

# Design and Visual Communication NCEA NZC Level 1

## Subject Learning Outcomes for Assessment

Companion to the Design and Visual Communication Learning Matrix

### **What are the Subject Learning Outcomes and how can I use them?**

Subject Learning Outcomes identify the knowledge and skills that students need to be ready for assessment. Subject Learning Outcomes are informed by the Achievement Standards. They should be used in conjunction with the full suite of NCEA materials. For guidance on assessment criteria please also refer to Achievement Standard, Unpacking, External Assessment Specifications and Conditions of Assessment.

Subject Learning Outcomes do not replace any documents. This includes the External Assessment Specifications and Conditions of Assessment. All NCEA materials need to be used to fully understand the requirements of each Achievement Standard and to plan a robust teaching, learning, and assessment programme. Subject Learning Outcomes should not be used to make assessor judgments. The Achievement Standard and the Assessment Schedule for Internal Assessment Activities are used to make such judgments.

Subject Learning Outcomes, alongside other key documents, make clear to teachers what to include in their teaching and learning programmes and what student capabilities to check for, in the lead up to assessment. Each Subject Learning Outcome does not need the same amount of teaching time.

All learning should connect with students' lives in Aotearoa New Zealand and the Pacific. Teachers or students usually select the contexts. As such, contexts are not always specified in the Subject Learning Outcomes. Examples may be provided to illustrate topics and contexts, but they are not prescriptive.

Students are entitled to teaching that supports them to achieve higher levels of achievement. Subject Learning Outcomes mainly align with outcomes for the Achieved level. However, outcomes for higher levels of achievement are also included.

The knowledge and skills in the Subject Learning Outcomes are the expected learning that underpins each Achievement Standard. Students will draw on this learning during assessment. It is important to note that assessment is a sampling process so not everything that is taught will be assessed.

### Design and Visual Communication (DVC) specific information:

Design and Visual communication (DVC) is a practice-led subject where students apply learning through personally driven design thinking that generates, explores and progresses their own three-dimensional design ideas, as relevant to the contexts of product and spatial design.

While students are encouraged to learn within both product and spatial design contexts, only one of these needs to be applied for each individual achievement standard. As there are four L1 DVC achievement standards available, there remains the opportunity to cover both spatial and product design contexts throughout a typical assessment programme.

For Level 1 DVC, learning experiences should be foundational and form the basis of the learning journey in Design and Visual Communication that runs over the final three curriculum levels (Levels 6 – 8) of the subject. This is best illustrated in how the DVC Learning Matrix Big Ideas progress over the final three years of secondary education. While they are all present and important at each curriculum level, the emphasis shifts as the subject progresses up the curriculum levels. Initially the emphasis will be on visual literacy skills and divergent / convergent thinking for Curriculum Level Six, whereas by Curriculum Level Eight the emphasis will have shifted to being on own designer voice and the purpose of design to improving people's lives.

<b>Achievement Standard 92000 (1.1)</b>	Generate product or spatial design ideas using visual communication techniques in response to design influences	Credits: 5 (Internal)
What is being assessed	Specific Learning Outcome (Students are able to...)	
Design characteristics and elements	<ul style="list-style-type: none"> <li>• recognise and analyse the design characteristics of more than one design influence</li> <li>• identify and analyse design elements illustrated through existing design examples and the works of designers. This includes; <ul style="list-style-type: none"> <li>○ understanding the defining qualities and characteristics that differentiate spatial design and product design;</li> <li>○ acknowledging the sources of research material (both images and text)</li> </ul> </li> </ul>	
Design influences	<ul style="list-style-type: none"> <li>• analyse and understand a mātauranga Māori design influence in terms of its stories and meanings. This includes; <ul style="list-style-type: none"> <li>○ considering tikanga Māori to ensure authentic, respectful, and responsible use of design ideas from te ao Māori</li> </ul> </li> <li>• critique how both design influences impact on their own product or spatial design ideas. This includes;</li> </ul>	



	<ul style="list-style-type: none"> <li>○ understanding that a rationale for a design influence can be expressed through visual decision making and through the response shown through own design ideas</li> </ul>
Divergent thinking	<ul style="list-style-type: none"> <li>● use divergent thinking approaches that explore the design influences through the experimentation of their own product or spatial design possibilities. This includes;             <ul style="list-style-type: none"> <li>○ understanding there is no single right answer, rather that there are multiple possibilities that can be valued and respected;</li> <li>○ understanding that creative play is a legitimate part of divergent thinking;</li> <li>○ beginning to develop an emerging personal perspective reflected in the design ideas they generate and design decisions made</li> </ul> </li> </ul>
Visual communication	<ul style="list-style-type: none"> <li>● visually communicate their design thinking;             <ul style="list-style-type: none"> <li>○ using any drawing or modelling mode individually or in combination as suited for product or spatial design;</li> <li>○ curating own visual work in terms of recognising what is important for explaining their thinking and decision making</li> </ul> </li> </ul>

<b>Achievement Standard 92001 (1.2)</b>	Use representation techniques to visually communicate own product or spatial design outcome	Credits: 5 (Internal)
<p><i>This achievement standard relates to principles and techniques for visual representation where only ONE of the following visual mode options needs to be selected for use:</i></p> <ul style="list-style-type: none"> <li>○ <i>Hand render</i></li> <li>○ <i>Physical model</i></li> <li>○ <i>Digital model</i></li> </ul> <p><i>Learning experiences can focus on one or all these modes, with either the student or their teacher deciding on which mode to use based on individual capability and strengths</i></p>		
What is being assessed	Specific Learning Outcome (Students are able to....)	
Effects of a light source	<ul style="list-style-type: none"> <li>● For a hand render:</li> </ul>	



