Roundwood Park School

A Level Design and Technology OCR

The aims and objectives of A Level Design and Technology are to enable students to:

- Be open to taking design risks, showing innovation and enterprise whilst considering their role as responsible designers and citizens
- Develop intellectual curiosity about the design and manufacture of products and systems, and their impact on daily life and the wider world
- Work collaboratively to develop and refine their ideas, responding to feedback from users, peers and expert practitioners
- Gain an insight into the creative, engineering and/or manufacturing industries
- Develop the capacity to think creatively, innovatively and critically through focused research and the exploration of design opportunities arising from the needs, wants and values of users and clients
- Develop knowledge and experience of real-world contexts for design and technological activity
- Develop a strong core knowledge and understanding of principles in design and technology enabling them to make informed decisions in the broader contexts
- Become independent and critical thinkers who can adapt their technical knowledge and understanding to different design situations
- Develop and in-depth knowledge and understanding of materials, components and processes associated with the creation of products that can be tested and evaluated in use
- Develop an experience understanding of iterative design processes that is relevant to industry practice
- Be able to make informed design decisions through an in-depth understanding of the management and the development of taking a design through to a prototype/product
- Be able to create and analyse a design concept and use a range of skills and knowledge from other subject areas, including mathematics and science, to inform decisions in design and the application or development of technology
- Be able to work safely and skilfully to produce high-quality prototypes/products
- Have critical understanding of the wider influences on design and technology, including cultural, economic, environmental, historical and social factors
- Become empathetic and successful designers, who not only consider global and local change, but also wider social implications of products to meet multiple needs and requirements
- Develop the ability to draw on and apply a range of skills and knowledge from other subject areas, including the use of mathematics and science for analysis and informing decisions in design
- Develop and use key design and technology terminology to communicate effectively in future education and employment.

Assessment Objectives:

A01: Identify, investigate and outline design possibilities to address needs and wants.

A02: Design and make prototypes that are fit for purpose.

A03: Analyse and evaluate –

- Design decisions and outcomes, including for prototypes made by themselves and others.
- Wider issues in design and technology.

A04: Demonstrate and apply knowledge and understanding of –

- Technical principles.
- Designing and making principles.

A01 = Explore, A02 = Create, A03 = Evaluate

Introduction:

In year 13 the design and technology course is divided into two theory and three NEA sessions per week. The exam-based lessons will give learners an understanding of what theory is required for the Principles examination (H006/01) and Problem-Solving examination (/02). The NEA sessions will teach learners an understanding of what is required for the Iterative Design Project.
The NEA (Iterative Design Challenge) guides and assesses learners under the following 5 strands and is worth 50% of the overall GCSE mark. Leaving the other 50% towards the examination.

- **The NEA (Iterative Design Challenge) guides and assesses learners under the following 5 strands and is worth 50% of the overall mark.**
- **The Principles of Product Design examination (H406/01) is a 1 hour and 30-minute paper and is worth 26.7% of overall mark.**
- **The Problem Solving in Product Design examination (H406/02) is a 1 hour and 45-minute paper and is worth 23.3% of overall mark.**

Strand 1 – Explore (AO1)

- Understanding the need(s), known as requirements, of the primary user and stakeholder(s).
- Who are the stakeholders? e.g. using personas with an interest in the context or anticipated product outcomes.
- What do stakeholders do and when do they do it? e.g. using task analysis.
- Where do stakeholders do it? e.g. through primary and secondary investigation that helps understand the physical, organisational, social and cultural environments.
- Why do stakeholders do what they want to do? e.g. establishing what stakeholders want to achieve by using/promoting the product.
- What is the impact of what stakeholders do on society (people), the environment (planet) and economics (profit)?

Strand 2 – Create – Design Thinking (AO2)

- Generation of initial ideas
- Working up rough prototypes of ideas using readily available materials
- Design developments
- Development of final design solution(s)

Strand 3 – Create – Design Communication (AO2)

- Quality of chronological progression
- Quality of initial ideas
- Quality of design developments
- Quality of final design solution(s)

Strand 4 – Create – Final prototype(s) (AO2)

- Quality of planning for making the final prototype(s)
- Quality of final prototype(s)
- Use of specialist techniques and processes
- Use of specialist tools and equipment
- Viability of the final prototype(s)

Strand 5 – Evaluate (AO3)

- Evaluation establishes whether the need(s) of the user(s) and stakeholder(s) have been met
- Ideas (sketches, CAD and models) generated and developed within 'create' are used to test and systematically evaluate their *appropriateness* against the stakeholder requirements identified as part of 'explore'
- Where needs have not been satisfactorily met, further exploration and creating of ideas will be systematically evaluated
- New or developed ideas will need to be systematically evaluated,
- The iterative processes are repeated until all user and stakeholder needs have been met in line with stakeholder requirements.

