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**Knowledge Rich Curriculum Plan**

Year 13 Design



| **Year 13****Design**  | **Unit: Design methods and processes** |  |  |  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Design methods and processes** | * Students will know the different design processes used by designers
* Students will know that different design processes are used to help different designers that face different problems
* Students will know the design process iterative design uses more of a circular approach than the standard linear idea
* Students will know that iterative design focuses of three main aspects, Design, Prototype, Evaluate
* Students will know the design process of User Centre Design
* Students will know that the User Centre Design approach focuses solely on the user of the product
 | User centre design: iterative design process in which designers focus on the users and their needs in each phase of the design process. | * ***Students need to already know that a design process describes the stages of a designer***
* ***Students need to already know how the linear design process applied to a designer***
* ***Students need to already know the stages of a design process***
* ***Students need to already know how a design process can affect a design***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Investigating** | * Students will know that investigating a design problem is one of the first steps of a design process
* Students will know how investigating can be used to help solve a problem
* Students will know that Primary and Secondary data are used to help investigate a problem
* Students will know that Primary data is data collected by yourself and thus is more trustworthy
* Students will know that Secondary data is collected by someone else and thus cannot be as trusted
 | Primary data: Primary data refers to the first hand data gathered by the researcher himself.Secondary data: Secondary data means data collected by someone else earlier. | * ***Students need to already know how data is collected as part of an investigation***
* ***Students need to already know how a designer uses the information gathered as part of their research***
* ***Students need to already know how Primary data can be used***
* ***Students need to already know how Secondary data cane be used***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Design theory** |  |  |  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Arts and Crafts** | * Students will know how design influences design
* Students will know how different design eras are used as part of research as a designer
* Students will know the main features of the Arts and Crafts movement
* Students will know that the main features of the Arts and Crafts movement are floral patterns, simple forms and drive inspiration from medieval times
* Students will know that Arts and Crafts believes designs should be handmade and shown craftsmanship
 | Design styles: a set of particular colour harmonies, typefaces, compositional styles | * ***Students need to already know how designers can be influence by other designers***
* ***Students need to already know how past designers can influence a product***
* ***Students need to already know the features based around Arts and Crafts products***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Art Deco** | * Students will know the key features of Art Deco
* Students will know the Art Deco key features are symmetrical or angular lines, long smooth and sweeping curves
 | Design styles: a set of particular colour harmonies, typefaces, compositional styles | * ***Students need to already know the term Art Deco***
* ***Students need to already know the basics of the Art Deco movement***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Modernism** | * Students will know Modernism evolved from Art Deco and create 2 design styles, Bauhaus and De Stijl
* Students will know that De Stijl design movement consists of solid black lines, primary colours and use of white space
* Students will know that the Bauhaus school was formed in Germany and become one of the most famous art schools for its unique views on Design and how a Designer should work
* Students will know the major contributors to the Bauhaus design movement were: Walter Groupius, Marcel Breuer, Mies Van Der Rohe and Marianne Brandt
 | Design styles: a set of particular colour harmonies, typefaces, compositional styles | * ***Students need to already know that art schools are an educational space***
* ***Students need to already know how designers work together to produce new ideas***
* ***Students need to already know the primary colours***
* ***Students need to already know the term modern***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Streamlining and Post Modernism** | * Students will know that streamlining is a design movement used to help product look more modern and futuristic
* Students will know that streamlining takes a lot of inspiration from Art Deco
* Students will know that Streamlining products show smooth and curved lines, rounded edges and a very clear Art Deco style
* Students will know that Post Modernism is a design style that aims to create a unique product, a product that will make the consumer question itself
* Students will know that Memphis is a style of Post Modernism
* Students will know that Memphis style uses very bold colours and patterns. Memphis styles uses very unusual shapes and ideas as part of their design style
 | Design styles: a set of particular colour harmonies, typefaces, compositional styles | * ***Students need to already know the style of Art Deco***
* ***Students need to already know unique shapes and bold colours***
* ***Students need to already know basic ideas on how to create modern products***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Philipe Starck** | * Students will know that Philipe Starck is a French designer known best for being a Post Modernistic designer
* Students will know that his style involves using a range of unusual shapes and forms
* Students will know that his style involves designs creating talking points
