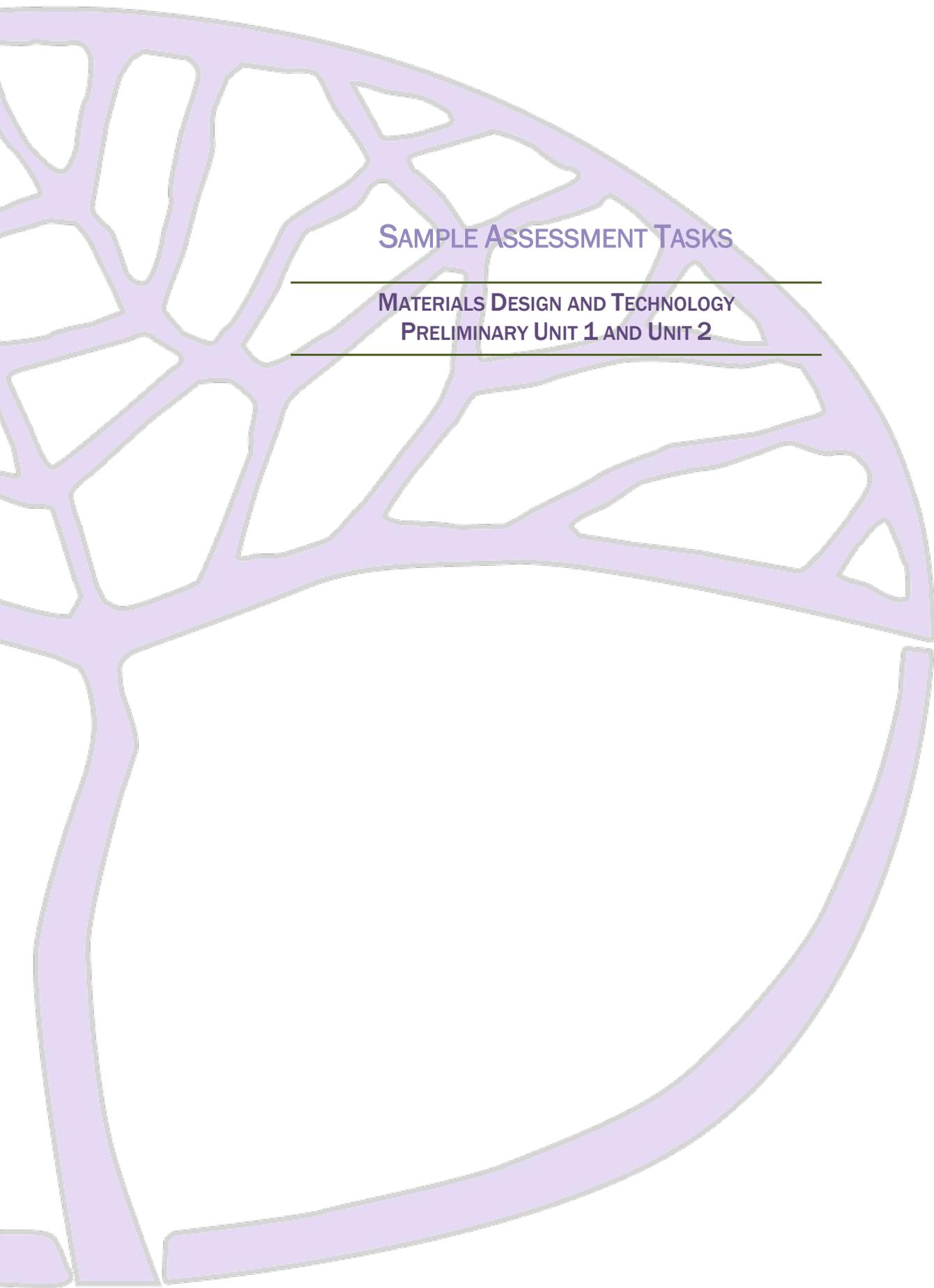




Government of **Western Australia**
School Curriculum and Standards Authority

SAMPLE ASSESSMENT TASKS

MATERIALS DESIGN AND TECHNOLOGY
PRELIMINARY UNIT 1 AND UNIT 2



Copyright

© School Curriculum and Standards Authority, 2014

This document – apart from any third party copyright material contained in it – may be freely copied, or communicated on an intranet, for non-commercial purposes in educational institutions, provided that the School Curriculum and Standards Authority is acknowledged as the copyright owner, and that the Authority's moral rights are not infringed.

Copying or communication for any other purpose can be done only within the terms of the *Copyright Act 1968* or with prior written permission of the School Curriculum and Standards Authority. Copying or communication of any third party copyright material can be done only within the terms of the *Copyright Act 1968* or with permission of the copyright owners.

Any content in this document that has been derived from the Australian Curriculum may be used under the terms of the [Creative Commons Attribution-NonCommercial 3.0 Australia licence](#)

Disclaimer

Any resources such as texts, websites and so on that may be referred to in this document are provided as examples of resources that teachers can use to support their learning programs. Their inclusion does not imply that they are mandatory or that they are the only resources relevant to the course.

