**Sample Assessment Tasks**

Materials Design and Technology

ATAR Year 12

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# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 1 – Unit 3

**Assessment type:** Design (written)

**Conditions**

Period allowed for completion of the task: two weeks

**Task weighting**

10% of the school mark for this pair of units

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**Develop a statement of intent or design proposal (15 marks)**

Identify a design problem or situation to be solved and propose client requirements and limitations.

Students research and discuss client needs, target audience/market, design needs, values and trends, beliefs of designers/developers; then develop and set out a design portfolio.

**What you need to do**

Identify a need through client discussion or other information.

1. Prepare a draft statement of intent (10 marks)
* this can be revised as you analyse the design proposal through discussion of: client needs, target audience/market, values and trends, design constraints
* list any design constraints which may be: processes, materials, equipment, function, size, finish, quantities, safety, cost or time
* outline likely; function, aesthetics, safety, cost considerations or limitations of the design proposal
* include in-text references to your sources of information.
1. Develop the pages of your design portfolio to include the following: (5 marks)
* a cover page with:
* course title
* design title (optional)
* candidate number
* year
* space for photograph or relevant image
* a contents page that will include:
* page content description
* page numbers
* prepare blank criteria contents pages and, within each footer, include: your candidate number, page number and, as an option, a design title
* for clear communication of information, use appropriate colours, legible font and font size for each prepared page.

Note: Refer to information regarding portfolio requirements.

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Statement of intent or design proposal
 |  |
| * Prepared first part of design portfolio
 |  |

# Marking key for sample assessment task 1 – Unit 3

|  |  |  |
| --- | --- | --- |
|  **Development of statement of intent, and preparation of design portfolio pages** | **Maximum possible mark** | **Allocated mark** |
| Statement of intent provides information about the situation, defining a need or purpose for the product* Clear, detailed statements about all aspects of client needs, target audience/market, values and trends, and likely function, aesthetics, safety, cost considerations and design constraints, including sources of information
* suitably detailed statements about client needs, and likely function, aesthetics, safety, cost considerations and design constraints, including sources of information
* statements about client needs, and some factors affecting design, including sources of information
* brief statements about client needs, and some general comments about factors affecting design, with occasional references to sources of information
* general statements about the likes and dislikes, covering broad areas of the problem in limited general design terms only
 | 9–107–85–63–41–2 | **/10** |
| Preparation of design portfolio pages * good use of colour, clear legible font for each page, showing correct and appropriate information
* appropriate colours, legible font for each page, showing correct information
* appropriate information, but requires a change and resizing of font
* information requires corrections and/or changes to colour and/or resizing of font
* missing information, requiring additional edits and change of font
 | 54321 | **/5** |
| **Total** | **/15** |

# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 2 – Unit 3

**Assessment type:** Design (written)

**Conditions**

Period allowed for completion of the task: three weeks

**Task weighting**

15% of the school mark for this pair of units

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**Investigate design proposal (26 marks)**

Students investigate and develop notes on target audience/market, demand, niche market design needs, values and trends performance criteria related to needs, values and beliefs of the developer and end user, historical, social, cultural and political sources of design inspiration, design fundamentals and factors affecting design.

**What you need to do**

Review the statement of intent or design brief and, with this in mind, develop the first part of the design portfolio, to include the following:

* investigate, survey and collect information on all **three** of the following that relate and are relevant to the statement of intent or design brief
* target audience/market, demand, niche market design needs, values and trends, performance criteria related to needs, values and beliefs of the developer and end user (10 marks)
* historical, social, cultural and political sources of design inspiration (4 marks)
* develop ideas and concepts through collected and annotated images, incorporating comments about design fundamentals and factors affecting design, with references back to the statement of intent, including limitations such as available materials and equipment. Incorporate into annotations comments on the influence of design fundamentals and factors affecting design, such as : (8 marks)

|  |  |
| --- | --- |
| * aesthetics
 | * environmental impact and considerations
 |
| * function
 | * sustainability issues
 |
| * safety
 | * ergonomics
 |
| * cost
 | * anthropometric data
 |

* include in-text referencing and acknowledge all sources of images and other research. (4 marks)

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Research on target audience/market, demand, niche market design needs, values and trends, performance criteria related to needs, values and beliefs of the developer and end user
 |  |
| * Research on historical, social, cultural and political sources of design inspiration, any limitations such as available materials and equipment
 |  |
| * Annotated ideas and design concept images showing concept development
 |  |

