2022 NCEA Assessment Report

Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Subject: **Design and Visual Communication**

Level: **2**

Standards: **91337, 91338, 91339**

Part B: Report on standards

91337: Use visual communication techniques to generate design ideas

Examination

Candidates need to select evidence that demonstrates they can use visual communication techniques to explore the functional **and** aesthetic qualities of the design to generate design possibilities.

Observations

Many candidates submitted work that met the requirements of the standard. It is important that candidates understand the intent of the standard. The brief provided must allow candidates the ability to achieve with Merit or Excellence.

Contexts were varied and work was divided between spatial, textiles and product design.

Digitally produced evidence is increasing. Digital media and / or physical models enabled effective visual communication for candidates who exhibit clever design thinking with limited drawing skills.

Both digital and traditional media provided high quality evidence.

Candidates who achieved at higher levels, understood the need to select the most appropriate visual communication techniques to communicate the design ideas effectively to others. Design qualities are viewed holistically and should consider functional and aesthetic qualities. Showing the design from a variety of angles assists in the understanding of the viewer. In spatial designs this may include how space is organised through floor plans, interior spaces and a connection to a site and users of the space. Product projects should deal with the user interface and ergonomics. Showing the product at different stages of operation also helps viewers to understand the design.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- generated design ideas that were generic or predictable in relation to the context
- contextualized their ideas so that they became an idea rather than just a form (i.e., communicated context)
- produced ideas that communicated the basic function and aesthetics as a solution to a brief.

Candidates who were awarded **Not Achieved** commonly:

- did not clearly communicate their design idea
- did not provide evidence of functional and / or aesthetic qualities of their design.

Candidates who were awarded **Achievement with Merit** commonly:

- produced ideas that were not replicated or predictable, they generated their own interesting and different ideas
- explored their ideas in greater detail visually
- explored aesthetic and functional qualities using clear visual communication techniques
- showed balance between the aesthetic qualities and the functional qualities of the ideas.

Candidates who were awarded **Achievement with Excellence** commonly:

- produced a range of quality design ideas with function embedded from the start and developed in conjunction with aesthetic narrative
- thoroughly explored function and aesthetics with attention to some of the finer details of their designs
- used multiple viewpoints and angles throughout their design process, and included different modelling and visual communication techniques
- communicated their thinking visually, with a clarity and level of execution that was refined, using the most appropriate mode of communication for what was being communicated
- produced designs that were clear and easy to follow with human factors embedded throughout
- explored and reflected on ideas, often regenerating, and manipulating to challenge design ideation.

91338: Produce Working drawings to communicate technical details of a design

Examination

Candidates are required to produce two-dimensional instrumental working drawings that show their own design decisions and communicates complex design details using appropriate conventions.

Observations

Many submissions are now being made in CAD, with candidates who used CAD well, producing a quality set of working drawings. However, it is clear some candidates appeared to be heavily reliant on the software to do the thinking for them This reliance on software can increase the risk of error. A good understanding of the fundamentals of working drawings is required to meet the standard.

Many candidates who are still using traditional drafting / technical drawing methods are achieving Merit and Excellence grades.

Candidates need to be aware of the purpose and importance of the title block. The title block should correctly name and link the set of related drawings, e.g. the project isn't "working drawings 91338" it is a description of the specific design, e.g. holiday home.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- produced a set of interconnected 2D instrumental working drawings to show technical details
- showed complex visual communication; most commonly this involved a plan, elevations and a clearly related cross section
- connected pages using page titles and /or page numbering
- used recognised drawing conventions appropriate to the drawings being produced. e.g., labelling, scale, basic line types – construction lines, outlines, section lines
- produced drawings that communicated both functional and aesthetic qualities of their design, e.g. specifying room purpose in their plans and / or materiality in their elevations for spatial design: specifying shape and componentry of a product design
- produced several pages of drawings of all the components of their design but limited 2D drawing of the assembled design and no section of the assembled project.

