - Use of automation within technology & production techniques: Automation, CAD/CAM, JIT, FMS - SMART & Modern materials - Biomimicry – Design strategies - Composite - Polymers – Dip Coating, powder coating, galvanizing - Design Strategies/Communication of ideas - Evaluation & Analysis <p>Practical:</p> <ul style="list-style-type: none"> - Soldering - Use of power machinery and hand tools (aviation snips, nibblers, metal sheet cutter, junior hacksaw, metal hole punch, spot welder, pliers, pop rivet) - Plastic Dip coating - High quality making—accuracy with measurements & tools (templates, engineers blue) - Two and three dimensional work— hand drawn design ideas, CAD - Use of Techsoft 2D Design - Joining materials – welding, soldering, rivets | | |



| | | | | | |
|----|--------------------------|--|--|---|--|
| 9 | Theme | Phone Stand (alternating projects as per rota) | | Designing for Others – Disability Toothbrush (alternating projects as per rota) | E Textiles (alternating projects as per rota) |
| | Skills Knowledge Concept | <p>Theory:</p> <ul style="list-style-type: none"> - Timber & Manufactured Boards - sources & origins (seasoning to reduce moisture content of timbers). - Manufacturing methods & Processes : Prototype, batch, mass and continuous production runs. - Prototype development/modelling - Use primary and secondary data to understand client and/or user needs. - Market research, use of anthropometric & ergonomic data - The use of anthropometric data and percentiles. - How to write a design brief and produce a design and manufacturing specification. - Design Strategies/Communication of ideas - Evaluation & Analysis <p>Practical Skills:</p> <ul style="list-style-type: none"> - Use of power machinery and hand tools Timbers (hegner saw, benchdrill, router, disk sander/beltsander) - Surfaces finishes – sanding seal - High quality making—accuracy with measurements & tools (templates, prototypes, tri square, ruler, marking gauge) - Marking out, cutting, shaping - Timber joining methods, finishing techniques - Two and three dimensional work— hand drawn design ideas, CAD - Use of Techsoft 2D Design | | <p>Theory:</p> <p>Preparing students for NEA at GCSE</p> <ul style="list-style-type: none"> - Polymers - origins & sources, properties, manufacturing processes, stock forms, working with and using. - Prototype development – iterative design, CAD modelling - Use of primary & secondary data – anthropometric, ergonomic, market research - Inclusive design (clients needs & wants) - Understanding of enterprise - Understanding of environmental, social and economic challenge: inclusive design, sustainable design, plastics & the environment, carbon footprint - Design Strategies/Communication of ideas - Evaluation & Analysis <p>Practical:</p> <ul style="list-style-type: none"> - Tenon saw, hegner saw, tri square, disk sander, sand paper, coping saw - 2D to 3D design techniques: hand drawn designs to using modelling materials –Styrofoam models & CAD - Polymers & surface finishes - CAD/CAM – 2D design, Laser cutting - Line bending | <p>Theory:</p> <ul style="list-style-type: none"> - Textiles, E-textiles and use in industry - Electronic components - Design for /work of others – Gaudi inspiration - Surface finishes – transfer printing/sublimation printing - Cross curricular materials – composites - Modern materials <p>Practical Skills:</p> <ul style="list-style-type: none"> - Hand sewing – conductive thread, e textiles components - Printing – transfer / sublimation printing - Design techniques use of inspiration |
| 10 | Theme | Drawing Skills | Picture Frame Project | Lamp Project | NEA GCSE |
| | Skills Knowledge Concept | <p>Design & Making Principles (GCSE AQA): Communication of design ideas:</p> <p>Develop , communicate, record and justify design ideas using a range of appropriate techniques. Transferable skills to NEA & Exam.