



National Certificate of Educational Achievement
TAUMATA MĀTAURANGA Ā-MOTU KUA TAEA

Exemplar for Internal Achievement Standard

Design and Visual Communication Level 3

This exemplar supports assessment against:

Achievement Standard 91630

Resolve a product design through graphics practice

An annotated exemplar is an extract of student evidence, with a commentary, to explain key aspects of the standard. It assists teachers to make assessment judgements at the grade boundaries.

New Zealand Qualifications Authority

To support internal assessment

	Grade Boundary: Low Excellence
1.	<p>For Excellence, the student needs to effectively resolve a product design through graphics practice.</p> <p>This involves:</p> <ul style="list-style-type: none">• making informed designer decisions that integrate product design knowledge, and understanding of the wider environmental conditions and human factors related to the design context• communicating a product design that is justified in terms of the significant opportunities and constraints. <p>This student has researched existing modern lighting design and analysed the relevance for their own context of a desk lamp (1). The conceptual ideas and design development express and integrate product design knowledge of shape and form, function, fixtures, fittings, assembly detail (2) and some understanding of environmental and human factors as ergonomic related issues (3).</p> <p>There are good levels of visual communication which clarify design thinking which assists the student's ability to express informed designer decisions (4) and justify reasons for design decisions with annotations referring to opportunities and constraints (5).</p> <p>For a more secure Excellence, the student could show further understanding and integration of wider environmental conditions and human factors. The significant opportunities and constraints could have been justified further by including, for example, scaled plans of the desk space, location of the lamp, how the light could be diffused and research on optimal lighting (lux) levels for a study environment.</p>

	Grade Boundary: High Merit
2.	<p>For Merit, the student needs to clearly resolve a product design through graphics practice.</p> <p>This involves:</p> <ul style="list-style-type: none">• exploring the wider environmental conditions and human factors related to the design context to identify opportunities and constraints• communicating a product design that addresses significant opportunities and constraints. <p>The student chose to design a chair, influenced by Oscar Niemeyer. The research is connected to the analysis of the context (1). Some wider environmental conditions have been explored in the research and design development (2). The chair design is both creative and unique and significant constraints and opportunities have been explored with shape, form and ingenuity (3).</p> <p>To reach Excellence, there would need to be further evidence of justifying how the chair was addressing the more significant opportunities and constraints such as wider environmental and human factors, the manufacturing detail required to make a complex piece of furniture, and ensuring a robust and durable design. It is expected that the exploration and refinement also address the wider environmental conditions and human factors.</p>

Student 2: High Merit
 NZQA Intended for teacher use only

Architects Chair Investigation

This page features a portrait of Oscar Niemeyer on the right. On the left, there are sections titled 'Ninth Contemporary Art Museum' and 'Time Line of Major Events and Projects'. The text discusses the architect's background and the context of the chair design.

Architects Chair Investigation

This page continues the investigation with sections for 'Chair Name', 'Influences', and 'Impact'. It includes a quote from Oscar Niemeyer: "There, then, is what I wanted to tell you of my architect: I created it with courage and passion, but also with an awareness of the fact that what is important in life, freedom and simplicity to make the most work, a better place in which to live."

Architects Chair Investigation

This page repeats the introductory information from the first investigation page, including the portrait of Oscar Niemeyer and the project title.

Architects Chair Concepts

This page shows early conceptual sketches of the chair, including side and top views. It includes a quote: "My architect has always been to induce a feeling of support or resistance. The seat is always addressed to the most sensitive and delicate part of the human body."

Architects Chair Concepts

This page features a 3D model of the chair's base and backrest, along with various technical drawings and sketches. A red circle with the number '1' is placed above the page.

Architects Chair Development

This page shows a 3D model of the chair with a colorful, segmented backrest. It includes technical drawings and descriptive text. A red circle with the number '3' is placed to the right of the page.

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Architects Chair Development

This page shows a 3D model of the chair with a colorful, segmented backrest. It includes technical drawings and descriptive text. A red circle with the number '3' is placed to the right of the page.

This page shows a detailed technical drawing of the chair, including a side view, a top view, and a perspective view. It includes dimensions and material specifications.

This page shows a 3D model of the chair with a colorful, segmented backrest. It includes technical drawings and descriptive text. A red circle with the number '2' is placed above the page.

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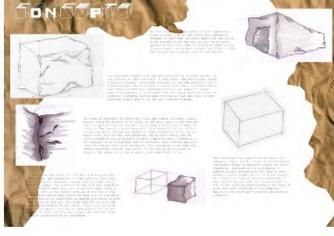
	Grade Boundary: Low Merit
3.	<p>For Merit, the student needs to clearly resolve a product design through graphics practice.</p> <p>This involves:</p> <ul style="list-style-type: none">• exploring the wider environmental conditions and human factors related to the design context to identify opportunities and constraints• communicating a product design that addresses significant opportunities and constraints. <p>This student chose to design an efficient and aesthetically pleasing desk light. There is some analysis of the design context in the research (1) to identify opportunities and constraints (2). The student is beginning to consider the wider environmental conditions and human factors by visually communicating desk layout and proportion (3).</p> <p>To move towards a more secure Merit the student would need to strengthen the resolved nature of the final design. For example, the student could show scaled drawings, parts and assembly views that indicate fixtures, fittings and materials. Wider factors relating to the lighting environment and the human/product interface would need to be explored.</p>