* Students will know one of his most famous designs is the juicy salif
 |  | * ***Students need to already know the style of Post Modernism***
* ***Students need to already know how post modernism is designed to affect the consumer***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **James Dyson** | * Students will know that James Dyson is a British designer best known for designing and manufacturing the Dyson vacuum hoover
* Students will know that Dyson created his idea by finding his product shows loss of function
* Students will know that Dyson style can be identified by sleek, simple colour schemes consisting of orange, purple or grey
 |  | * ***Students need to already know the work of Dyson***
* ***Students need to already know the products designed by James Dyson***
* ***Students need to already know how the product of a vacuum cleaner is used***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Other designers** | * Students will know that Margaret Calvert is a Graphic Designer who is most famous for designing the road signs used in the UK
* Students will know the designers of Dieter Rams, Charles and Ray Eames and Marinne Brandt
 |  | * ***Students need to already know the road signs of the UK***
* ***Students need to already know how to identify the UK road signs***
* ***Students need to already know how to investigate and research different designers***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Technology and cultural changes** |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Technology and cultural changes** | * Students will know the factors that affect or change a design
* Students will know that these factors are: Ethical, Social, New materials, Cultural, Internet, Technology, Poverty
* Students will understand how society and economy affect a design
* Students will know that Marcel Breuer is a Bauhaus designer associated with extreme experimental post modernism
* Students will know the famous Wassily chair and discuss its impact and style
 | Cultural: relating to the ideas, customs, and social behaviour of a society.Moral: concerned with the principles of right and wrong behaviour. | * ***Students need to already know about social impacts on a designer***
* ***Students need to already know about ethical impacts on a designer***
* ***Students need to already know moral impacts on a designer***
* ***Students need to already know environmental impacts on a designer***
* ***Students need to already know the design style of Post Modernism***
* ***Students need to already know how to identify a Post Modernism design***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Contemporary and mass production**  | * Students will know how global events can affect how products are designed
* Students will know how post Second World War products were produced
* Students will know that Streamlining and minimalism played a big part in the reforming of the designing of products post world war 2
* Students will know that designs were changed and developed from the Robin Day stacker chair
 | Minimalism: a movement in sculpture and painting which arose in the 1950s, characterized by the use of simple, massive forms. | * ***Students need to already know about the second world war***
* ***Students need to already know about the impacts a global event can have***
* ***Students need to already know about the common stacker chair***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Microelectronics** | * Students will know how microelectronics are used in electrical products
* Students will know the impact of microelectronics
* Students will know the impact of microelectronics results to the development of all electronical products over the past 50 years
* Students will know how products have changed due to microelectronics
 | Microelectronics: the design, manufacture, and use of microchips and microcircuits. | * ***Students need to already know about how electronic products work***
* ***Students need to already know how products have developed***
* ***Students need to already know why products have developed***
* ***Students need to already know the term microelectronics***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Technology advances** | * Students will know how technology advances
* Students will know the term Technology push
* Students will know how a product evolves
 |  | * ***Students need to already know examples of products that have evolved***
* ***Students need to already know the term Technology push***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **New materials** | * Students will know the term new materials
* Students will know the term new materials replaces the Modern materials learnt in GCSE
* Students will know new materials are materials classed as recently discovered
* Students will know the new materials as Glulam, Kevlar and Nanomaterials
 | New materials: material that has not previously been used in the manufacture of another article used for any purpose. | * ***Students need to already know the term Modern materials***
* ***Students need to already know examples of Modern materials***
 |  |
| **Lesson:** **Advancements of CAD-CAM** | * Students will know the terms CAD and CAM
* Students will know the advancements of CAD and CAM
* Students will study the effects of using CAD and CAM
* Students will know how to export files to help support the use of CAD and CAM
 | CAD: Computer aided designCAM: Computer aided manufacture | * ***Students need to already know the term CAD***
* ***Students need to already know the advantages of CAD***
* ***Students need to already know examples of CAD***
* ***Students need to already know the term CAM***
* ***Students need to already know the advantages of CAM***
* ***Students need to already know examples of CAM***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Social, Moral and Ethical issues** | * Students will know Social impacts on a designer
* Students will know that social impacts refer to how a designer will design a product for people
* Students will know Moral impacts on a designer
* Students will know that moral impacts refer to a designer’s choice of whether to do something