</p> <ul style="list-style-type: none"> - Freehand sketching, isometric and perspective - 2D and 3D drawings : isometric, orthographic, oblique, two point perspective - CAD design – including Sketchup & 2D Design | <p>Core technical principles/Specialist technical principles:</p> <p>Timbers & Manufactured Board</p> <ul style="list-style-type: none"> - Sources, origins, properties - Working with timber based materials - Commercial manufacturing, surface treatments and finishes. - Ecological issues in the design and manufacture of products. - Environmental issues: Deforestation, mining, drilling and farming. <p>Design & Make principles</p> <ul style="list-style-type: none"> - Investigation into users needs and wants - Creating a design brief & specification - The environment, social and economic challenges that influence design and making. - Generate imaginative and creative design ideas: iterative design, Modelling, Sketching - Evaluation of their work to improve outcomes - Identify steps within the design process—Product Analysis, <p>Timber & Manufactured board</p> <p>Marking out, cutting & shapingwoods</p> <ul style="list-style-type: none"> - Tenon saw, hegner saw, tri square, disk sander, sand paper, coping saw, bench drill, jigs, chisel, files, CNC router - Joining methods – Timbers - Surface finishes | <p>Specialist technical principles:</p> <p>Metal based materials</p> <ul style="list-style-type: none"> - Sources, origins, properties - Working with metal based materials - Commercial manufacturing, surface treatments and finishes. <p>Polymers:</p> <ul style="list-style-type: none"> - Sources, origins, properties - Working with polymer based materials - Commercial manufacturing, surface treatments and finishes. <p>Core Technical Principles</p> <ul style="list-style-type: none"> - Ecological & environmental issues <p>Systems & Control:</p> <ul style="list-style-type: none"> - Inputs, processes and outputs - Energy generation & storage - Renewable and non-renewable energy. - Production techniques and systems: JIT, Batch, CAD/CAM, FMS <p>Design & Make principles</p> <ul style="list-style-type: none"> - Investigation into the work of others, past and present designers. - Polymers, Metals & Alloys, Systems & Controls - Marking out, cutting & shaping metals & polymers - CNC router, Tenon saw, hegner saw, tri square, disk sander, sand paper, coping saw, bench drill, jigs, chisel, files, laser cutter - CAD/CAM software – 2D design - Systems & Controls – circuit construction, soldering, soldering iron | <p>Beginning of GCSE NEA</p> <p>AO1 Identify, investigate and outline design possibilities</p> <ul style="list-style-type: none"> - A Identifying & investigating design possibilities - B Producing a design brief & specification |
| 11 | Theme | GCSE NEA | | Revision | |
| | Skills Knowledge Concept | <p>NEA 2 exam</p> <p>15 hours</p> <p>A02 Design and make prototypes that are fit for purpose</p> <ul style="list-style-type: none"> - C Generating design ideas - D Developing design ideas - E Realising design ideas <p>A03 Analyse and evaluate</p> <ul style="list-style-type: none"> - F Analysing & evaluating | | <p>Core Technical Principles:</p> <p>New & Emerging Technologies:</p> <ul style="list-style-type: none"> - Industry & Enterprise - Sustainability & The environment - People Culture & Society - Informing design decisions <p>Energy Materials Systems and devices:</p> <ul style="list-style-type: none"> - Energy Generation - Energy Storage - Modern Materials - SMART Materials | |



| | | | | | | | |
|------------------|--|-----------------------------------|----------------------|------------|-----------|-----------------------------|--|
| | | | | | | | <ul style="list-style-type: none"> - Composite materials & Technical Textiles - Systems approach to design - Electronic systems processing - Mechanical Devices <p>Materials and working properties :</p> <ul style="list-style-type: none"> - Papers & Boards - Timbers - Metals - Polymers - Textiles <p>Specialist technical principles</p> <p>Common Specialist Technical Principles:</p> <ul style="list-style-type: none"> - Forces & Stresses - Improving Functionality - Ecological Social footprint - 6R's - Scales of Production - Timbers - Working Properties/Sources & Origins/Making Processes <p>Design & Making</p> <p>Designing Principles:</p> <ul style="list-style-type: none"> - Investigation Primary & Secondary Data - The work of others - Design Strategies <p>Making Principles:</p> <ul style="list-style-type: none"> - Communication of design ideas and prototype development - Selection of materials and components - Tolerances & allowances - Material Management and marking out - Specialist tools equipment techniques and processes - Surface treatments and finishes |
| Wider Curriculum | | ENGINEERING AT KS3 – BUG PROJECTS | Jewellery Club – KS3 | STEM CLUBS | STEM Days | Bradford Manufacturing Week | |



Food- Hospitality

| Food- Hospitality | | | | | | | |
|-------------------|--------------------------|--|--|--|--|--|--|