# Marking key for sample assessment task 2 – Unit 3

|  |  |  |
| --- | --- | --- |
| **Design portfolio – Investigation of design proposal and concept development**  | **Maximum possible mark** | **Allocated mark** |
| Provides information about target audience/market, demand, niche market design needs, values and trends, performance criteria related to needs, values and beliefs of the developer and end user * carefully prepared relevant statements and survey data about demand, trends, target audience and/or niche market, making detailed comparisons between design needs, values and performance criteria
* statements about market/target audience, with comparisons between selected ideas and images, against design needs, values and performance criteria
* statements describing likely market/audience differences, combined with notes on design needs, and plausible client needs
* a selection of ideas of a single target audience/market with limited reference to design needs, values and performance criteria
* collection of dissimilar statements about general ideas, markets and design needs
 | 9–107–85–63–41–2 | **/10** |
| Provides information on historical, social, cultural and political sources of design inspiration; any limitations such as available materials and equipment* detailed comparisons, using design considerations, between a critically selected number of historical, social, cultural and political sources of design inspiration, supported by suitable images
* a number of different examples with notes describing the differences
* a selection of ideas from a single historical, social, cultural and political sources of design inspiration with some notation about likes/dislikes
* collection of ideas, dissimilar images and few notes
 | 4321 | **/4** |
| Provides ideas and concepts through collected and annotated images * clear development of ideas and concepts showing concept development with annotations on images referring to design fundamentals, factors affecting design and statement of intent
* concept development in the annotated images, referencing design factors and statement of intent
* concept development is limited by few images and simple annotations, little or some reference to ideas in the statement of intent
* collection of ideas, general annotations, dissimilar images and few notes
 | 7–85–63–41–2 | **/8** |
| Includes in-text referencing for sources of information, images and other data* clearly identifies all, or majority of, references and sources of information, using in-text acknowledgements
* limited referencing or acknowledgement of information for images and other data
 | 3–41–2 | **/4** |
| **Total** | **/26** |

Teacher feedback \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 3 – Unit 3

**Assessment type:** Response (written)

**Conditions**

Period allowed for completion of the task: two weeks

**Task weighting**

10% of the school mark for this pair of units

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**Investigation and report on the nature and properties of materials (35 marks)**

Research and present portfolio pages on the nature and properties of materials suitable for use in the development of a design solution.

**What you need to do**

Present findings for the research section of the portfolio, including images, samples or graphics, where appropriate within your context; find and research information and present research notes about:

* types, names and classifications of natural, composite or manufactured materials, including supporting graphics or images (5 marks)
* collected processes on the testing of materials, including results from testing the physical and chemical properties of materials. (5 marks)

Present research notes to show:

* examples distinguishing physical differences between different materials, including differences in structure affecting physical properties (12 marks)
* selection and description of the characteristics of materials that influence design choices; include property testing with relevant graphics and charts/table to communicate materials design choice concepts and analysis of different properties. (10 marks)

Acknowledge all sources of information, using either in-text referencing or an appropriately set out reference list (3 marks)

The final research should be between 1000–1500 words and submitted as a Word document.

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Presentation of research notes
 |  |