Sample assessment task

Materials Design and Technology – Preliminary

Task 1 – Unit 1

Conditions

Period allowed in class for completion of the task: two weeks

Design fundamentals and skills

Introduction to simple design

The following knowledge and skills will be the focus of this task:

- a simple design process and how a design context can be delivered in any context – metal, textiles or wood
- how to prepare for the design process and choose what products they would like to make.

For this task, you will need to:

- bring in pictures of products from home or collect images of products from sources such as the internet, photographs or publications or magazines
- assemble images or actual products to be made into a class collection, including images of where different materials or combination of materials have been used to make the products
- explore different products and give them names
- try to identify the material the products are made from
- in groups, use the class collection of products to explore differences, your likes and preferences to the products
- talk about your reasons for preferences for one product over another.

Your progress in this task will be documented in the following ways:

- teacher observation of you participating in providing products or images of products
- teacher observation of you participating in discussion of likes and preferences to different products.

Task 1 – Completion checklist

Unit outcome: Recognise differences in appearance between materials

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Observation of each student participating in providing products or images of products		
Observation of each student participating in discussion of likes and preferences for different products		

Sample assessment task

Materials Design and Technology – Preliminary

Task 2 – Unit 1

Conditions

Period allowed in class for completion of the task: end of Week 4

Design fundamentals and skills

For this task, as a group, we will explore a simple design process based on aesthetics and appearance of materials.

In particular:

- differences in shapes and sizes
- variations and differences in colours of materials
- variations in surfaces by touch and feel
- other observations about characteristics and aesthetics that make for an appealing product.

For this task you will need to:

- in groups, use the assembled images or actual products of the class collection to explore the fundamentals of design of each selected product in the collection
- relate these design characteristics of the materials and products to each student's likes and preferences for selected products.

Your progress in this task will be documented in the following ways:

- your completed student booklet where you distinguish between materials using colour, aesthetic properties and appearance
- teacher observation of you discussing differences in materials: colour, aesthetic properties and appearance in selected different products.

Task 2 – Completion checklist

Unit outcomes:

1. Recognise differences in appearance between materials

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Student booklet where student distinguishes between materials; using colour, aesthetic properties and appearance		
Observation of student participating in discussion of differences in materials; colour, aesthetic properties and appearance in selected different products		

2. Recognise different uses for different materials

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Student booklet where student distinguishes between materials; using colour, aesthetic properties and appearance		
Observation of student participating in discussion of differences in materials; colour, aesthetic properties and appearance in selected different products		

Sample assessment task

Materials Design and Technology – Preliminary

Task 3 – Unit 1

Conditions

Period allowed in class for completion of the task: completed end of Weeks 6 and 7

Design fundamentals and skills, and Use of technology – skills and techniques

For this task, the class will explore the methods of communicating design ideas.

In particular:

- the use of simple drawing and annotation techniques to make changes by design choices, focusing on drawing
 - differences in shapes and sizes
 - variations of ideas
 - variations and differences in colours
 - variations in decoration of possible products
 - individual characteristics and aesthetics that make for an appealing product.

For this task, you will need to:

- use the assembled images or actual products of the class collection
- use simple drawing and annotation techniques to develop your ideas of a product, or use pre-prepared drawings of designs and make changes you think are suitable for a product
- focus on drawing
 - individual characteristics and aesthetics that make for an appealing product
 - differences in shapes and sizes/measurements
 - variations:
 - of ideas
 - in annotations/notes
 - in differences in choice of colours
 - of decoration of possible products.

Your progress in this task will be documented in the following ways:

- your annotated drawings developing into a possible product
- annotations to describe the parts of the drawn product and measurements
- discussion with your teacher how changes can be made through your design choices using your prepared drawings.

Task 3 – Completion checklist

Unit outcomes: Apply design choices to develop a product

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Student annotated drawings developing into a possible product		
Student annotations to describe the parts of the drawn product and measurements		
Student choice of colour and decoration		
Discussion about how changes can be made through your design choices using your prepared drawings		

Sample assessment task

Materials Design and Technology – Preliminary

Task 4 – Unit 1

Conditions

Period allowed in class for completion of the task: end of Week 15

Use of technology – skills and techniques as per context

For this task, the class will explore the methods of manufacturing the product and manufacturing the product. With varying degrees of supervision and assistance, you will use simple tools and process techniques to manufacture the designed product.

For this task, you will need to:

- use the developed drawings, or pre-designed drawings to assemble a product
- with assistance from your teacher, work with simple tools, equipment and materials to:
 - use teacher-directed production plans and processes when applicable
 - correctly use personal protective equipment (PPE) where applicable
 - apply appropriate safety behaviour when using tools
 - 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
 - finishing
 - communicate and describe, in simple terms, the production process
 - demonstrate workshop clean-up procedures.