| | | Term1 | | Term2 | | Term3 | |
| | | Term 1.1 | Term 1.2 | Term 2.1 | Term 2.2 | Term 3.1 | Term 3.2 |
| | | Rotation 1 | | | Rotation 2 | | |
| Theme | | Unit 1 – Health and Safety | Unit 2 – The Eat Well Guide – How to have a balanced diet | Unit 3 – Food issues | Unit 1 – Health and Safety | Unit 2 – The Eat Well Guide – How to have a balanced diet | Unit 3 – Food issues |
| 7 | Skills Knowledge Concept | <p>The Big Picture:</p> <ul style="list-style-type: none"> Intro into Health and Safety and Hygiene Kitchen equipment – knife safety Food storage and the danger zone Food contamination = The 4 C <p>Skills:</p> <p>Lesson 4 and 5 – Knife skills and safety</p> <p>Lesson 6 and 7 – Rubbing in method (will be repeated in Y8 and Y9) and QCC</p> <p>Treat lesson - bain-marie (revisited Lesson 16) Challenge;</p> <p>Lesson 5 fruit salad – the fruits pupils bring in</p> <p>Assessment:</p> <p>Lesson 5 Fruit salad; Self-assessment of fruit salad to complete in lesson or for homework Teacher grade and feedback (add to SIMs and pupil tracker sheet)</p> <p>Lesson 7 Rockcake - Self-assessment of Rockcake to complete in lesson or for homework</p> <p>Lesson 8 – End of Unit Test - Teacher grade and feedback (add to SIMs and pupil</p> <p>Links to Hospitality and catering GCSE; Unit 1 LO4 Unit 2 Practical skills</p> | <p>The big Picture:</p> <ul style="list-style-type: none"> The Eat Well Guide The 8 tips of healthy eating Creating balanced dishes <p>Skills:</p> <p>Lesson 10 and 11 - Making a dough Shaping bread dough, Proving, Flavours, making a sauce, Creativity, adapting a recipe, Working to a time plan</p> <p>Lesson 12 – Sauce making Flavours, making a sauce, Creativity, Adapting a recipe</p> <p>Lesson 15 -16 – Food Presentation SKILLS -creativity; presentation; skills and adding nutritional balance</p> <p>Assessment:</p> <p>Lesson 11- 12 - Pizza Snack Self-assessment of bread to complete in lesson or for homework</p> <p>Lesson 14 – case study Whole class feedback – Teacher assessment</p> <p>Links to Hospitality and catering GCSE; Unit 2 – AC1</p> | <p>The big Picture;</p> <ul style="list-style-type: none"> Where are food comes from Framing and processing food availability <p>Skills;</p> <p>Assessment;</p> <p>Links to Hospitality and catering GCSE; Unit 2; NEA</p> | <p>The Big Picture:</p> <ul style="list-style-type: none"> Intro into Health and Safety and Hygiene Kitchen equipment – knife safety Food storage and the danger zone Food contamination = The 4 C <p>Skills:</p> <p>Lesson 4 and 5 – Knife skills and safety</p> <p>Lesson 6 and 7 – Rubbing in method (will be repeated in Y8 and Y9) and QCC</p> <p>Treat lesson - bain-marie (revisited Lesson 16) Challenge;</p> <p>Lesson 5 fruit salad – the fruits pupils bring in</p> <p>Assessment:</p> <p>Lesson 5 Fruit salad; Self-assessment of fruit salad to complete in lesson or for homework Teacher grade and feedback (add to SIMs and pupil tracker sheet)</p> <p>Lesson 7 Rockcake - Self-assessment of Rockcake to complete in lesson or for homework</p> <p>Lesson 8 – End of Unit Test - Teacher grade and feedback (add to SIMs and pupil</p> <p>Links to Hospitality and catering GCSE; Unit 1 LO4 Unit 2 Practical skills</p> | <p>The big Picture:</p> <ul style="list-style-type: none"> The Eat Well Guide The 8 tips of healthy eating Creating balanced dishes <p>Skills:</p> <p>Lesson 10 and 11 - Making a dough Shaping bread dough, Proving, Flavours, making a sauce, Creativity, adapting a recipe, Working to a time plan</p> <p>Lesson 12 – Sauce making Flavours, making a sauce, Creativity, Adapting a recipe</p> <p>Lesson 15 -16 – Food Presentation SKILLS -creativity; presentation; skills and adding nutritional balance</p> <p>Assessment:</p> <p>Lesson 11- 12 - Pizza Snack Self-assessment of bread to complete in lesson or for homework</p> <p>Lesson 14 – case study Whole class feedback – Teacher assessment</p> <p>Links to Hospitality and catering GCSE; Unit 2 – AC1</p> | <p>The big Picture;</p> <ul style="list-style-type: none"> Where are food comes from Framing and processing food availability <p>Skills;</p> <p>Assessment;</p> <p>Links to Hospitality and catering GCSE; Unit 2; NEA</p> |

| | | Rotation 1 | | Rotation 2 | | |
|-------|--------------------------|--|---|---|---|--|
| Theme | | Unit 1 – Nutrition | Unit 2 – Special diets | Unit 1 – Nutrition | Unit 2 – Special diets | |