# Marking key for sample assessment task 3 – Unit 3

|  |  |  |
| --- | --- | --- |
| **Research notes on the nature and properties of materials** | **Maximum possible mark** | **Allocated mark** |
| Presentation of research notes on types, names and classifications of natural, composite or manufactured materials* correct listing, naming and classification of all syllabus material types, supported by suitable graphics
* listing, naming and classification of all syllabus material types with images, minor errors corrected
* names listed, with statements about material types, with images; requires more information
* materials named within statements about material types combined with images; requires corrections to supplied information
* limited description of material types, with little or no comments on classification or differences
 | 54321 | **/5** |
| Collected processes on the testing methods for the physical and chemical properties of materials * logical arrangement and setting out of testing processes – identifying physical and chemical properties of materials; detailed test results clearly recorded
* relevant explanation of test methods – table presentation of physical and chemical properties of materials and completed test results
* relevant collection of methods, but sketchy test processes and recorded test results
* collection of test results in table form, with brief reference to test methods
* notes identifying simple test methods, but incomplete testing data
 | 54321 | **/5** |
| Presentation of examples of identified physical differences between different materials* numerous materials arranged, prioritised, detailed with specific points about the distinguishing physical differences
* clear arrangement of materials with examples of distinguishing physical differences
* collection of relevant statements of examples of distinguishing physical differences
* statements refer to syllabus; listed materials with examples of physical differences
* notes referring to examples of the main differences in appearance of project materials
* notes on some main points of materials’ differences
 | 11–129–107–85–63–41–2 | **/ 12** |
| Selection and description of characteristics of materials that influence design choices; property testing with relevant graphics and charts/table to communicate materials’ design choice concepts and analysis of different properties.* correct selection of materials; detailed arrangement and setting out of the main characteristics, identifying many of the characteristics, properties and factors affecting design choices; supported by suitable graphics
* clear arrangement identifying the main materials’ characteristics and factors affecting design choices; with supporting images
* collection of notes identifying chosen materials’ characteristics affecting design choices
* notes on a few materials, listing the materials’ characteristics affecting design choices
* limited description of materials, with little or no comments on characteristics affecting design choices
 | 9–107–85–63–41–2 | **/ 10** |
| Exhibits in-text referencing or a reference list that is* accurate, complete and extensive
* relevant, but limited in range of references
* partial or incomplete in-text referencing or reference list
 | 321 | **/3** |
| **Total** | **/35** |

# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 4 – Unit 3

**Assessment type:** Design (written)

**Conditions**

Period allowed for completion of the task: three weeks

**Task weighting**

15% of the school mark for this pair of units

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**Devise and development concepts (20 marks)**

Students use a design process to devise concepts, review developing ideas, rapid concept drawings, patterns or templates, referring back to the design brief and performance criteria.

**What you need to do**

Develop design ideas and concepts within the portfolio towards a likely solution, including annotations to explain design development using the following:

* apply elements and principles of design, where applicable, in context

|  |  |  |  |
| --- | --- | --- | --- |
| * line
 | * colour
 | * rhythm
 | * dominance
 |
| * shape
 | * tone
 | * radiation
 | * proportion
 |
| * form
 | * repetition
 | * harmony
 | * balance
 |
| * texture
 | * gradation
 | * contrast
 | * unity
 |

* devise and develop concept design sketches, applying the elements and principles of design
* apply rapid concept development techniques to generate a variety of design ideas
* adapt design ideas using annotated graphics and sketches, templates or patterns
* collate best ideas that have been developed using annotated hand or computer-generated graphics – pictorial views and detailed sketches, as necessary
* review and justify best ideas using design brief and performance criteria (6 marks)
* present annotated concept sketches of final ideas, including likely materials, shapes, joins, specific features, likely dimensions and notes on any likely applied finish (14 marks)

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Developed design ideas and annotated concept sketches
 |  |
| * Concept drawings/sketches developing towards final ideas and likely finishes
 |  |

# Marking key for sample assessment task 4 – Unit 3

|  |  |  |
| --- | --- | --- |
| **Design portfolio – development of concept ideas, sketches, templates or patterns**  | **Maximum possible mark** | **Allocated mark** |
| Progression of design ideas and concepts from design brief to likely solution* clear flow of concept development through a variety of annotated design ideas, including annotations about elements and principles of design; critical review and justification of best ideas using design brief and performance criteria
* satisfactory arrangement of design ideas, illustrating elements and principles of design; annotation shows a review of ideas using design brief and performance criteria
* flow of ideas haphazard, some development of materials and finishes; little reference to design brief or performance criteria
 | 5–63–41–2 | **/6** |
| Sketching skills and presentation of design information; materials, shapes, joins, specific features, likely dimensions and notes on likely finishes * detailed, well-proportioned sketches showing detail of specific ideas; views showing relevant joining methods with appropriate dimensions; clear annotation for other materials and finishes
* well-shaped, annotated sketches that show concept ideas, including other materials, joining and suitable dimensions
* annotated sketches that show concept ideas, including some other materials, joining and possible dimensions
* annotated sketches that show concept ideas, including other materials, joining and possible dimensions; minor corrections/touch-ups required to some sketches
* reasonably proportioned sketches showing ideas, including some materials, joining and dimensions; corrections/touch-ups required to some sketches
* sketches that show development of mainly a single concept idea, some sketch proportion problems, corrections/touch-ups required to fix sketches, few annotations for materials and joining, some dimensioning
* collection of dissimilar or incomplete sketches, limited design progression, and few notes
 | 13–1411–129–107–85–63–41–2 | **/14** |
| **Total** | **/20** |

Teacher feedback \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 5 – Unit 3

**Assessment type:** Design (practical)

**Conditions**

Period allowed for completion of the task: two weeks

**Task weighting**

10% of the school mark for this pair of units

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**Devise solution (20 marks)**

Students use context-appropriate drawing and technical information to develop the final product.