Your progress in this task will be documented in the following ways:

- teacher observation notes of your behaviour and use of equipment and materials
- teacher checklist of you using personal protective equipment (PPE) where applicable, and applying appropriate safety behaviour when using tools
- your completed student worksheet where you name and use basic equipment, as appropriate, to context to manipulate materials to manufacture the product
- teacher observation of you communicating and describing, in simple terms, the production process
- teacher checklist of you demonstrating workshop clean-up procedures
- photographs of your completed project.

Task 4 – Completion checklist

Unit outcomes:

1. Develop and practice safe production skills

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Teacher observation notes of student behaviour and use of equipment and materials		
Completed student worksheet where student names basic equipment, as appropriate, in context to manipulate materials to manufacture the product		
Observation of student communicating and describing, in simple terms, the production process		

2. Apply production skills to make a product

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Teacher observation notes of student behaviour and use of equipment and materials		
Teacher checklist of student correctly using personal protective equipment (PPE), where applicable, and applying appropriate safety behaviour when using tools		
Observation of student use of equipment, as appropriate, in context to manipulate materials to manufacture the product		
Observation of student communicating and describing, in simple terms, the production process		
Teacher checklist of student demonstrating workshop clean-up procedures		
Photographs of completed student project		

Sample assessment task

Materials Design and Technology – Preliminary

Task 6 – Unit 2

Conditions

Period allowed in class for completion of the task: end of Week 2

The nature and properties of materials that influence simple design

For this task, the class will be exploring:

- the nature and properties of different materials in any context – metal, textiles or wood
- the qualities of different materials within our context:
 - metals – steel, aluminium, copper, brass, tin, stainless steel
 - textiles – cotton, denim, linen, wool, silk
 - wood – softwoods, hardwoods, manufactured boards
- different products that appear different, but are essentially the same, i.e. they may be made from different materials
- basic aesthetic properties or characteristics, such as:
 - colour – bright, dull
 - appearance – patterned, plain
 - texture – soft, hard, smooth, rough
 - weight – heavy, light
- aesthetic differences and likes between, and for, one product over another.

For this task, you will need to:

- bring in pictures of products from home or collect images of products from sources such as the internet, publications or magazines
- assemble images or actual products to be made into a class collection including images of where different materials or combination of materials have been used to make the products
- give the names of different products
- identify and name the material the products are made from
- in groups, use the class collection of products to explore aesthetic differences, your likes and preferences for the products
- talk about your reasons for preferences for one product over another.

Your progress in this task will be documented in the following ways:

- teacher observation of you participating in providing products or images of products
- student booklet where you name different products
- student booklet where you name the material the products are made from
- teacher observation of you participating in discussion of aesthetic differences, likes and preferences to different products.

Task 6 – Completion checklist

Unit outcomes:

1. Recognise differences in appearance between materials

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Observation of student participating in providing products or images of products		
Student booklet where student names different products		
Student booklet where student names the material the products are made from		

2. Recognise different properties for different materials

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Student booklet where student names the material the products are made from		
Observation of student participating in discussion of materials differences, likes and preferences for different materials		

3. Recognise factors affecting design choices

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Student booklet where student names the material and properties affecting the products use		
Observation of student participating in discussion of aesthetic differences, likes and preferences for different products		

Sample assessment task

Materials Design and Technology – Preliminary

Task 7 – Unit 2

Conditions

Period allowed in class for completion of the task: end of Week 4

Design fundamentals and skills

Progress through a simple design process based on aesthetics and appearance of materials

As a class, we will be exploring the following design fundamentals:

- factors affecting design, chosen from:
 - personal likes/dislikes
 - aesthetics – appearance, form
 - function – purpose, use
 - safety – design requirements
 - cost – compare similar products
- the fundamentals of design including:
 - variations in shapes and sizes
 - variations in the appearance and colours of materials
 - variations in surfaces by touch and feel
 - variations in decoration of products
 - different ways the materials have been crafted for a specific use
 - other observations about characteristics and aesthetics that make for an appealing product.

For this task, you will need to:

- use the assembled images or actual products of the class collection
 - in groups, use the class collection to explore the fundamentals of design by viewing, discussing and describing, and distinguishing between the characteristics, especially function and appearance of each selected product in the collection
- relate these design characteristics of the materials and products to how the product is used: does the material suit the function?

Your progress in this task will be documented in the following ways:

- teacher observing you participating in distinguishing between materials using colour, aesthetic properties and appearance
- your completed student booklet where the class discussed differences in materials: colour, aesthetic properties and appearance in selected different products
- your completed student booklet where the class discussed the different uses for each product and whether the material suited the function.

Task 7 – Completion checklist

Unit outcomes:

1. Recognise factors affecting design choices

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Observation of student participating in distinguishing between materials using colour, aesthetic properties and appearance		
Student booklet where showing differences in materials: colour, aesthetic properties and appearance in selected different products		
Student booklet showing the different uses for each product and whether the material suited the function		

2. Apply design choices to develop a product

Description of evidence to be collected by teacher	Date evidence collected	Level of support comments
Student booklet where showing differences in materials: colour, aesthetic properties and appearance in selected different products		
Student booklet showing the different uses for each product and whether the material suited the function		