Year / term	Unit of work	Assessment
Year 12 **Autumn Term**	**Identifying Requirements** **1.1** What can be learnt by exploring contexts that design solutions are intended for? **1.2** What can be learnt by undertaking stakeholder analysis? **1.3** How can usability be considered when designing prototypes? **Learning from existing products** 2.1 Why is it important to analyse and evaluate products as part of the design and manufacturing process? 2.2 why is it important to understand technological developments? 2.3 why is it important to understand both past and present developments? 2.4 what can be learnt by examining the lifecycle of products? **Implications of wider issues** 3.1 What factors need to be considered while investigating design possibilities? 3.2 What factors need to be considered when developing design solutions for manufacture? 3.3 What factors need to be considered hen manufacturing products? 3.4 What factors need to be considered when distributing products to market? 3.5 How can skills and knowledge from other subject areas - including mathematics and science inform decisions? 3.6 What energy factors need to be considered when developing design solutions? **Design thinking and communication** **4.1** How do product designers use annotated 2D and 3D sketching and digital tools to graphically communicate ideas 4.2 How do industry professionals use digital design tools to support and communicate the exploration, innovation and development of design ideas? 4.3 using different approaches to design thinking to support the development of design ideas ● 2D technical drawings such as floorplans, orthographic drawings, exploded isometric using 2D Design in school and	Designing for disabilities project-based task (in the style of the NEA) Focused practical task Textbook activities Practice exam questions Product disassembly task Textbook activities Practice questions Lifecycle analysis task Introduction to essential maths skills questions Making links between topics covered in Science and D&T questions Practice exam questions Context based CAD/CAM focused practical task – produce a 3D printed handheld product that improves everyday living Research tasks Practice questions Accuracy of technical drawings assessed

	industry standard software (AutoCad) through BYOD for design work and for use with CAM (Laser Cutter) ● 3D modelling – Sketchup and TinkerCad to create 3D models to visualise design ideas and for CAM output of components and prototypes (3D Printing) **Exam Practice taught throughout – practice papers completed every 4 -6 weeks**	Focused CAD tasks Focused CAM outputs Practice questions and mock papers Textbook activities
Super Curricular	Read, Watch, Do tasks provided on google classroom Documentaries, articles, books and related practical activities	**ASPIRE FOCUS - Review**

Year / term	Unit of work	Assessment
Year 12 **Spring Term**	**Material and component considerations** 5.1 What factors influence the selection of materials for products? 5.2 What materials and components should be selected when designing and manufacturing products and prototypes? 5.3 Why is it important to consider the properties/characteristics of materials when designing and manufacturing products? **Technical Understanding** 6.1 What considerations need to be made about the structural integrity of a design solution? 6.2 How can products be designed to function effectively within their surroundings? 6.3 What opportunities are there through using smart and modern technologies within products? **Manufacturing processes and techniques** 7.1 How can materials and processes be used to make iterative models 7.2 How can materials and processes be used to make final prototypes? 7.3 How can materials and processes be used to make commercial products? 7.4 How is manufacturing organised and managed for different scales of production? 7.5 How is the quality of products controlled through manufacture?	Research tasks Focused Practical outcomes Textbook activities Case Study on innovative sustainable design solutions Textbook activities

	Viability of design solutions 8.1 How can designers assess whether a design solution meets its stakeholder requirements? 8.2 How can product designers and manufacturers assess whether a desig solution meets the criteria of technical specification? 8.3 How do designers and manufacturers determine whether design solutions are commercially viable? Health and safety 9.1 How can safety be ensured when working with materials in a worksho environment? 9.2 What are the implications of health and safety on product manufacture? **Mock Exam and Revision**	Complete model Risk assessment Practice Questions and Mock Papers
Super Curricular	Read, Watch, Do tasks provided on google classroom Documentaries, articles, books and related practical activities	**ASPIRE FOCUS - Take risks**