* Students will know Ethical impacts on a designer
* Students will know that ethical impacts refer to a designer’s choice on the materials they use
 |  | * ***Students need to already know the term Social***
* ***Students need to already know the term Moral***
* ***Students need to already know examples of Ethical***
* ***Students need to already know the difference of right or wrong***
* ***Students need to already know the effects of recycling materials***
* ***Students need to already know the impacts products have on the planet***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Sustainable materials** | * Students will know how a product can be sustainable
* Students will know how a designer can use sustainability in their work
* Students will know how global companies use their ethical voice
 |  | * ***Students need to already know the term Social***
* ***Students need to already know the term Moral***
* ***Students need to already know examples of Ethical***
* ***Students need to already know the difference of right or wrong***
* ***Students need to already know the effects of recycling materials***
* ***Students need to already know the impacts products have on the planet***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Design process** |  |  |  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Technology and cultural changes** | * Students will know how a design process is used as part of a designer’s journey
* Students will know how the use of collaborative design is used to help generate ideas as a designer
 |  | * ***Students need to already know how a design process works***
* ***Students need to already know the design process stages***
* ***Students need to already know the term collaborative***
 |  |

| **Year 13** **Design**  | **Unit: Critical analysis and evaluation** |  |  |  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Critical analysis and evaluation** | * Students will know how faults in products affect the consumer
* Students will know the use of third-party feedback aids or hinders a product
* Students will know that third party feedback refers to asking impartial companies or consumers to evaluate a product
* Students will know how the BSI Kitemark is used to help certify products
 |  | * ***Students need to already know the term third party***
* ***Students need to already know how products are evaluated***
* ***Students need to already know the importance and relevance of product evaluation***
* ***Students need to already know a product must conform to certain standards in order to be made public***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Selecting appropriate tools, equipment and processes** |  |  |  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Selecting appropriate tools, equipment and processes** | * Students will know how to select certain materials for certain products
* Students will know the differences of materials
* Students will know how to select the correct tools and equipment for a particular product
 |  | * ***Students need to already know the processes of manufacture***
* ***Students need to already know the properties of materials***
* ***Students need to already know alternatives of materials during use***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Safety in commercial manufacture** | * Students will know the basics of health and safety legislation during a products manufacture
* Students will know the Health and Safety at Work Act was introduced in 1974
* Students will know COSHH refers to Control of Substances Hazardous to Health and controls all harmful chemicals during manufacture
* Students will know how legislation is applied to workshops and industry
* Students will know how risk assessments are completed and applied to a work place
 |  | * ***Students need to already know basic health and safety***
* ***Students need to already know safe practise of production***
* ***Students need to already know the correct procedure of handling and using tools and equipment***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Accuracy in design and manufacture** |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Accuracy in design and manufacture** | * Students will know how accuracy is used during manufacture
* Students will know how industry uses accuracy in their product manufacture
* Students will know industry uses the go no go gauge to address accuracy in industry
* Students will know the tools used in a school workshop to acquire accuracy in their products
* Students will know the tools used in a school workshop to determine accuracy are a Tri square, Steel Rule and a marking gauge
 |  | * ***Students need to already know the term accuracy***
* ***Students need to already know how accuracy is used in DT***
* ***Students need to already know how accuracy is applied during workshop manufacture***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Responsible design** |  |  |  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Responsible design** | * Students will know how a designer will be responsible as part of the manufacturing process
* Students will know how a designer uses the 6 Rs of sustainability as part of the design process
* Students will know the 6 Rs include: Reduce, Reuse, Rethink, Recycle, Refuse, Reduce
* Students will know how to apply the 6 Rs to an existing product
 | Responsible design: Achieving balanced social, environmental and economic development by embedding ethical decision-making in inclusive and sustainable design practice. | * ***Students need to already know the term sustainability***
* ***Students need to already know how a designer can design responsibly***
* ***Students need to already know the 6 Rs of sustainability***
* ***Students need to already know how the 6 Rs are used in designing***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Carbon footprint** | * Students will know how carbon footprint will impact the globe
* Students will know how a designer can help combat carbon footprint
* Students will know that Primary carbon footprint measures direct emissions of CO2 from the burning of fossil fuels, including transport and domestic energy consumption.