Prepare working drawings, patterns and/or templates.

**What you need to do**

Develop your chosen designs and provide the following:

* working drawing/s and/or developed templates or selected patterns (12 marks)
* use conventions suitable to context
* collate best ideas that have been developed using annotated hand or
computer-generated graphics – multiple views and detailed sketches, as necessary
* review and justify best ideas, using design brief and performance criteria
* prepare two-dimensional illustrations – working/technical drawings
* exhibit inspiration/concept/storyboard development and presentation
* final production drawing/s (8 marks)
* select and show dimensions, methods of joining
* show suitable part drawing/s showing joins or fine or hidden detail.

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Working drawings or templates or patterns for product
 |  |
| * Final production drawings
 |  |

# Marking key for sample assessment task 5 – Unit 3

|  |  |  |
| --- | --- | --- |
| **Design portfolio – devised solution** | **Maximum possible mark** | **Allocated mark** |
| Presentation of working drawing/s or template or selected pattern* well-drawn, correctly labelled view/s with clear, accurate dimensioning, and necessary annotation
* correctly drawn and labelled view/s with appropriate dimensioning and annotation
* drawn views show correct major features, with appropriate dimensions
* drawn views show correct major dimensioned features, requiring minor additional dimensions or alterations
* drawn views show minor, corrected errors on some features, including corrections to minor dimensions
* drawn views require correction to minor errors, and additional dimensions
 | 11–129–107–85–63–41–2 | **/12** |
| Final production drawings of proposed solution* well-drawn, correctly proportioned and dimensioned representation of detailed parts of proposed product
* well-drawn representation of part/s of product
* satisfactory representation of part of product, minor errors corrected
* representation of part, but with minor errors or missing detail
 | 7–85–63–41–2 | **/8** |
| **Total** | **/20** |

Teacher feedback \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 6 – Unit 3

**Assessment type:** Design (practical)

**Conditions**

Period allowed for completion of the task: two weeks

**Task weighting**

10% of the school mark for this pair of units

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**Presentation drawing of proposed solution** **(10 marks)**

Students use a colour-rendered, pictorial, three-dimensional drawing, either CAD or hand drawn.

**What you need to do**

Develop the devise part of a design portfolio to include:

* colour-rendered, pictorial, three-dimensional drawing/s, either CAD or hand drawn, representing the finished product.

Use context-appropriate drawing and relevant technical information to produce the final product to demonstrate:

* three dimensional presentation drawings
* rendering techniques
* inspiration/concept or storyboard development and presentation.

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Final presentation drawing
 |  |

# Marking key for sample assessment task 6 – Unit 3

|  |  |  |
| --- | --- | --- |
| **Design portfolio – Presentation drawing/s** | **Maximum possible mark** | **Allocated mark** |
| Final, three-dimensional rendered presentation of proposed solution* well-drawn, correctly proportioned, three-dimensional, colour-rendered representation of the proposed product, showing aspects of the design brief; appropriate use of colour and render to show surface and finish
* well-drawn representation of proposed solution, reflecting design brief, satisfactory use of render and colour
* satisfactory representation of solution, but with minor errors or missing detail
* drawn presentation shows minor, corrected drawing errors or some features missing and with corrections to minor proportional differences
* presentation drawing shows limited detail associated with previous concept or working drawings
 | 9–107–85–63–41–2 |  |
| **Total** | **/10** |

Teacher feedback \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 7 – Unit 3

**Assessment type:** Design (practical)

**Conditions**

Period allowed for completion of the task: two weeks

**Task weighting**

10% of the school mark for this pair of units

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**Production management plan** **(15 marks)**

Students develop and present materials costing and list, a proposed production plan and timeline to manufacture the product.

