**Sample Assessment Outline**

Materials Design and Technology

Preliminary Unit 1 and Unit 2

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# Sample assessment outline

# Materials Design and Technology – Preliminary

## Unit 1

| **Assessment task** | **Notional  due date** | **Unit outcome:**  recognise differences  in appearance  and uses for different materials | **Unit outcome:**  recognise design  choices exist for  different products | **Unit outcome:**  apply design  fundamentals and  skills to  develop a product | **Unit outcome:**  develop and practise  safe production skills to make a product |
| --- | --- | --- | --- | --- | --- |
| **Task 1: Introduction to simple design**  Introduction to products and materials. The nature and properties of materials of different products.  Introduction to a design process. Look at products and materials using design fundamentals, such as colour, appearance, texture and weight. | Week 2 | **✓** | **✓** |  | **✓** |
| **Task 2: Material differences and uses**  Explore differences in products and materials. Likes and preferences based on design choices and design fundamentals. | Week 4 | **✓** | **✓** |  | **✓** |
| **Task 3: Methods of communicating design ideas**  Students use simple drawing and annotation techniques to develop a product, or use pre-prepared drawings of designs to make changes by design choices. | Week 7 | **✓** |  | **✓** |  |
| **Task 4: Manufacture theproduct**  With varying degrees of supervision and assistance, students use simple tools and process techniques to manufacture the designed product. | Week 15 | **✓** |  | **✓** | **✓** |
| **Task 5: Presentation of completed product**  Presentation of completed product. | Week 16 |  | **✓** |  | **✓** |

| **SAMPLE PLANNING CHECKLIST  Materials Design and Technology**  **Preliminary Unit 1**  (✓ = Unit content covered) | **Task 1**  Introduction to design | **Task 2**  Materials, differences and uses | **Task 3**  Communicate ideas | **Task 4**  Manufacture the product | **Task 5**  Presentation of product |
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| **Design fundamentals and skills** | | | | | |
| Seek and discuss links between design processes and final products, such as design concept sketches, compared to the finished product.  Identify a product from its design and determine that the product and design are the same object.  Use pre-prepared designs to make design choices.  Decision making: make design choices based on colour and shape. | **✓** |  | **✓** |  | **✓** |
| **Nature and properties of materials** | | | | | |
| Identify by appearance, and name materials within the chosen context. | **✓** | **✓** |  |  |  |
| Identify basic aesthetic properties or characteristics. | **✓** | **✓** |  |  |  |
| **Materials in context** | | | | | |
| Identify basic uses for materials within the chosen context. | **** | **✓** | **✓** |  |  |
| **Use of technology – design skills and techniques** | | | | | |
| Use pre-prepared design in developing a solution.  Use simple graphic communication technologies.  Name and use basic equipment as appropriate to context. | **✓** |  | **✓** |  | **✓** |
| **Use of technology – skills and techniques – safety – production management** | | | | | |
| Name and use basic equipment as appropriate to context.  Manipulate materials.  Correct use of personal protective equipment (PPE) where applicable. |  |  | **✓** | **✓** |  |
| Use teacher-directed design, production plans and processes.  With supervision, use simple tools and/or machines safely.  Communicate and describe, in simple terms, the production process.  Demonstrate workshop clean-up procedures. |  |  |  | **✓** | **✓** |

# Sample assessment outline

# Materials Design and Technology – Preliminary

## Unit 2

| **Assessment task** | **Notional  due date** | | **Unit outcome:**  recognise differences  in appearance  and uses for different materials | | **Unit outcome:**  recognise design  choices exist for  different products | **Unit outcome:**  apply design  fundamentals and  skills to  develop a product | **Unit outcome:**  develop and practise  safe production skills to make a product |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Task 6: Material differences and uses**  Students discuss different materials and the differences in appearance.  Students name materials and products made from different materials.  Students discuss different uses for different materials.  Personal likes and preferences based on design fundamentals and factors affecting design. | | Week 2 | | **✓** | **✓** |  | **✓** |
| **Task 7: Re-introduction to simple design**  Explore the nature and properties of different materials in different products.  Continue with a design process.  Look at a range of different materials using design fundamentals: colour, appearance, texture and weight. | | Week 4 | | **✓** | **✓** |  | **✓** |
| **Task 8: Methods of communicating design ideas**  Students use simple drawing and annotation techniques to develop a product, making changes by design choices within the design process, to develop an individual design solution. | | Week 7 | | **✓** |  | **✓** |  |
| **Task 9: Manufacture of product**  Manipulation of materials to produce the product, as applicable to context.  Safety; correct use of personal protective equipment (PPE) where applicable.  Production management as directed by teacher. | | Week 15 | | **✓** |  | **✓** | **✓** |
| **Task 10: Presentation of completed product**  Students present the finished product, and discuss the likes and uses of the product. | | Week 16 | |  | **✓** |  | **✓** |

| **SAMPLE PLANNING CHECKLIST  Materials Design and Technology**  **Preliminary Unit 2**  (✓ = Unit content covered) | **Task 6**  Materials, differences and uses | **Task 7**  Introduction to design | **Task 8**  Communicate ideas | **Task 9**  Manufacture the product | **Task 10**  Presentation of product |
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| **Design fundamentals and skills** | | | | | |
| Identify product/s and discuss:   * factors affecting design, chosen from: * personal likes/dislikes * aesthetics – appearance, form * function – purpose, use * safety – design requirements * cost – compare similar products. | **✓** | **✓** |  |  |  |
| Seek and discuss links between designs and final products.  Use a guided design method or pre-prepared designed components to develop own solution.  Decision making: make design choices based on factors affecting design. | **✓** |  | **✓** |  | **✓** |
| **Nature and properties of materials** | | | | | |
| Identify, by appearance and name, within the chosen context   * metals – steel, aluminium, copper, brass, tin, stainless steel * textiles – cotton, denim, linen, wool, silk * wood – softwoods, hardwoods, manufactured boards. | **✓** | **✓** |  |  |  |
| Identify basic aesthetic properties or characteristics, such as:   * colour – bright, dull * appearance – patterned, plain * texture – soft, hard, smooth, rough * weight – heavy, light. | **✓** |  | **✓** |  |  |
| **Materials in context** | | | | | |
| Within a chosen context, identify common materials and describe their uses.  Name some products or objects made from common materials. | **✓** | **✓** |  |  |  |
| **Use of technology – design skills and techniques** | | | | | |
| Use pre-prepared design in developing a solution.  Use simple graphic communication technologies.  Name and use basic equipment as appropriate to context. | **✓** |  | **✓** |  | **✓** |
| **Use of technology – skills and techniques – safety – production management** | | | | | |
| Name and use basic equipment as appropriate to context.  Manipulate materials.  Correct use of personal protective equipment (PPE) where applicable. |  |  | **✓** | **✓** |  |
| Use teacher-directed design, production plans and processes.  With supervision, use simple tools and/or machines safely.  Communicate and describe, in simple terms, the production process.  Demonstrate workshop clean-up procedures. |  |  |  | **✓** | **✓** |