Year / term	Unit of work	Assessment
Year 12 **Summer Term**	**Essential maths skills in Design and technology** **Introduction to NEA** **NEA:** Strand 1 – Explore AO1 ● Investigations of the context and feasibility study of potential approaches ● Design Brief ● Investigations of user and stakeholder needs and wants and the outlining of stakeholder requirements (non-technical specification) ● Investigations of existing products and design practices	Focused maths related exam practice Practice Questions and mock papers Textbook activities
Super Curricular	Read, Watch, Do tasks provided on google classroom Documentaries, articles, books and related practical activities	**ASPIRE FOCUS - Plan**

Year / term	Unit of work	Assessment
Year 13 Autumn Term	**1.1 What can be learnt by exploring contexts that design solutions are intended for?** a. Understand that all design practice is context dependent and that investigations are required to identify what makes a context distinct in relation to: i. Environment and surroundings ii. User requirements iii. Economic and market considerations iv. Product opportunities. **1.2 What can be learnt by undertaking stakeholder analysis?** a. Demonstrate an understanding of methods used for investigating stakeholder requirements, such as: ● User-centred design and stakeholder analysis ● SWOT analysis ● Focus groups ● Qualitative observations. ● Market research to identify gaps for new products or opportunities to uptake existing products b. Demonstrate an understanding of how enterprise can help drive the development of new product ideas through routes to innovation such as: ● Entrepreneurship ● Commercial partnerships ● Venture capitalists and crowd funding websites. **1.3 How can usability be considered when designing protypes?** a. Learners should be able to analyse and evaluate factors that may need consideration in relation to the user interaction of a design solution, including: i. The impact of a solution on a user's lifestyle ii. The ease of use and inclusivity of products iii. Ergonomic considerations and anthropometric data to support ease of use iv. Aesthetic considerations. b. Demonstrate an understanding of the ergonomic factors that may need considering when developing products, including: i. Anthropometric data to help define design parameters associated with the human body ii. User comfort, layout of controls, software user interface.	● Mock examination review from year 12 ● Textbook activities ● Exam practice booklet ● Weekly home learning activities ● Exam questions ● Keyword spelling tests ● Students begin their NEA project ● NEA (50% of the overall A Level)

2.1 Why is it important to analyse and evaluate products as part of the design and manufacturing process?

a. Analyse and evaluate the features and methods used in existing products and design solutions, to inform opportunities and constraints that may influence design decisions to offer product enhancement including:

i. The context of the existing product and the context of future design decisions
ii. The multiple materials and components used
iii. Methods of construction and manufacture
iv. How functionality is achieved
v. The ease of use, including: ergonomic and anthropometric considerations
vi. Inclusivity of products and appropriate considerations of application to a wide variety of users
vii. Fitness for purpose
viii. The impact on user lifestyles
ix. The effect of trends, taste and/or style
x. The effect of marketing and branding
xi. The considerations of how to get a product to market.

2.2 Why is it important to understand technological developments in product design?

a. Be able to critically evaluate how new and emerging technologies influence and inform the evolution and innovation of products in both contemporary and potential future scenarios.

2.3 Why is it important to understand both past and present developments in product design?

a. Recognise how past and present designers, technologies and design thinking have influenced the style and function of products from different perspectives, including:

i. The impact on industry and enterprise
ii. The impact on people in relation to: lifestyle, culture and society
iii. The impact on the environment
iv. Consideration of sustainability

b. Understand how key historical movements and figures and their methods have had an influence on future developments in product design.

2.4 What can be learnt by examining lifecycles of products?

a. Demonstrate an understanding of a product's marketing lifecycle from initial launch to decline in popularity, including:

	i. Consideration of initial demand, growth in popularity and decline over time ii. Methods used to create more demand and maintain a longer product popularity iii. New models of marketing and the influence of social media. **3.1 What factors need to be considered whilst investigating design possibilities?** a. Understand how social, ethical and environmental issues have influenced and been impacted by past and present developments in design practice and thinking, including: i. Consideration of lifecycle assessment (LCA) at all stages of a product's life from raw material to disposal ii. The source and origin of materials; and the ecological and social footprint of materials iii. The depletion and effects of using natural sources of energy and raw materials iv. Planned obsolescence v. Buying trends vi. Environmental incentives and directives. **3.2 What factors need to be considered when developing design solutions for manufacture?** a. Awareness of the responsibilities and principles of designing for manufacture (DFM), including: i. Planning for accuracy and efficiency through testing and prototyping ii. Being aware of issues in relation to different scales of production iii. Designing with consideration of product life. b. Awareness of product lifecycles that extend useful product life through planning for and consideration of maintenance, repair, upgrades, remanufacture and recycling systems. c. Demonstrate an understanding of how environmental factors Impact on: i. Sourcing and processing raw materials into a workable form ii. The disposal of waste, surplus materials and components, by-products of production iii. Cost implications related to materials and process. d. Demonstrate an understanding of sustainability issues relating to industrial manufacture, including: i. Fair trade and the Ethical Trade (ETI) ii. Economic issues and globalisation iii. Material sustainability and optimisation, availability, recycling and conservation schemes, such as: o Exploring the impact and use of eco-materials o Exploring how materials can be up-cycled **3.3 What factors need to be considered when manufacturing products?** a. Demonstrate an understanding of how to achieve an optimum use of materials and components, including:	

	i. The cost of materials and/or components ii. Stock sizes and forms available iii. Sustainable production. **3.4 What factors need to be considered when distributing products to markets?** a. Understanding the issues related to the effective and responsible distribution of products, including: i. Cost effective distribution ii. Environmental issues and energy requirements iii. Social media and mobile technology iv. Global production and delivery. b. Demonstrate an understanding of the implications of intellectual property (IP), registered design, registered trademarks, copyright, design rights and patents, in relation to ethics in design practice and consumer rights. **3.5 How can skills and knowledge from other subject areas, including mathematics and science, inform decisions in product design?** a. Demonstrate an understanding of the need to incorporate knowledge from other experts and subjects to inform design and manufacturing decisions, including the areas of science and mathematics. b. Understand how undertaking primary and secondary research and being able to interpret technical data and information from specialist websites and publications support design development.	
Super Curricular	1. **Emad Zand - https://www.youtube.com/watch?v=J4QSbRD0mwc&t=191s** 2. Exhibition visits (design museum, science museum, Tate Modern, Natural History Museum).	**ASPIRE FOCUS - Organise**

Year / term	Unit of work	Assessment
Year 13 Spring Term	**4.1 How do product designers use annotated 2D and 3D sketching and digital tools to graphically communicate ideas?** a. Demonstrate an understanding of how to use annotated sketching and digital tools to graphically communicate ideas and sketch modelling to explore possible improvements, in terms of physical requirements, such as: ● Function, usability, construction, movement, stability, composition, strength ● Aesthetic qualities ● Manufacturing processes ● Suitability of materials and components	● Past exam papers ● Textbook activities ● Exam practice booklet ● Exam questions ● Keyword spelling tests ● Deadline for the NEA project ● NEA (50% of the overall A Level)

	b. Demonstrate an understanding of methods used to communicate the construction of design solutions to inform third parties, such as producing: i. Working/technical drawings ii. Digital visualisation iii. Schematic diagrams and lay plans if appropriate iv. Flowcharts with associated symbols v. Prototypes and models. **4.2 How do industry professionals use digital design tools to support and communicate the exploration, innovation and development of design ideas?** a. Demonstrate an understanding of how digital design software is used during design development, such as: ● Visual presentation, rendering and photo-quality imaging ● Product simulation ● Scientific analysis of real-world physical factors determine whether a product will break or work the way it was intended. **4.3 How do product designers use different approaches to design thinking to support the development of design ideas?** a. Awareness of different strategies, techniques and approaches to explore, create and evaluate design ideas, including: ● Iterative designing ● User-centred design ● Circular economy ● Systems thinking. b. The importance of collaboration to gain specialise knowledge from across subject areas when delivering solutions in the design and manufacturing industries. c. Understand how design teams use different approaches to project management when faced with large projects, such as critical path analysis, scrum and six sigma. **5.1 What factors influence the selection of materials that are used in products?** a. Understand that the selection of materials and components is influence by a range of factors, including: i. Functional performance ii. Aesthetic iii. Cost and availability iv. Properties and characteristics v. Environmental considerations vi. Social, cultural and ethical factors	

