

Rotation between: 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Natural and manufactured timber Project Title: Blockbots Summary of Learning: Using/Learning about timber/wood related tools/techniques and equipment- Band facer, Hardwood, Softwood & Hardwood, Softwood & Hardwood, Softwood & Flardwood, Softwood & Flardwood	
1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or 1. Materials: Plastics/Electrical components & functions Project Title: Steady hand game. Summary of Learning: Using/Learning about timber/wood rela	erm 3b
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	1. Materials: Natural and manufactured timber Project Title: Desk Tidy Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or	1. Materials: Natural and manufactured timber Project Title: Desk Tidy Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or	1. Materials: Natural and manufactured timber Project Title: Desk Tidy Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or	1. Materials: Natural and manufactured timber Project Title: Desk Tidy Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or	1. Materials: Natural and manufactured timber Project Title: Desk Tidy Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or	1. Materials: Natural and manufactured timber Project Title: Desk Tidy Summary of Learning: Using/learning about electronics and methods of joining electrical components & also properties of plastics & shaping plastics, H&S involved in both etc., or
00	1. Materials: Plastics, Laser friendly Wood & composite materials Project Title: 2D Keyring & 3D mantel piece project Summary of Learning: Using/Learning about all CAD/CAM related Software, Techniques & Equipment- 2D Design, 3D Design, Techsoft 2D, SketchUp Pro, Solid Works, Laser cutter, 3D Printer, 3D Router etc. or	1. Materials: Plastics, Laser friendly Wood & composite materials Project Title: 2D Keyring & 3D mantel piece project Summary of Learning: Using/Learning about all CAD/CAM related Software, Techniques & Equipment- 2D Design, 3D Design, Techsoft 2D, SketchUp Pro, Solid Works, Laser cutter, 3D Printer, 3D Router etc. or	1. Materials: Plastics, Laser friendly Wood & composite materials Project Title: 2D Keyring & 3D mantel piece project Summary of Learning:Using/Learnin g about all CAD/CAM related Software, Techniques & Equipment- 2D Design, 3D Design, Techsoft 2D, SketchUp Pro, Solid Works, Laser cutter, 3D Printer, 3D Router etc. or	1. Materials: Plastics, Laser friendly Wood & composite materials Project Title: 2D Keyring & 3D mantel piece project Summary of Learning: Using/Learning about all CAD/CAM related Software, Techniques & Equipment- 2D Design, 3D Design, Techsoft 2D, SketchUp Pro, Solid Works, Laser cutter, 3D Printer, 3D Router etc. or	1. Materials: Plastics, Laser friendly Wood & composite materials Project Title: 2D Keyring & 3D mantel piece project Summary of Learning:Using/Learning about all CAD/CAM related Software, Techniques & Equipment- 2D Design, 3D Design, Techsoft 2D, SketchUp Pro, Solid Works, Laser cutter, 3D Printer, 3D Router etc. or	1. Materials: Plastics, Laser friendly Wood & composite materials Project Title: 2D Keyring & 3D mantel piece project Summary of Learning: Using/Learning about all CAD/CAM related Software, Techniques & Equipment- 2D Design, 3D Design, Techsoft 2D, SketchUp Pro, Solid Works, Laser cutter, 3D Printer, 3D Router etc.
	3. Food Technology Summary of Learning: Food safety and the function of ingredients	3. Food Technology Summary of Learning: Food safety and the function of ingredients	3. Food Technology Summary of Learning: Food safety and the function of ingredients	Summary of Learning: Food safety and the function of ingredients	3. Food Technology Summary of Learning: Food safety and the function of ingredients	or 3. Food Technology Summary of Learning: Food safety and the function of ingredients

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	files, punches, Ball pein	files, punches, Ball pein	hammer, engineering vice,	hammer, engineering vice,	files, punches, Ball pein	Junior/Hacksaw, metal
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9	components & functions	components & functions	Summary of Learning:	Project Title: Moodlight	components & functions	Plastics/Electrical
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	joining electrical	joining electrical	components & also	joining electrical components	joining electrical	electronics and methods
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In this unit, students will learn about :

Systems

Mechanical devices Unit 3.1.5

In this unit, students will learn about :