| 8 | Skills Knowledge Concept | <p>The big Picture; Pupils completing a task linking to Hospitality and Catering and embedding knowledge of nutrition</p> <ul style="list-style-type: none"> • recap the EGW • recap Health and Safety • introduce the 5 main nutrients • in-depth lessons looking at each nutrient and its functions • <p>Skills; Lesson 2 - recap of health and safety, handling raw meat, flavouring Lesson 7 – creativity, health and safety, pupil’s organization, own dish skills Challenge; own recipe for lesson 7, make one plate to present, make a side dish to serve Skills; Lesson 9 – Koftas handling raw meat, cooking for a special diet, making a sauce / dip, making flat bread, shaping, creativity, cooking meat to 75C, food presentation, food styling. Lesson 12 – MOD / Pop Tarts / Jam Tarts rubbing in method, SC pastry, shaping, rolling, filling, baking, creaming method (cake MOD) Lesson 14 – Christmas / Eater Treat</p> <p>Assessment; Lesson 5 – Teacher grade and whole class feedback (add to SIMs and pupil tracker sheet)</p> <p>Links to Hospitality and catering GCSE; Unit 2; NEA</p> | <p>The big Picture;</p> <ul style="list-style-type: none"> • Understanding of s=what special diets are • How people can have different diets • Allergies and intolerance <p>Skills;</p> <p>Assessment; Lesson 20 - Self-assessment of dish to complete in lesson or for homework Teacher feedback written Lesson 21 – End f food test teacher marked</p> <p>Links to Hospitality and catering GCSE; Unit 2; NEA</p> | <p>The big Picture; Pupils completing a task linking to Hospitality and Catering and embedding knowledge of nutrition</p> <ul style="list-style-type: none"> • recap the EGW • recap Health and Safety • introduce the 5 main nutrients • in-depth lessons looking at each nutrient and its functions • <p>Skills; Lesson 2 - recap of health and safety, handling raw meat, flavouring Lesson 7 – creativity, health and safety, pupil’s organization, own dish skills Challenge; own recipe for lesson 7, make one plate to present, make a side dish to serve Skills; Lesson 9 – Koftas handling raw meat, cooking for a special diet, making a sauce / dip, making flat bread, shaping, creativity, cooking meat to 75C, food presentation, food styling. Lesson 12 – MOD / Pop Tarts / Jam Tarts rubbing in method, SC pastry, shaping, rolling, filling, baking, creaming method (cake MOD) Lesson 14 – Christmas / Eater Treat</p> <p>Assessment; Lesson 5 – Teacher grade and whole class feedback (add to SIMs and pupil tracker sheet)</p> | <p>The big Picture;</p> <ul style="list-style-type: none"> • Understanding of s=what special diets are • How people can have different diets • Allergies and intolerance <p>Skills;</p> <p>Assessment; Lesson 20 - Self-assessment of dish to complete in lesson or for homework Teacher feedback written Lesson 21 – End f food test teacher marked</p> <p>Links to Hospitality and catering GCSE; Unit 2; NEA</p> | |

| | | | | | | | |
|----|--------------------------|--|--|--|---|---|---|
| | | | | | Links to Hospitality and catering GCSE; Unit 2; NEA | | |
| | | Rotation 1 | | | Rotation 2 | | |
| | Theme | Unit 1 – causes of food-related ill health | Unit 2 Roles in Hospitality and Catering | Unit 2 – understanding nutrition | | | |
| 9 | Skills Knowledge Concept | <p>The big Picture; develop confidence of cooking a range of dishes understand what hospitality and catering is.</p> <ul style="list-style-type: none"> • Explore bad Health and Safety rules • Name some of the causes of food-related ill health • Justify why cafes and restaurants have food rating systems • Accurately describe the role of the EHO <p>Skills; Lesson 4 – Practical Bolognese (meat Ragu) - Focus on safety and food hygiene Knife skills Lesson 8 – Practical pizza – making a dough, sauce, shaping and flavouring</p> <p>Assessment; Lesson 6 – Food hygiene and role of EHO Assessment – case study</p> <p>Links to Hospitality and catering GCSE; Unit 2; NEA</p> | <p>The big Picture; develop confidence of cooking a range of dishes understand what hospitality and catering is.</p> <ul style="list-style-type: none"> • Understand the Kitchen Brigade system • Understand the job roles in a restaurant • Know different type of establishment • To understand star ratings and effects of reviews <p>Skills; Lesson 11 – Practical make the pastry to freeze Lesson 12 – Practical make sausage rolls</p> <p>Assessment; Lesson 12 – Practical make sausage rolls – teacher assessment</p> | <p>The big Picture; develop confidence of cooking a range of dishes understand what hospitality and catering is.</p> <ul style="list-style-type: none"> • Nutrients • How food affects life stages • Special diets <p>Skills; Lesson 18 Leon 23</p> <p>Assessment; Lessons 21-23 assessment project</p> | | | |