	5.2 What materials should be selected when designing and manufacturing products and prototypes in product design? a. Understand that most products consist of multiple materials and that product designers are required to discriminate between them appropriately for their use, including: i. Hardwoods and softwoods, such as: o Oak, teak and beech; pine, spruce and fir ii. Manufactured boards, such as: o Plywood, MDF and block board iii. Ferrous and non-ferrous metals, such as: o Cast iron, mild steel and stainless steel; aluminum and copper iv. Metal alloys, such as: o Brass, bronze and tungsten v. Thermopolymers and thermosetting polymers, such as: o PET, HDPE, PVC, LDPE, polypropylene, polystyrene and ABS; urea formaldehyde, epoxy resin and polyester resin. vi. Natural and synthetics fibres, such as: o Cotton, wool and silk; polyester and nylon vii. Composite materials, such as: o Fibre-reinforced plastics, glass-reinforced plastics (GRP) and carbon fibre (CFRP) viii. Modern materials, such as: o E-textiles, super-alloys, graphene, bioplastics and nanomaterials ix. Smart materials, such as: o Thermochromic, photochromic and electrochromic materials; shape memory alloy and shape memory polymers; conductive paints and e-textiles. **5.3 Why is it important to consider the properties'/characteristics of materials when designing and manufacturing products?** a. Understand why the characteristics and properties of the materials in 5.2a make them suitable for use in a variety of products dependent on the contextual application, including: ● Density, strength, hardness, durability, strength-to-weight ratio, stiffness, elasticity, impact resistance, plasticity, malleability and ductility, corrosive resistance to chemicals and weather, flammability, absorbency, washability, thermal and electrical conductivity, resistance to decay, biodegradable. b. Understand how the available forms, costs and properties of materials contribute to the decisions about suitability of materials when developing and manufacturing their own products.	

Super Curricular	1. Research websites on; **Design Architects Frank Gehry –** https://www.youtube.com/watch?v=Az-m56vUjgw 2. Pod casts, i.e. digital audio and video files on well-known designers Alessi etc. 3.	**ASPIRE FOCUS - Communicate**

Year / term	Unit of work	Assessment
Year 13 Summer Term	**6.1 What considerations need to be made about the structural integrity of a design solution?** a. Learners should understand how and why some materials and/or system components need to be reinforced or stiffened to withstand forces and stresses to fulfill the structural integrity of products. b. Learners should understand processes that can be used to ensure the structural integrity of a product, such as: ● Triangulation ● Reinforcing **6.2 How can products be designed to function effectively within their surroundings?** a. Understand how surface finishes and coatings can be used to enhance the appearance of products and the methods of preparing different surfaces to accept finishes in order to deliver a decorative, colourful and quality outcome. b. Understand how materials and products can be finished in different ways to prevent corrosion or decay in the environment they are intended for, such as: ● Paints, varnishes, sealants, preservatives, anodizing, plating, coating, galvanization and electroplating. **6.3 What opportunities are there through using smart and modern technologies within products?** a. Demonstrate an understanding of how smart materials change the functionality of products, such as: ● Colour changes, shape-shifting, motion control, self-cleaning and self-healing ● Smart materials used in medical procedures to act in a way that conventional materials and processes would not have previously have permitted. b. Understand how modern technologies can support the function of products, such as: ● Programmable components that can be built into a product and coded to respond to inputs that command an action.	● Past exam papers ● Textbook activities ● Exam practice booklet ● Keyword spelling tests

	7.1 How can materials and processes be use4d to make iterative models? a. Understand that 3D iterative models can be made from a range of materials and components to create block models and working prototypes to communicate and test ideas, moving parts and structural integrity. b. Demonstrate an understanding of simple processes that can be used to model ideas using hand tools and digital tools such as rapid prototyping, or digital simulation packages to support the creation of iterative developments. **7.2 How can materials and processes be used to make final prototypes?** a. Understand methods of joining similar and dissimilar materials within products to fulfill the following functions: i. Permanently joining materials to include constructional joints ii. Temporarily/semi permanently joining materials iii. Adhesion and heat iv. Using standard components and fixings. b. Demonstrate an understanding of a variety of processes, tools and machinery used to accurately manufacture final prototypes in the workshop made from wood, metal and polymers, including: i. Wasting techniques, such as drilling, sawing, shaping and abrading ii. Moulding methods, such as thermoforming and vacuum forming iii. Milling metals and turning woods iv. Casting of metals such as lost wax casting, sand casting, low temperature and resin casting v. Forming and lamination vi. Bending, rolling and forming sheet material. c. Understand how digital technology, including the use of computer-aided design (CAD) and computer-aided manufacture (CAM) can be used in the making of final prototypes. d. Understand how the design of templates, jigs, formers and moulds ensures quality and accuracy when making a final prototype. Understand how the available forms, costs and working properties or materials contribute to the decisions about sustainability of materials when developing and manufacturing products. **7.3 How can materials and processes be used to make commercial products?** a. Understand production processes and machinery used to manufacture products to different scales of production, including: i. Moulding methods, such as injection, rotational, compression, extrusion and blow ii. Thermoforming and vacuum forming iii. Die casting and sand casting	

iv. Sheet metal forming and stamping
v. Automated material handling systems
vi. Robotic arms to stack, assemble, join and paint parts.