Types of motion

Materials and their working properties Unit 3.1.6

In this unit, students will learn about :

Material properties

Selection of materials or components Unit 3.2.1

Using and working with materials Unit 3.2.5 In this unit, students will learn about :Commercially available types and sizes of materials

Investigation, primary and secondary data Unit 3.3.1 Communication of ideas Unit 3.3.5

In this unit, students will learn about :

- Manufacturing
- Specification/working drawings

Specialist techniques and processes Units 3.2.8

Material Management Unit 3.3.9

In this unit, students will learn about :

- Tools, equipment and processes
- Quality control

Design strategies 3.3.4

Communication of design ideas 3.3.5

In this unit, students will learn about :

 Generating imaginative and creative designs

- Audio and visual recordings
- Modelling

Prototype development 3.3.6

In this unit, students will learn about:

- Satisfy the requirements of the brief
- Functionality
- Aesthetics
- Potentially marketable

Selection of materials and components 3.3.7

In this unit, students will learn about:

 Materials are selected based on functionality, cost and availability

- Preparing a material for a surface finish
- Applying a surface finish
- How materials can be altered to change their properties

Scales of production 3.2.7 Specialist techniques and processes 3.2.8 In this unit, students will

learn about:

- Scales of production
- Commercial processes

Context given for Nonexam assessment External context is set by the exam board (AOA)

It's intended to be an iterative design process so the learning activities will be directed by the student and will depend on their project

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Year ↓	Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
10	Unit 1 LO4 – Know how food can cause ill health In this unit, students will learn what causes food to become unsafe and make people ill, and how this can be prevented. They will also learn about food allergies, intolerances and the laws that protect consumers.	Unit 1 LO1 – Understand the environment in which Hospitality and Catering In this unit, students will learn about the structure of the H&C unit and the services and jobs it provides. They will also learn about how the industry is rated according to different standards.	Unit 1 LO2 – Understand how Hospitality and Catering provision operates Students will learn why good organisation of a kitchen is essential for making sure that high- quality, safe food is produced for customers, and that the use of ingredients, equipment and employees is as efficient as possible.	Unit 1 LO3 – Understand how Hospitality and Catering provision meets H&S requirements In this unit, students will learn about the responsibilities of H&C employees for personal safety in the workplace, to help prevent accidents and injuries.	Unit 1 LO5 – Be able to propose a Hospitality and Catering provision to meet specific requirements In this unit students will apply knowledge gained in LO1-LO4 to suggest suitable H&C provision for specific needs, locations and situations Examination in June	Unit 2 – Hospitality and catering in action LO1 – Understanding the importance of nutrition when planning a menu - The function of nutrients in the body - Nutritional needs of specific people - Unsatisfactory nutritional intake
	Year 11 term	1 will be spent on the N	lon-Exam Assessment (NEA), Exams revision for F	PE's and Final exams in	the Summer
Term → Year ↓	Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
11	iterative process so the learning activities will be directed by the student and will depend on their project In the NEA Students will be working on & completing the following six sections as follows. 4.4.4.1 Section A: Identifying and investigating design possibilities (10 marks) By analysing the contextual challenge students will identify design possibilities, investigate client needs and wants and factors including economic and social challenges. Students should also use the work of	Producing a design brief and specification (10 marks) Based on conclusions from their investigations students will outline design possibilities by producing a design brief and design specification. Students should review both throughout the project. 4.4.4.3 Section C: Generating design ideas (20 marks) Students should explore a range of possible ideas linking to the contextual challenge selected. These design ideas should demonstrate flair and	Developing design ideas (20 marks) Students will develop and refine design ideas. This may include, formal and informal 2D/3D drawing including CAD, systems and schematic diagrams, models and schedules. Students will develop at least one model, however marks will be awarded for the suitability of the model(s) and not the quantity produced. Students will also select suitable materials and components communicating their decisions throughout the development process. Students are encouraged	4.4.4.5 Section E: Realising design ideas (20 marks) Students will work with a range of appropriate materials/components to produce prototypes that are accurate and within close tolerances. This will involve using specialist tools and equipment which may include hand tools, machines or CAM/CNC. The prototypes will be constructed through a range of techniques, 4.4.4.6 Section F: Analysing and evaluating (20 marks) Within this iterative design process students are expected to continuously analyse and evaluate their work, using their decisions to improve	NEA Completed End of year Product Exhibition Final exams Revision Final exams in May/June	Final exams in May/June