Candidates who were awarded **Not Achieved** commonly:

- produced a set of interconnected drawings that did not show enough technical details about the design. Common examples included: product drawings lacking technical details about their distinct parts and assembly. Spatial design lacking communication about functionality or materiality

- produced product design drawings with a lot of details, but no or limited assembled views of the overall object. If these were provided, there was often no dimensioning to show how big the object was and how it related to the given scale.
- produced drawings that were not interconnected; in other words, lacked information that connected one drawing to the next, e.g. poor use of the title block, page sequence or linking the north symbol to elevations Candidates who were awarded

Candidates who were awarded **Achievement with Merit** commonly:

- clearly communicated technical details of the design. Drawings clearly showed construction information or complex detailing that related to the design
- communicated details clearly and accurately, with appropriate use and application of tools to link the pages. For example, using cutting planes to link sectional views, NSEW symbols to link plans to elevations, and using effective project descriptions and page sequence numbering
- produced drawings that were skilfully and accurately drawn
- demonstrated good skills in applying drawing conventions appropriately to the drawing being presented.

Candidates who were awarded **Achievement with Excellence** commonly:

- communicated the technical details of their design effectively using appropriate conventions
- produced drawings that were consistently, accurately drawn and included all the information and details so as to clearly understand the design. These drawing often included sectional views, with enlarged details
- provided accurate relevant details to the design that were consistent with information communicated in the other linked drawings
- produced a clear coherent set of working drawings to communicate the design.

91339: Produce instrumental perspective projection drawings to communicate design ideas.

Examination

Candidates are required to produce instrumental perspective projection drawings that show their design decisions. They must produce parallel perspective projection **and / or** angular perspective projection, and apply appropriate construction, including: use of picture plane; station point; eye-line levels; ground-level lines; vanishing points; and height lines, including the set-up of the plan and elevations to indicate proof of heights.

Evidence for this achievement standard can be generated using either traditional drawing equipment or computer applications.

Observations

Instrumental perspective projections are complex drawings that need a good understanding of projection principles for success. It is important that candidates show construction clearly, especially curves and circles. Higher levels of success require candidates to clearly show they have plotted points rather than drawing curves and circles.

Candidates should be encouraged to demonstrate accuracy and drawing skills at the correct level. This includes, for example, using clean and tidy instruments and drawing sheets, and considering pencil grades.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- produced an instrumental perspective drawing that applied the principles of perspective projection correctly, showing the correct setting out and use of the picture plane, eye level line, ground line, vanishing points and station point
- used perspective projection techniques to reveal design features; these showed some detailing / complexity in terms of the form and features of the object. These features were evident in the plan and the elevation to be projected.

Candidates who were awarded **Not Achieved** commonly:

- produced an instrumental perspective drawing where the principles of projection were not applied correctly; the most common fault was not projecting the vanishing points correctly from the station point and picture plane set up, i.e. not projecting parallel to the plan view from the station point when setting up an angular perspective projection
- did not understand the relationship between the station point, picture plane and vanishing point and projected incorrectly
- did not have an elevation or labelled features on a height line to project the objects height from
- produced an instrumental perspective drawing that was too simple in shape and form, and lacked the communication of complex information in terms of showing any real detail of the design features
- did not present their own design ideas (drawings were a drawing task)
- produced a freehand perspective sketch or a computer-generated perspective image with no projection, e.g. a SketchUp model.

Candidates who were awarded **Achievement with Merit** commonly:

- applied the principles or perspective projection accurately to show detail of the design feature; showing the correct setting out and use of the picture plane, eye line, ground line, vanishing points and correctly used a height line, or elevation, to project the heights on the drawing. (Note: if a height line is being used the different height marks should be labelled. This helps the marker to verify features are projected correctly.)

- showed some skill in being able to clearly project the detail of the design features, such as window frames, door frames and railings, showing thickness and depth allowing the communication of construction or the materials
- presented evidence that was skilfully drawn in terms of clear and effective linework
- produced a drawing of sufficient scale / size so detail could be viewed
- plotted points that allowed for more complex shapes and / or curves to be drawn.

Candidates who were awarded **Achievement with Excellence** commonly:

- selected a viewpoint that enabled the perspective projection to effectively communicate visual information and detail about the design
- used the picture plane and viewpoint effectively to produce an enlarged image of the object / building of sufficient scale / size so drawing was highly informative and visually realistic, including the overall form and structure of the building or object
- used the picture plane and viewpoint effectively to produce an enlarged image of the object / building of sufficient scale / size so detail could be clearly seen, and the key details enhanced. This was done through projection techniques, not digital manipulation
- produced a perspective outcome that was accurately projected. Design features were skilfully and accurately plotted such as weatherboards, gaps in fittings, handles, guttering, flooring and decking
- showed a high level of drawing skill to communicate design information; techniques such as exploded views or showing additional interior information through the windows, or removing some exterior cladding removed to show wall framing were effective.