	Grade Boundary: High Achieved
4.	<p>For Achieved, the student needs to resolve a product design through graphics practice.</p> <p>This involves:</p> <ul style="list-style-type: none">• exploring and refining design ideas based on an analysis of the design context (including opportunities and constraints) and understanding of product design knowledge• communicating a product design that addresses identified opportunities and constraints. <p>The student chose to design a 'bike bar' - a place where cyclists can remain on their bikes and eat, drink and/or gather as a group. The student has chosen a range of contemporary designers (1) as sources of inspiration, and this contributes to the analysis of the design context (2). Analysis of the context gains strength in the development of the ideas (3). There are good levels of visual communication which explore form and show some understanding of product design knowledge (4).</p> <p>To reach Merit, the exploration of ideas would need to consider wider environmental conditions. These could be location and human factors such as further ergonomic studies. The design idea is very conceptual and for this standard, further resolution of size, scale, construction and assembly detail would be required.</p>

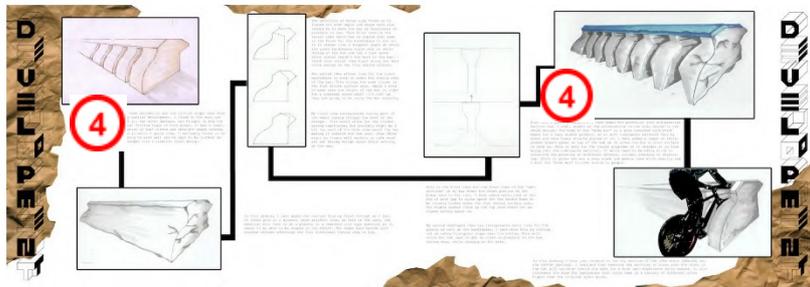
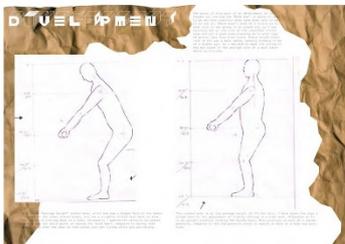
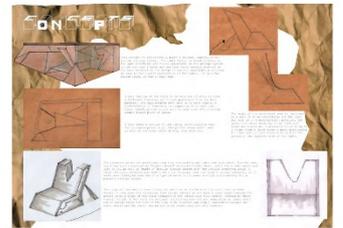
Student 4: High Achieved
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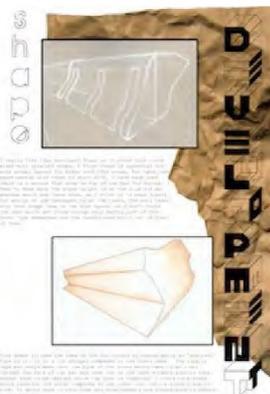
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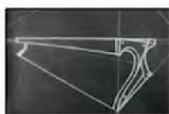
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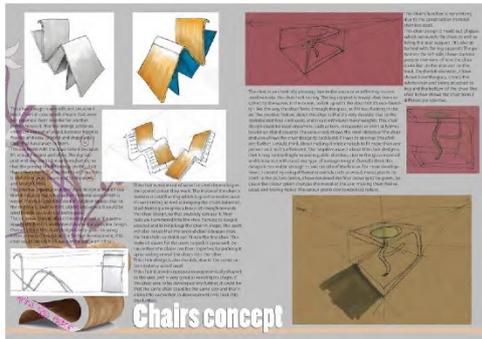


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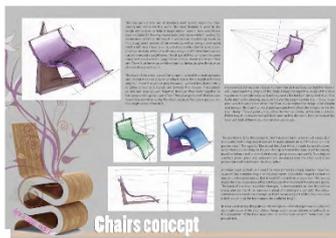
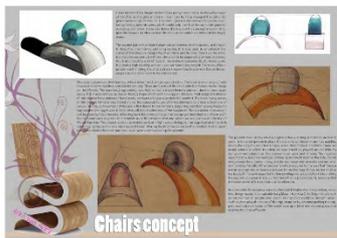
	Grade Boundary: Low Achieved
5.	<p>For Achieved, the student needs to resolve a product design through graphics practice.</p> <p>This involves:</p> <ul style="list-style-type: none">• exploring and refining design ideas based on an analysis of the design context (including opportunities and constraints) and understanding of product design knowledge• communicating a product design that addresses identified opportunities and constraints. <p>The student chose to design a chair inspired by a range of influential designers and products (1). There is good analysis of the design context in the research (2). The student explores shape and form with continued analysis of opportunities and constraints (3). There is some refinement and resolution of ideas (4).</p> <p>For a more secure Achieved, the student would need to show further evidence of product design knowledge such as how the chair is assembled. The student could move beyond just producing conceptual shape and form in the final design to providing further visual communication of fixtures, fittings and assembly details.</p>

Student 5: Low Achieved
 NZQA Intended for teacher use only

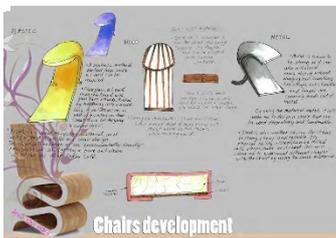


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2



3



4



	Grade Boundary: High Not Achieved
6.	<p>For Achieved, the student needs to resolve a product design through graphics practice.</p> <p>This involves:</p> <ul style="list-style-type: none">• exploring and refining design ideas based on an analysis of the design context (including opportunities and constraints) and understanding of product design knowledge• communicating a product design that addresses identified opportunities and constraints. <p>The student chose to design mood lighting for a stakeholder. The research begins to analyse the context (1) and explores shape and form to reasonable levels (2) and there is some analysis of the design context seen in the student's annotation and visual communication (3).</p> <p>To reach Achieved, the work needs to demonstrate a more relevant design focus. There would need to be further evidence of the resolution of the design ideas, such as scaled assembly detail of the components and strengthening of the visual communication used throughout the development of the design ideas.</p>