ideas. Research should be with their designs. by looking at their analysing the design brief and Students may wish to use a requirements; including specifications along with the concise and relate to their contextual challenge. variety of techniques to how their designs meet the testing and evaluating of ideas design specification. Part of produced during the Students are also advised communicate. Students will not be this work will then feed into generation and development to use a range of research techniques awarded for the quantity of the development of a stages. Their final prototype(s) design ideas but how well manufacturing specification will also undergo (primary/secondary) in a range of tests on which the order to draw accurate their ideas address the providing sufficient conclusions. Students contextual challenge accurate information for final evaluation will be formulated. This should. should be encouraged to selected. Students are third party manufacture, investigate throughout their encouraged to be using a range of include market testing project to help inform imaginative in their and a detailed analysis of the appropriate methods, such decisions. approach by experimenting as measured drawings, prototype(s) with different ideas and control programs, circuit possibilities that avoid diagrams, patterns, cutting PPF/Mock exams design fixation. or parts lists. PPE/Mock exams Final exams Revision Revision/ In the highest band Revision/ Final exams in May/June students are expected to Final exams Revision PPF/Mock exams Sit PPE/Mock exams in show some innovation by Sit PPE/Mock exams in Revision/ exams conditions generating ideas that are Final exams in exams conditions different to the work of the Sit PPE/Mock exams in May/June End of year Product majority of their peers or exams conditions Exhibition. demonstrate new ways of improving existing solutions.

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Year ⊎	Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
11	Unit 2 – Hospitality and catering in action LO2 – Understand menu planning - Understanding the needs of customers - Planning the production of dishes for a menu - Commodities - Preparation techniques	Unit 2 – Hospitality and catering in action LO3 - Be able to cook dishes and understand different methods of cooking - Preparation techniques - Portion control	Unit 2 – Hospitality and catering in action Learner assignment brief The unit two assessment is carried out through a controlled (supervised) assessment task (CAT) in the form of a learner assignment brief (LAB). Students response to the LAB will be measured by their response to the Learning outcomes (LO's) enabling them to demonstrate knowledge and skills gained over the course.	Unit 2 – Hospitality and catering in action Learner assignment brief The unit two assessment is carried out through a controlled (supervised) assessment task (CAT) in the form of a learner assignment brief (LAB). Students response to the LAB will be measured by their response to the Learning outcomes (LO's) enabling them to demonstrate knowledge and skills gained over the course	Unit 2 – Hospitality and catering in action Learner assignment brief The unit two assessment is carried out through a controlled (supervised) assessment task (CAT) in the form of a learner assignment brief (LAB). Students response to the LAB will be measured by their response to the Learning outcomes (LO's) enabling them to demonstrate knowledge and skills gained over the course	
12	A1: Introduction to Design Engineering APP. 1 2D and 3D skills	A2: Materials APP. 2 CAM project	A3: Mechatronics (Electronics and Mechanisms) and Smart Materials APP. 3 Health and safety, manipulating materials while learning about production methods.	A4: Materials science and structural integrity APP. 4 Mechatronic test rig Note: Revision Past papers will be set from time to time to ensure exam knowledge is maintained	A5: Product analysis and skills leading to the Iterative Design Project APP. 5-Up-cycling project	Iterative Design Project set by Exams Board Note: Revision Past papers will be set from time to time to ensure exam knowledge is maintained
13	Iterative Design Project Note: Revision Past papers will be set from time to time to ensure exam knowledge is maintained	Iterative Design Project Note: Revision Past papers will be set from time to time to ensure exam knowledge is maintained	Iterative Design Project Note: Revision Past papers will be set from time to time to ensure exam knowledge is maintained	Iterative Design Project Note: Revision Past papers will be set from time to time to ensure exam knowledge is maintained	Completed Iterative Design Project Revision for Final exams End of year Product Exhibition	Revision for Final exams Study leave and exams