| 10 | Theme | Unit 1 - LO4: Know how food can cause ill health. | | LO 1 Understanding the environment in which hospitality and catering providers operate | LO2: Understand how hospitality and catering provision operates | Unit 1 LO3: Understand how hospitality and catering provision meets health and safety requirements. | : Be able to propose a hospitality and catering provision to meet specific requirements |

| | | | | | | | |
|------------------|--------------------------|---|--|---|--|--|--|
| | Skills Knowledge Concept | <ul style="list-style-type: none"> Describe food related causes of ill health Describe the role and responsibilities of the EHO (Environmental Health Officer) Describe food safety legislation Describe common types of food poisoning Describe the symptoms of food induced ill health | <ul style="list-style-type: none"> Describe the structure of the hospitality and catering industry Analyse job requirements within the hospitality and catering industry. Describe working conditions of different job roles across the hospitality and catering industry Explain factors affecting the success of hospitality and catering providers. | <p>Describe the operation of the kitchen.</p> <p>Describe the operation of front of house.</p> <p>Explain how hospitality and catering provision meet customer requirement</p> | <ul style="list-style-type: none"> Describe personal safety responsibilities in the workplace. Identify risks to personal safety in hospitality and catering. Recommend personal safety control measures for hospitality and catering provision. | <ul style="list-style-type: none"> Review options for hospitality and catering provision Recommend options for hospitality provision | |
| | Theme | LO1 Unit 2 | Lo2 Unit 2 | Mock NEA | NEA | NEA | |
| 11 | Skills Knowledge Concept | <p>Nutrition Describe functions of nutrients in the human body</p> <p>Special Diets Compare the nutritional needs of different groups of people</p> <p>Explain characteristics of unsatisfactory nutritional intake.</p> <p>Explain how cooking methods impact on nutritional value.</p> | <p>Dish Proposal Explain factors to consider when proposing dishes for menus</p> <p>Environment Explain factors to consider when proposing dishes for menus.</p> <p>Explain factors to consider when proposing dishes for menus.</p> <p>Plan production of dishes for a menu.</p> | | Complete NEA | Complete NEA | |
| Wider Curriculum | | | | | | | |

| Textiles | | | | | | | |
|----------|--------------------------|--|---|---|----------|----------|----------|
| | | Term1 | | Term2 | | Term3 | |
| | | Term 1.1 | Term 1.2 | Term 2.1 | Term 2.2 | Term 3.1 | Term 3.2 |
| 7 | Theme | Introduction and 5 stitch challenge | 5 stitch challenge cont.... and Tropical World bag project | Tropical World bag project | | | |
| | Skills Knowledge Concept | <ul style="list-style-type: none"> - Introduction to Textiles - Why are textiles important? - T shirt about me - From fibre to yarn - Paper weaving - 5 stitch challenge | <ul style="list-style-type: none"> - Tropical World Design Brief/Analysis - Inspiration/fact sheets - Initial character sketches - Design ideas with stitch labelling - Template production - Pinning and cutting skills using templates - Manufacturing diary | <ul style="list-style-type: none"> - Tie and dye technique (dyeing front of bag) - Hand embroidery of character design - Sewing machine paper practice/driving test - Construction of bag (seams and drawing casing) - Quality control - Final evaluations <p>Swap-over to food at Feb half term</p> | | | |
| 8 | Theme | Sewing machine focus and monster toy design brief | Monster toy project | Monster toy project | | | |
| | Skills Knowledge Concept | <ul style="list-style-type: none"> - Sewing machine practice on paper/driving test - Design Brief - Toy analysis/focus on senses (exam style question) - Timed sketches (monster character initialisation) - Educational purpose of toys (use of components for interactivity) - Fabric choices – analysis of basic properties | <ul style="list-style-type: none"> - Working characteristics of fabrics (applique practice by hand and machine), comparisons/evaluation to inform own planning - Final design planning - Final design drawing with annotation - Template production - Pinning and cutting fabrics | <ul style="list-style-type: none"> - Stitching decoration and application of component parts - Construction of toy - QC and manufacturing diary - Final evaluations <p>Swap-over to food at Feb half term</p> | | | |