* Students will know that Secondary carbon footprint measures indirect CO2 from the products we use. The production of five polymer carrier bags produces about 1 kg of CO2
* Students will know how the revolution of packaging reduction has helped to less carbon footprint
 | Carbon footprint: a measure of the amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organization, or community. | * ***Students need to already know the term sustainability***
* ***Students need to already know how a designer can design responsibly***
* ***Students need to already know the term carbon footprint***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Circular economy** | * Students will know how circular economy plays an impact as a designer
* Students will know a circular economy aims to use materials in a way that ensures a continual cycle of reuse and remanufacture, without utilising wasteful resources or having products end their life in landfill.
* Students will know how a circular economy impacts the designer and global issues
 | Economy: the state of a country or region in terms of the production and consumption of goods and services and the supply of money. | * ***Students need to already know the term sustainability***
* ***Students need to already know about the economy***
* ***Students need to already know the term carbon footprint***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Design for manufacture and project management** |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Design for manufacture and project management** | * Students will know how designers use check lists to ensure products meet criteria
* Students will know that Quality assurance refers to the procedures and policies put in place to reduce waste, and to ensure manufactured products are produced accurately within set acceptable tolerances.
* Students will know that Quality control refers to the constant checking of products during manufacture to identify problems or hazards
* Students will know the term Lean manufacture
* Students will know that Lean manufacture is a systematic approach to production which aims to eliminate all waste from product production.
 | Quality assurance: the maintenance of a desired level of quality in a service or product, especially by means of attention to every stage of the process of delivery or production. | * ***Students need to already know how products are checked during manufacture***
* ***Students need to already know the term of quality***
* ***Students need to already know manufacturers check their products for faults***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Lean manufacture** | * Students will know how Lean manufacture is used in industry
* Students will know how Lean manufacture is applied by a variety of different companies
 |  | * ***Students need to already know the term lean manufacture***
* ***Students need to already know how to evaluate other people’s work***
* ***Students need to already know how to analyse information***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: National and international standards in product design** |  |  |  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **National and international standards in product design** | * Students will know the national and international symbols used for products after manufacture
* Students will know that the BSI Kitemark is used to show a product has been tested and has passed all certification
* Students will know the BSI is part of the ISO organisation
* Students will know how to read the mobius loop on polymer products
 | National: relating to or characteristic of a nation; common to a whole nation.International: existing, occurring, or carried on between nations. | * ***What prior knowledge do the students need to have in their long-term memory in order to be able to make sense of your intended knowledge?***
* ***Students need to already know how products are tested and evaluated after manufacture to be approved by these organisations***
* ***Students need to already know the ISO organisation***
* ***Students need to already know the term BSIKitemark and know how it is applied to products***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **EU packaging** | * Students will know how packaging directives are used to help ease the recycling of packaging
* Students will know the WEEE directive stands for The Waste from Electrical and Electronic Equipment
* Students will know the WEEE directive is used to help to help recycle electronic products after their end of life cycle
* Students will know the EU ENERGY STAR is used to help computers tablets and laptops be recycled
 |  | * ***Students need to already know the symbols used on certain products***
* ***Students need to already know the ISO organisation***
* ***Students need to already know packaging symbols***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Non examined assessment****Unit: Section A**  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Investigation** | * Students will know the basics in how a design investigation will be accessed by a designer
* Students will know how to begin investigating the context of their design problem and explore design possibilities
* Students will know how to explore a design possibility needs and wants
* Students will know how to use primary and secondary information to inform their design investigation
* Students will know how to identify a user or cohort to their possible design possibility
* Students will know how to discuss and evaluate their findings from a design investigation
 |  | * ***Students need to already know how to identity a designs context***
* ***Students need to already know how to perform basic investigation using both primary and secondary methods***
* ***Students need to already be able to analysis products***
* ***Students need to already know how to develop ideas and thoughts***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Research plan** | * Students will know how to identify the key issues of their proposed idea
* Students will know how to identify the proposed products advantages
* Students will know how to explore their proposed products key features
* Students will know how to assign effective time management to their proposed research
 |  | * ***Students need to already know how to create a time plan***
* ***Students need to already know how to prioritise different tasks***
* ***Students need to already know the difference between primary and secondary data***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Product analysis** | * Students will know how to identify the key issues of their product analysis