**What you need to do**

Develop a suitable production management plan containing the following:

* materials and components list/s
* estimated and/or actual costing for all materials and components (6 marks)
* proposed stages/steps of a production plan (6 marks)
* estimated timeline. (3 marks)

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Materials/parts list, costing
 |  |
| * Proposed production plan showing timeline
 |  |

# Marking key for sample assessment task 7 – Unit 3

|  |  |  |
| --- | --- | --- |
| **Design portfolio – production management plan** | **Maximum possible mark** | **Allocated mark** |
| Completed list of materials and cost form, plus any additional components* logical order showing complete and correct naming of materials, with list of all individual parts with accurate sizes, and up-to-date correct total cost
* complete and correct list of materials, with accurate sizes, correct total cost
* clear list of materials and parts with correct sizes, costing completed
* list of materials with approximate sizes and calculated approximate cost
* list of materials with approximate cost, adjustments to list, sizes and/or costing
* incomplete list of parts
 | 654321 | **/6** |
| Proposed production plan with stages/steps for manufacturing* logical list of methods of making and fitting the parts of the project together with correct tools and correct procedures
* correct procedures listed with available tools for making the project
* outline, with limited and/or partial list of procedures and tools
 | 5–63–41–2 | **/6** |
| Production timeline* a realistic timeline mapped against the production steps
* suitable timeline estimates
* timeline presents limited detail
 | 321 | **/3** |
| **Total** | **/15** |

Teacher feedback \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 8 – Unit 3

**Assessment type:** Production (practical)

**Conditions**

Period allowed for completion of the task: three weeks

**Task weighting**

10% of the school mark for this pair of units

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**Pre-production skills development, as per context-specific skills and techniques (20 marks)**

You are to complete skills development exercises, as demonstrated by your teacher, prior to the production of the proposed product.

Keep a daily work log/timesheet to record your skills development.

**What you need to do**

Document and include the following in your daily work log/timesheet: (3 marks)

* notes on the processes involved in the skills development exercises
* list of appropriate machines and tools used to complete the exercises.

Use the following procedures to complete the project:

* follow Occupational Safety and Health (OSH) practices when using appropriate tools and equipment
* follow instructions to complete skills development in a production process
* mark out details of parts on materials from a plan, using appropriate tools (3 marks)
* select and use appropriate tool/s to accurately cut and assemble the required parts (6 marks)
* if required, use appropriate tools to shape parts
* check fit, modify if needed
* present finished pre-production exercise (8 marks)
* check appearance and function of assembled skill exercise
* apply a finish, if required.

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Documented daily work log/timesheet
 |  |
| * Finished pre-production exercises
 |  |

# Marking key for sample assessment task 8 – Unit 3

|  |  |  |
| --- | --- | --- |
| **Skills development exercises**  | **Maximum possible mark** | **Allocated mark** |
| Notes on processes, tools and machines set out in daily work log/timesheet * well recorded, detailed and correct processes, tools and machines
* main steps of processes recorded with correct work practices
* inconsistent notes, partly correct work practices
 | 321 | **/3** |
| Marking out required from plan* marking out completed correctly
* marking out completed
* marking out completed but required correction
 | 321 | **/3** |
| Parts cut and shaped and fitted * all parts accurately cut, well-shaped and correctly fitted
* parts cut, but some minor unevenness, parts suitably fitted
* parts cut, but required second attempts in shaping and fitting
 | 5–63–41–2 | **/6** |
| Final presented skill exercise * correctly assembled/fitted, appearance shows accurate finished detail
* competently assembled/fitted, with an acceptable finished detail
* assembled/fitted, appearance shows minor detail flaws
* assembled, but poorly fitting parts, appearance shows detail flaws
 | 7–85–63–41–2 | **/8** |
| **Total** | **/20** |

Teacher feedback \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 12 – Unit 4

**Assessment type:** Production (practical)

**Conditions**

Period allowed for completion of the task: eight weeks

**Task weighting**

40% of the school mark for this pair of units

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**Production management (25 marks)**

Use safe production methods to produce the product.

Document a daily work log/timesheet, including a photographic record of production.

**What you need to do**

Use the planned production management procedures to complete the project

* manage each production process independently
* maintain a production plan to manage processes to meet time constraints
* adapt planned actions, equipment and resources to complete production
* apply production techniques that reduce material wastage
* follow OSH practices when using appropriate tools and equipment
* consider client feedback, and modify production processes accordingly
* document and record changes to working drawings
* document and record changes to materials lists and/or changes to actual cost of materials
* use regular journal, diary and folio entries, including: (2 marks)
* ongoing evaluation of production processes and techniques
* use of photography and notes to record ongoing progress and changes made to the project
* mark out details of parts on materials from a plan, using appropriate tools, then select and use appropriate tool/s to accurately cut the required parts (5 marks)
* if required, use appropriate tools to shape parts
* select and use appropriate tools to assemble parts (10 marks)
* check fit; modify, if needed
* check appearance of assembled product
* apply a finish, if required
* completed project, accompanied by ongoing production notes in portfolio. (8 marks)