| 9 | Theme | Sewing machine focus and case for an event brief | | | | | |
| | Skills Knowledge Concept | <ul style="list-style-type: none"> - Seams and decoration practice using fabrics relevant to upcoming project - Design Brief – focus on fashion and function - Event research (sporting or festival) – fashion and accessories trend board - Logo design panel on A5 fabric (hand and machine embroidery/applique and use of components) | <ul style="list-style-type: none"> - Sustainability of fabrics (PET – plastic bottles to polar fleece) - Pattern cutting storage case for event - CAD CAM – turning fabric logo into badge - Construction of storage case - Manufacturing diary - Final evaluations <p>Swap-over at Christmas due to options</p> | | | | |

| | | | | | | | |
|------------------|--------------------------|--|---|---|---|--|--|
| 10 | Theme | Pearson's BTEC Tech Award in Art and Design | | | | | |
| | Skills Knowledge Concept | <ul style="list-style-type: none"> - Introduction to sketchbook work (design task considering popular fabrics) - Sewing machine skills – setting up and seams practice (seams for different properties of fabrics) - Focus of fashion sketching – how to draw garments, how to apply colour to create textures of fabrics - Fashion in colour – how designers use colour (list of designers to choose from) – colour introduction, designer research, collage design task - Repeat prints used on fashion fabrics – types of repeats, focus on Orla Kiely and Tumorous Beasties and how they use repeat prints on their fabrics - Creation of own repeat print designs using sketches of different fruits - CAD CAM using fabric transfer paper to create repeat print fabric samples | <ul style="list-style-type: none"> - Focus on New York designer Zero Waste Daniel and how he uses unwanted fabrics to create new fashion - Practical portfolio development, sampling a wide variety of techniques to use within upcoming components (tie dye, batik, hand and freehand machine embroidery/applique, block printing, stencil printing, embellishments - Presentation skills on A3 – practical portfolio write ups | <ul style="list-style-type: none"> - Continuation of practical portfolio - Component One (internally assessed) – investigations into designers, mood boards, fashion research | <ul style="list-style-type: none"> - Component One continued (initial sketches, developed designs, mini garment prototypes) - Fabric manipulation techniques (pleat, gathers, ruching, complex fabric manipulations) – sampling and research into how they are used in fashion garments (aesthetics, function, comfort) | <ul style="list-style-type: none"> - Continuation of fabric manipulation techniques - Focus on trims/edgings (bias binding, piping, fringing, lace etc...) – sampling and research into how they are used on fashion | <ul style="list-style-type: none"> - Focus on fastenings (zips, buttonholes, elastic, stud fasteners etc...) – sampling and considerations for aesthetics, function, safety etc... - Completion of all write ups for sampling work |
| 11 | Theme | | | | | | |
| | Skills Knowledge Concept | <ul style="list-style-type: none"> - Focus on designing interior products (differences to fashion) – trends, safety, quality etc... - Component Two – Cushion product for a art gallery entrance seating space - Research artists/designers – observations of colour, pattern, texture, shapes (theme board) - Initial sketches through to final design with annotation - A5 sampling of layered decoration techniques relevant to final design | <ul style="list-style-type: none"> - Paper pattern template production - Manufacture of cushion product following design plan - Production diary | <ul style="list-style-type: none"> - Mock paper for externally assessed Component Three - Consideration and practice of key skills for component (working for a client) | <ul style="list-style-type: none"> - Component Three – working for a client (Pearson's release paper) – controlled conditions to complete all areas required in set time limits for each section of the paper | | |
| Wider Curriculum | | | | | | | |