Government of **Western Australia**
School Curriculum and Standards Authority

SAMPLE ASSESSMENT OUTLINE

MATERIALS DESIGN AND TECHNOLOGY
PRELIMINARY UNIT 3 AND UNIT 4

Sample assessment outline

Materials Design and Technology – Preliminary

Unit 3

Assessment task	Notional due date	**Unit outcome:** identify and name materials and their basic properties and uses	**Unit outcome:** discuss design choices and factors affecting design choices	**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 design fundamentals Introduction and application of design fundamentals and factors affecting design through selected products and materials Comparing products, their uses, and understanding the nature and properties of materials of different products	Week 2	✓	✓	✓	
Task 2: Material properties for different product uses Identify the different properties or characteristics of materials, and explore why these materials are chosen for each product's function	Week 3	✓	✓		✓
Task 3: Developing and communicating design ideas Students use simple drawing and annotation techniques to develop a product, while making changes through design choices	Week 7	✓	✓	✓	
Task 4: Manufacture the product Practical skills and techniques are used in the 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 the teacher	Week 15	✓		✓	✓
Task 5: Presentation of completed product Evaluate completed product against initial design Present completed product	Week 16		✓		✓

SAMPLE PLANNING CHECKLIST **Materials Design and Technology** **Preliminary Unit 3** (✓ = Unit content covered)	**Task 1** Introduction to design fundamentals	**Task 2** Materials, differences and uses	**Task 3** Developing and communicating ideas	**Task 4** Manufacture the product	**Task 5** Presentation of product
Design fundamentals and skills					
Discuss: • needs and wants • existing products • design fundamentals ▪ aesthetics, function, safety, cost • factors affecting design Devise: • using communication techniques • sketches of personal product ideas, with development of images to a final solution • presentation of design choices and final design Use guided and/or highly scaffolded design plans as the idea/plan for an eventual product Evaluate when discussing and devising design ideas	✓		✓		✓
Evaluate finished product against initial design					✓
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					
Develop basic graphic skills with simple annotation chosen from, but not limited to, the following: • coloured images cut and pasted • 2D pencil sketches, pictorial drawings, colour or rendered drawings • desktop publishing, ICT drawing Use appropriate terminology and conventions Name and use basic equipment, as appropriate to context	✓		✓		✓
Use of technology – skills and techniques – safety – production management					
Use appropriate terminology and conventions Name and use basic equipment, as appropriate to context Manipulate materials: • mark out parts/shapes • cut out and/or shape parts/shapes • join or assemble • finish product **Safety** Correct use of personal protective equipment (PPE) where applicable			✓	✓	
Production management Use teacher directed design, production plans and processes With supervision, use tools and machines safely Communicate and describe the production process in simple terms Manage processes to finish a product Demonstrate workshop clean-up procedures				✓	✓

Sample assessment outline

Materials Design and Technology – Preliminary

Unit 4

Assessment task	Notional due date	**Unit outcome:** identify and name different materials and their different basic properties and uses	**Unit outcome:** discuss design choices and factors affecting design choices	**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: Nature and properties of materials Identify and name the materials by their appearance Look at a range of different common materials and identify some of the differences of the materials' properties	Week 2	✓	✓	✓	
Task 7: Design fundamentals and skills Explore existing products, within context based on needs and wants. Personal likes and preferences based on design fundamentals and factors affecting design	Week 3	✓	✓		✓
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 the 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 4** (✓ = Unit content covered)	**Task 6** Nature and properties of materials	**Task 7** Design fundamentals and skills	**Task 8** Communicate design ideas	**Task 9** Manufacture the product	**Task 10** Presentation of product
Design fundamentals and skills					
Discuss: • design needs and wants – existing products – design fundamentals – factors affecting design	✓	✓	✓		✓
Devise: • using communication techniques • sketches of personal product ideas with development of images to a final solution • design choices based on design fundamentals • presentation of final design Use guided and/or highly scaffolded design plans as the idea/choice/plan for an eventual product Evaluate when discussing and devising design ideas	✓	✓			
Nature and properties of materials					
Identify, by appearance and name, within the chosen context: • metals – ferrous, non-ferrous • textiles – natural fibres, manufactured fibres • wood – softwoods, hardwoods, and different manufactured boards	✓				
Identify basic aesthetic properties or characteristics, such as: • colour – appearance – patterned, plain • texture – soft, hard, smooth, rough – density – heavy, light	✓	✓	✓		
Materials in context					
Identify, within a chosen context, common materials and describe their uses Name some products or objects made from common materials	✓	✓			
Use of technology – design skills and techniques					
Use a guided design method to develop own solution Develop graphic skills, such as desktop publishing and/or hand sketching with simple annotation		✓	✓		✓
Use of technology – skills and techniques – safety – production management					
Use tools and basic machinery Manipulate materials by cutting, shaping, joining and finishing Use appropriate correct basic terminology and conventions **Safety** Correct use of personal protective equipment (PPE) where applicable			✓	✓	
Production management Use simple tools and machines Use teacher-directed design, production plans and processes Communicate and describe the production process				✓	✓
Design fundamentals and skills Evaluate finished product against initial design	✓				✓