

Design marking guide and response

External assessment 2023

Examination — Design challenge (34 marks)

Assessment objectives

This assessment instrument is used to determine student achievement in the following objectives:

2. represent ideas, and a sustainable design concept using schematic sketching and/or ideation sketching in the develop phase
4. devise ideas using divergent thinking strategies in response to a redesign problem in the develop phase
5. synthesise ideas and sustainability information to propose a sustainable design concept in the develop phase
6. evaluate the strengths, limitations and implications of ideas against design criteria and make refinements.

Note: Objectives 1, 3 and 7 are not covered in this assessment.

Purpose

This document consists of a marking guide and a sample response.

The marking guide:

- provides a tool for calibrating external assessment markers to ensure reliability of results
- indicates the correlation, for each question, between mark allocation and qualities at each level of the mark range
- informs schools and students about how marks are matched to qualities in student responses.

The sample response:

- demonstrates the qualities of a high-level response
- has been annotated using the marking guide.

Mark allocation

Where a response does not meet any of the descriptors for a question or a criterion, a mark of '0' will be recorded.

Where no response to a question has been made, a mark of 'N' will be recorded.

Marking guide

Criterion: Devising ideas

Divergence of ideas		Attributes of ideas	
The response:	M	The response:	M
<ul style="list-style-type: none"> shows a wide range of ideas, based on multiple different ways of responding to the problem 	5	<ul style="list-style-type: none"> shows unique, credible and detailed ideas <ul style="list-style-type: none"> that demonstrate insight and understanding of the problem through discerning use of the stimulus in response to all the design criteria 	5
<ul style="list-style-type: none"> shows a range of ideas, based on at least two different ways of responding to the problem 	4	<ul style="list-style-type: none"> shows credible and detailed ideas <ul style="list-style-type: none"> that demonstrate purposeful use of the stimulus in response to all the design criteria 	4
<ul style="list-style-type: none"> shows a range of ideas that are similar to each other in their response to the problem 	3	<ul style="list-style-type: none"> shows credible ideas <ul style="list-style-type: none"> related to the stimulus in response to at least two design criteria 	3
<ul style="list-style-type: none"> shows ideas that respond to the problem 	2	<ul style="list-style-type: none"> shows superficial ideas related to the stimulus in response to at least one design criterion 	2
<ul style="list-style-type: none"> shows one idea <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> states suggestions 	1	<ul style="list-style-type: none"> states information about ideas related to the stimulus 	1
<ul style="list-style-type: none"> does not satisfy any of the descriptors above. 	0	<ul style="list-style-type: none"> does not satisfy any of the descriptors above. 	0

Criterion: Evaluating and refining

Evaluation of ideas		Refinement of ideas	
The response:	M	The response:	M
<ul style="list-style-type: none"> provides a critical evaluation <ul style="list-style-type: none"> of the strengths, limitations and implications of particular characteristics and properties of ideas against all design criteria 	5	<ul style="list-style-type: none"> shows discerning changes <ul style="list-style-type: none"> to ideas by modifying their attributes (selected for value and relevance) to improve how the range of ideas match the criteria based on judgments related to all criteria 	5
<ul style="list-style-type: none"> provides a reasoned evaluation <ul style="list-style-type: none"> of the strengths and limitations of ideas against all design criteria 	4	<ul style="list-style-type: none"> shows effective changes <ul style="list-style-type: none"> to ideas that improve how they match the criteria based on judgments related to at least two criteria 	4
<ul style="list-style-type: none"> provides statements <ul style="list-style-type: none"> about the strengths and limitations of ideas that are believable and able to be actioned related to at least two design criteria 	3	<ul style="list-style-type: none"> shows adequate changes <ul style="list-style-type: none"> to at least two ideas based on judgments related to at least one criterion 	3
<ul style="list-style-type: none"> provides statements concerned with the obvious strengths or limitations of ideas against at least one design criterion 	2	<ul style="list-style-type: none"> shows superficial changes <ul style="list-style-type: none"> to at least one idea related to at least one criterion 	2
<ul style="list-style-type: none"> provides statements about ideas 	1	<ul style="list-style-type: none"> shows trivial embellishment <li style="text-align: center;">OR shows changes to a flawed idea 	1
<ul style="list-style-type: none"> does not satisfy any of the descriptors above. 	0	<ul style="list-style-type: none"> does not satisfy any of the descriptors above. 	0