	<ul style="list-style-type: none"><li>○ apply tonal effects, cast shadows, shadow lines and highlights on drawings to effectively show tonal qualities</li><li>● For a physical model:<ul style="list-style-type: none"><li>○ set up lighting (whether artificial or natural) in a direction that effectively shows tonal qualities when photographing the model</li></ul></li><li>● For a digital model:<ul style="list-style-type: none"><li>○ set up the light effects and direction in relation to the digital model to effectively show tonal qualities</li></ul></li></ul>
Representing materials	<ul style="list-style-type: none"><li>● For a hand render:<ul style="list-style-type: none"><li>○ apply colour media and visual textures to represent materials</li></ul></li><li>● For a physical model:<ul style="list-style-type: none"><li>○ apply modelling materials and finishing techniques to represent materials</li></ul></li><li>● For a digital model:<ul style="list-style-type: none"><li>○ apply digital rendering techniques to represent materials</li></ul></li></ul>
Visually communicating a design outcome	<ul style="list-style-type: none"><li>● For a hand render:<ul style="list-style-type: none"><li>○ select and use the appropriate views (close ups and viewpoints) that best show the key features of the design outcome</li></ul></li><li>● For a physical model:<ul style="list-style-type: none"><li>○ select and use the appropriate views for photographing (close ups and viewpoints) that best show the key features of the design outcome</li></ul></li><li>● For a digital model:<ul style="list-style-type: none"><li>○ select and use the appropriate views (close ups and viewpoints) that best show the key features of the design outcome. (In the case of digital animations, students need to compose and edit their animation using cinematic principles)</li></ul></li></ul>



<b>Achievement Standard 92002 (1.3)</b>	Develop product or spatial design ideas informed by the consideration of people	Credits: 5 (External)
What is being assessed:	Specific Learning Outcome (Students are able to...)	
Consideration of people	<ul style="list-style-type: none"><li>critique how the needs of people impact on the developing of their own design ideas. This includes;<ul style="list-style-type: none"><li>understanding the needs and experiences of people appropriate to the context of their design ideas</li></ul></li><li>apply decision-making that responds to the needs of people in progressing their design ideas. This includes;<ul style="list-style-type: none"><li>considering people connected to the context being designed for, to meet their needs or improve their lives</li></ul></li></ul>	
Design practice	<ul style="list-style-type: none"><li>critique how the needs of people impact on the developing of their own design ideas. This includes;<ul style="list-style-type: none"><li>considering the possible users of a potential design outcome throughout the design process</li></ul></li><li>apply research (specialist knowledge, technical information, user experience), when and as needed. This includes;<ul style="list-style-type: none"><li>understanding the defining qualities and characteristics that differentiate spatial design and product design;</li><li>understanding design elements and principles of function and aesthetics relevant to their design ideas and context;</li><li>acknowledging the sources of research material (both images and text)</li></ul></li><li>generate design possibilities beyond predetermined outcomes. This includes;<ul style="list-style-type: none"><li>understanding that design practice is about quality rather than quantity;</li><li>developing an emerging personal perspective through the design ideas they generate and any design decisions made</li></ul></li><li>improve design ideas through refinement that considers possible users of the design. This includes;<ul style="list-style-type: none"><li>understanding that design is an iterative process</li><li>applied features and details that will improve the experience for users of the design</li><li>fine-tuning aspects of the design to improve the aesthetic and functional qualities of the outcome for people.</li></ul></li></ul>	



Convergent thinking	<ul style="list-style-type: none"><li>• use convergent thinking, exploring design options with purpose, in order to progress and improve a design idea</li><li>• engage with decision-making that is connected to people, and design knowledge in developing design outcomes</li></ul>
Visual communication	<ul style="list-style-type: none"><li>• use visual communication techniques to explain design features</li><li>• visually communicate their design thinking and the narrative of their practice. This includes;<ul style="list-style-type: none"><li>○ curating own visual work in terms of recognising what is important for explaining their thinking and decision making</li></ul></li></ul>

<b>Achievement Standard 92003 (1.4)</b>	Use instrumental drawing techniques to communicate own product or spatial design outcomes	Credits: 5 (External)
What is being assessed:	Specific Learning Outcome (Students are able to...)	
Technical features	<ul style="list-style-type: none"><li>• clarify the construction and assembly details of their product design outcome OR internal spatial relationships of their spatial design outcome. This includes;<ul style="list-style-type: none"><li>○ understanding the defining qualities and characteristics that differentiate spatial design and product design</li></ul></li></ul>	
Instrumental drawing	<ul style="list-style-type: none"><li>• use instrumental drawing resources (digital software or manual equipment) for generating a set of coherent instrumental drawings. This includes;<ul style="list-style-type: none"><li>○ applying the principles of alignment for instrumental drawings (orthographic and exploded paraline);</li><li>○ applying the principles of sectioning for conveying internal information;</li><li>○ applying the principles of scale for representing a design outcome</li></ul></li><li>• apply the principles of drawing conventions. This includes;<ul style="list-style-type: none"><li>○ understanding the interrelationship between orthographic drawings (2D) and paraline drawings (3D) for communicating a design outcome;</li></ul></li></ul>	



	<ul style="list-style-type: none"><li>○ understanding that the use of layout, line types and labelling aids visual communication;</li><li>○ understanding that an architectural floor plan is a section view where the cutting plane is typically at 1.2 m;</li><li>○ understanding that the labelling of views differs between architectural and engineering design fields</li></ul>
Visually communicating a design outcome	<ul style="list-style-type: none"><li>● select appropriate 2D and 3D views that best explain the technical qualities and details of their design outcome</li><li>● use visual conventions effectively for the clear and easy reading by a viewer (line types, labelling, dimensioning)</li></ul>