* Students will know how to identify a product key feature
* Students will know how to explore a products material choice
* Students will know how to disassemble a product
* Students will know how to analyse different types of products
 | Product analysis: involves examining product features, costs, availability, quality, appearance and other aspects. | * ***Students need to already know what is meant by the term disassembly***
* ***Students need to already know how to perform a basic analysis***
* ***Students need to already know how to discuss positives and negatives***
* ***Students need to already know how to compare a variety of different products***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Practical testing** | * Students will know how to identify a range of materials
* Students will know how to perform a range of workshop tests
* Students will know how to perform a dot punch test
* Students will know a dot punch test will test the strength and brittleness of a material
* Students will know how to analyse different types of products
 |  | * ***Students need to already know what is meant by the term disassembly***
* ***Students need to already know how to perform a basic analysis***
* ***Students need to already know how to discuss positives and negatives***
* ***Students need to already know how to compare a variety of different products***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Initial Ideas** | * Students will know how to generate a range of different design ideas
* Students will know how to generate a range of rough, initial ideas
* Students will know how to perform analysis on design ideas
* Students will know a initial idea is a rough sketch of a product idea
* Students will know how to analyse different types of products
 |  | * ***Students need to already know what is meant by the term design ideas***
* ***Students need to already know how to annotate ideas***
* ***Students need to already know the term annotate***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Non examined assessment****Unit: Section B** |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Development of ideas** | * Students will know development involves the changes and adjustments of a product
* Students will know how to understand how the developments of a product are formed
* Students will know how to annotate their developments
* Students will know how to link designers needs and wants to their annotations
* Students will know how to use a range is mediums to develop their ideas
 | Development: a process that creates growth, progress, positive change or the addition of physical, economic, environmental, social and demographic components. | * ***Students need to already know how to develop ideas and thoughts***
* ***Students need to already know how to annotate***
* ***Students need to already be able to analysis products***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Modelling** | * Students will know how to generate models
* Students will know how to annotate their models
* Students will know how to use a range of CAD and CAM to create models
* Students will know how to use traditional model techniques to create models
* Students will know how to use a range is mediums to develop their ideas
 | Technique: a way of carrying out a particular task, especially the execution or performance of an artistic work or a scientific procedure. | * ***Students need to already know how to develop models***
* ***Students need to already know the basics of traditional model making***
* ***Students need to already know the basics of CAD and CAM***
* ***Students need to already be able to create basic models***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Exploded view** | * Students will know how to generate an exploded view
* Students will know an exploded view is designed to explore all aspects of a design
* Students will know how to use a range of CAD software to create exploded views
* Students will know how to use add dimensions to an exploded view
 |  | * ***Students need to already know how to use basic CAD software***
* ***Students need to already know how to draw in basic isometric***
* ***Students need to already know how to apply dimensions to designs***
 | Exam style questions – End of topic assessments - MCQ |
| **Lesson:** **Manufacturing specification** | * Students will know how to create a manufacturing specification
* Students will know a manufacturing specification is a document which uses a step by step guide on how to manufacture a product
* Students will know how research to inform their manufacturing specification
 |  | * ***Students need to already know how to use measurements***
* ***Students need to already know which type of manufacturing process are relevant***
* ***Students need to already know how to create a basic specification***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Non examined assessment****Unit: Section C** |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Manufacture of product** | * Students will know how to manufacture their product
* Students will know how to use processes specific for their manufacture
* Students will know how to use quality control in their manufacture
* Students will know how to select appropriate manufacture processes for their product
* Students will know how to test and evaluate the products throughout manufacture
* Students will know how to use a range is mediums to manufacture their product
 |  | * ***Students need to already know how to perform basic manufacture***
* ***Students need to already know how to use basic workshop tools***
* ***Students need to already know the different stages of manufacture***
 | Exam style questions – End of topic assessments - MCQ |

| **Year 13****Design**  | **Unit: Non examined assessment****Unit: Section D** |  |  |  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Testing and evaluating** | * Students will know how to analyse a product
* Students will know how to test their product for function
* Students will know how to test their products against a specification
* Students will know how to test their product against the client’s needs and wants
 |  | * ***Students need to already know how to evaluate their products***
* ***Students need to already know how to evaluate against a specification***
* ***Students need to already know how to apply and discuss developments***
 | Exam style questions – End of topic assessments - MCQ |