b. Understand how the design of jigs, fixtures, presses, formers and moulds in commercial production are used to ensure consistent accuracy and quality, and different scales of production methods.
c. Understand the necessity for manufacturers to optimise the use of materials and production processes, such as:

- Economical lay plans and costings; ensuring cost effective production for viability
- Working to a budget through efficient manufacture and making the best use of labour and capital throughout the design and manufacturing process.

7.4 How is manufacturing organised and managed for different scales of production?
a. Understand how and why different production methods are used when manufacturing products dependent on market demand, including:

i. One-off and bespoke, batch and high-volume production systems
ii. Modular/cell production systems
iii. Lean manufacturing
iv. Just-in-time manufacture
v. Bought-in parts and components, standardised parts
vi. Fully automated manufacture.

b. Understand how ICT and digital manufacture methods
stock control, monitoring, purchasing logistics in industry.

7.5 How is the quality of products controlled through manufacture?
a. Understand the processes that need to be undertaken to ensure products meet legal requirements and are high quality:

i. Quality control
ii. Quality assurance
iii. 'Total Quality Management' (TQM)
iv. European and British standards.

8.1 How can designers assess whether a design solution meets its stakeholder requirements?
a. Critically evaluating how a design solution has met its intended requirements, including:

i. Functionality
ii. Ease of use and inclusivity of the solution
iii. User needs.

b. Demonstrate an understanding of the needs and methods for testing design solutions with stakeholders throughout the design development, and when testing the success of a product.
c. Demonstrate an understanding of the needs and methods of testing the feasibility of getting a product to market including considerations of cost, packaging and appeal.
d. Understanding the relevant standards that need to be met and how to ensure these are delivered, including:

i. Those published by the British Standards Institute (BSI)
ii. Those published by the International Organisation for Standardisation (ISO) specific to the subject.

8.2 How can product designers and manufacturers assess whether a design solution meets the criteria of technical specifications?
a. Demonstrate an understanding of the methods and importance of undertaken physical testing on a product to ensure it meets the criteria it is meant to fulfil, including:

i. Functionality
ii. Accuracy
iii. Performance.

b. Recognise how physical testing systems are integrated into the manufacturing process in the design industry to test functional feasibility, including:

i. Testing of materials for durability and aftercare
ii. Testing models and prototypes for performance and fitness for purpose
iii. Testing products in use through different methods, such as:
    - Consumer testing
    - Virtual testing.

8.3 How do designers and manufacturers determine whether design solutions are commercially viable?
a. Demonstrate an understanding of the value of feasibility studies to determine the likely factors that influence the commercial viability of a product to market, such as:

- The design solution's impact on user lifestyles
- How well a product performs
- Technical difficulty of manufacture
- Stock availability of materials and components
- Costs and profit
- Timescales involved
- Promotion, brand awareness and advertising potential
- Balancing supply and demand
- Market analysis of similar products.

	9.1 How can safety be ensured when working with material in a workshop environment? a. Demonstrate an understanding of safe working practices in the workshop situation, including: i. Understanding the need for risk assessments ii. Identifying hazards and implementing control measures to minimise risks. b. Demonstrate an understanding of how to work safely with specialist tools, techniques, processes, equipment and machinery during the design and manufacture of products. **9.2 What are the implications of health and safety legislation on product manufacture?** a. Demonstrate an understanding of how the regulatory and legislative framework in the Health and Safety at Work Act (HASAW) sets out duties of employers and employees in the product manufacturing industries, including: i. Control of Substances Hazardous to Health (COSHH) ii. Personal Protective Equipment at work regulations (PPE). b. The responsibility of manufacturers to appropriately label products and offer guarantees to their consumers to deliver the correct levels of product assurance related to safety.	