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Stages of production (teacher observation)
 |  |
| * Production photos/daily work log for making process
 |  |
| * Completed product
 |  |

# Marking key for sample assessment task 12 – Unit 4

|  |  |  |
| --- | --- | --- |
| **Production management of proposed product** | **Maximum possible mark** | **Allocated mark** |
| Contents and records in daily work log/timesheet * records ongoing correct workshop practices
* inconsistent records of work practices
 | 21 | **/2** |
| Completed marking out of material/s as required from plan and cut parts to required shapes, using appropriate tools* marking out completed correctly, all parts cut to correct size and square
* marking out completed, parts cut to correct size
* marking out completed with minor corrections, parts cut to size
* marking out required correction, adjusted parts re-sized
* marking out required correction, re-cut replacement pieces
 | 54321 | **/5** |
| Completed assembly/fitting of product parts* all parts and joints assembled, even and square fit
* all parts and joints assembled, minor corrected unevenness
* all parts and joints assembled, minor shape unevenness
* all parts and joints assembled, but some required second attempt, some poor fit
* parts fitted, joints show poor fit, and some require additional material for second attempt
 | 9–107–85–63–41–2 | **/10** |
| Completed product and ongoing record of production * correctly assembled/fitted product, presented as per design proposal; detailed record of production clearly showing each stage of the process
* correctly assembled/fitted product, easily identified from the design proposal; well explained stages of the process in the record of production
* completed product, appearance shows minor detail flaws; limited record of production
* assembled, but poorly fitting parts; appearance and production notes show a deviation from the design and production plan
 | 7–85–63–41–2 | **/8** |
| **Total** | **/25** |

# Sample assessment task

# Materials Design and Technology – ATAR Year 12

## Task 13 – Unit 4

**Assessment type:** Final product evaluation (Practical)

**Conditions**

Period allowed for completion of the task: one week

**Task weighting**

10% of the school mark for this pair of units

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**Practical final product evaluation and report (20 marks)**

Evaluate your finished product by creating an evaluation report.

**What you need to do**

Write clear statements to evaluate the product.

Evaluate:

* product against design brief, initial design and performance criteria related to needs, values and beliefs of the developer and end user (10 marks)
* comment on the manufacturing processes with critical analysis of changes, and/or improvements at any stage of manufacturing (5 marks)
* comment on the design process with critical analysis of changes, and/or improvement during or prior to any stage of manufacturing processes (5 marks)

To support the evaluation, prepare a:

* presentation to display the quality of the final product
* portfolio presentation, including photographic evidence of the details of the finished product.

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due date** |
| * Evaluation report
 |  |
| * Completed product
 |  |
| * Completed portfolio
 |  |

# Marking key for sample assessment task 13 – Unit 4

|  |  |  |
| --- | --- | --- |
| **Evaluation of completed product** | **Maximum possible mark** | **Allocated mark** |
| Evaluation comments with regards to the specifications and design considerations of needs, values and beliefs of the developer and end user* clear comments referring to specific design considerations combined with justification of design, fulfilling statement of intent requirements and design brief
* comments outlining major design considerations, and referring to points within statement of intent and/or design brief
* comments linked to design considerations, expressing personal likes and dislikes about finished project
* comments outlining use of product, but little reference to design considerations
* comments reflect superficial evaluation
 | 9–107–85–63–41–2 | **/10** |
| Comments and critical analysis of the manufacturing processes; changes and/or improvements* evaluation of all procedures with reference to specific procedures, improvements, with little or no change of process
* appropriate reporting and/or comment on procedures with some logical evaluation of operations, with minor changes to process
* comments on procedures with limited evaluation of operations, after major changes to process
* brief comments with few references to processes
* comments reflect superficial evaluation
 | 54321 | **/5** |
| Evaluation comments and critical analysis of the design process, including any changes and/or improvements* clear comments referring to aesthetics, function and safety influenced by specific design changes and suggested improvements
* comments suggesting improvements referring to major design considerations
* comments expressing personal likes and dislikes about improvements
* brief reference to design changes to improve function or aesthetics
* few comments/superficial notes on improvements
 | 54321 | **/5** |
| **Total** | **/20** |