Criterion: Design concept

The response:	M
<ul style="list-style-type: none"> • proposes an innovative circular design concept that <ul style="list-style-type: none"> – includes a coherent and logical combination of the attributes drawn from multiple ideas and stimulus information – satisfies all design criteria 	5
<ul style="list-style-type: none"> • proposes a credible circular design concept that <ul style="list-style-type: none"> – includes a logical combination of ideas and stimulus information – satisfies at least two design criteria 	4
<ul style="list-style-type: none"> • proposes a simple circular design concept that <ul style="list-style-type: none"> – combines ideas and stimulus information – satisfies at least one design criterion 	3
<ul style="list-style-type: none"> • proposes a rudimentary design concept that <ul style="list-style-type: none"> – reproduces a single idea – satisfies at least one design criterion 	2
<ul style="list-style-type: none"> • shows a partial design concept in response to the problem 	1
<ul style="list-style-type: none"> • does not satisfy any of the descriptors above. 	0

Criterion: Representing

Representing ideas		Representing the design concept	
The response:	M	The response:	M
<ul style="list-style-type: none"> shows ideation and schematic sketching of ideas using <ul style="list-style-type: none"> refined freehand methods sophisticated application of line, tone, colour, shape, contrast, proximity, hierarchy and scaled details to show critical attributes arrows, boxes, circles and connecting lines to show the relationships between attributes of ideas combinations and sequences of related sketches to easily show progression of ideas as they are devised and across pages as the ideas are refined 	5	<ul style="list-style-type: none"> shows a sketch of the design concept using <ul style="list-style-type: none"> refined freehand methods sophisticated application of line, tone, colour, shape, contrast, proximity, hierarchy and scaled details to show how critical attributes satisfy the design criteria arrows, boxes, circles and connecting lines to show the relationships between attributes 	4
<ul style="list-style-type: none"> shows ideation and schematic sketching of ideas using <ul style="list-style-type: none"> careful and deliberate freehand methods that may include the use of a ruler considered application of line, colour, tone, shape and scaled details to show attributes arrows and connecting lines to show the relationships between ideas sequences of related sketches to show changes in the detail and form of ideas across pages 	4	<ul style="list-style-type: none"> shows a sketch of the design concept using <ul style="list-style-type: none"> careful and deliberate freehand methods that may include the use of a ruler considered application of line, colour, tone, shape and scaled details to show attributes that satisfy the design criteria arrows and connecting lines to show the relationships between attributes 	3
<ul style="list-style-type: none"> shows ideation and schematic sketching of ideas using <ul style="list-style-type: none"> basic methods fit for purpose — three-dimensional objects are represented pictorially, processes are represented schematically appropriate application of line, colour/tone and shape to show form sketches to show changes to ideas across the pages 	3	<ul style="list-style-type: none"> shows a sketch of the design concept using <ul style="list-style-type: none"> basic methods fit for purpose — three-dimensional objects are represented pictorially, relationships are represented schematically appropriate application of line, colour/tone and shape to show form 	2
<ul style="list-style-type: none"> shows sketching of ideas with little attention to detail or small thumbnail images 	2	<ul style="list-style-type: none"> shows a sketch of the design concept with little attention to detail 	1
<ul style="list-style-type: none"> relies on written text descriptions 	1	<ul style="list-style-type: none"> does not satisfy any of the descriptors above. 	0
<ul style="list-style-type: none"> does not satisfy any of the descriptors above. 	0		



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