

# Assessment Report

## Level 2 Design and Visual Communication 2016

Standards [91337](#) [91338](#) [91339](#)

### 91337: Use visual communication techniques to generate design ideas

Candidates who were awarded **Achievement** commonly:

- used appropriate visual communication techniques to present their design ideas: most common techniques were sketching that included 2-D and 3-D
- used 'Sketch Up' printouts predominantly, as a digital form of communication, along with some use of photographed mock-ups, in support of their sketching
- communicated functional qualities through visual means; most commonly this was shown using 2-D and 3-D sketches; examples included floor plans, cross sections, and detailed drawings to indicate construction
- communicated aesthetic qualities that indicated shape, form, and material finish using a range of modes that varied from pencil rendering to the use of marker pens
- communicated ideas using techniques and principles of visual communication (e.g. basic line work, rendering, proportioning) that showed design features
- generated ideas that were predictable and/or similar to the researched solutions gathered.

Candidates who were assessed as **Not Achieved** commonly:

- used poorly executed visual communication techniques; predominantly, the sketching was out of proportion and lacked identifiable design qualities
- produced insufficient evidence to show how their design functioned in terms of operation, fit for use or construction
- produced evidence that was incomplete or demonstrating only a single idea.

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

- used visual communication techniques that were skilfully applied; most commonly presented techniques were well-proportioned sketches including detailed 2-D, 3-D drawings, using appropriate sectioning and/or exploded views as required

- communicated functional qualities with clarity, showing how the design was to work, e.g. how the product being designed was intended to be used or how the product fits into the hand
- communicated aesthetic qualities with clarity; generally, this was limited to colour, texture, tone, shape, form, and surface finish
- used a variety of different views to fully express the qualities of the design from different angles as well as internally
- demonstrated divergent thinking, producing a range of possible ideas using different generative strategies (e.g. mock-ups, research-inspired ideas, concept generation, creative experiments with forms and shapes)
- produced diverse design ideas that clearly showed identifiable design qualities, which tended to be primarily aesthetic in nature.

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

- applied refined visual communication techniques that were appropriate to what they were trying to communicate and executed these to a high standard that lead to effective communication of their design thinking.
- clarified comprehensively the functional and aesthetic details of the design in depth and with clarity to demonstrate a full understanding of the design, both internally and externally.
- extended their design thinking through the ongoing exploration and manipulation of their ideas visually in a manner that was informed within the design context.

## Standard-specific comments

### Visual communication techniques:

Visual communication techniques have continued to consolidate through teaching and learning programmes. Candidates achieving at the higher levels chose the most appropriate technique to enable them to effectively generate design ideas to show design qualities with clarity and refined detailing. These techniques varied to include sketching, rendering, digital techniques, collage, and overlays.

Physical modelling with paper, card, and clay was also produced, with photos included to illustrate what was being tested.

Design qualities are viewed holistically and should include functional and aesthetic qualities, choosing the most appropriate technique, whether a sectional view or exploded component, sometimes shown from a range of different viewpoints. The intended purpose of the design item was often clarified by showing inside and outside, introducing ergonomics, use of hands and figures in environments, and cut-away buildings.

Showing the design at different stages in its operation also helped visualise the design.

### Exploring and extending ideas:

Candidates who investigate very common, pre-existing, and obvious ideas or whole class set exercises found it difficult to step outside the square and generate diverse ideas.

Candidates successfully showing divergent thinking showed their starting point as either observational sketches or research photos near their drawings and then showed how these starting

points could be reinterpreted into their own ideas, pushing them further. Starting points were particularly successful when they were widely different from each other.

Those candidates who extended their ideas showed how their design qualities could be refined further. They recombined their divergent ideas in new ways creating new ideas that could be again explored and extended utilising visual communication techniques that were most appropriate to illustrate their thinking.

Some candidates used ideation and mood boards as their design influence in the initial stages and then failed to take any of these influences into their own initial designs. This limited their ability to arrive at more interesting solutions and restricted their achievement level. Those candidates who used these influences in their designs usually arrived at more interesting and divergent ideas and tended to achieve well.

### **Spatial and product design:**

Work presented in the areas of spatial design and product design varied from many small houses, galleries, school cafes, and baches to lamps, knives, and GoPro handles. The selection of the brief needs to allow for the candidate to explore and effectively communicate an innovative, creative design solution.

Container-based houses, designing a knife handle or a GoPro handle, where the result looks like what is currently available commercially, can be restrictive and do not allow the candidate to extend themselves.

### **Technology work:**

Predominantly technology work comes from textiles candidates. Most candidates could show design ideas but these tend to be limited to just 2-D sketches. This was generally in the form of the dress model, 2-D format and repeated the same form throughout the design process without exploring other methods of communicating ideas or detailing. Functional qualities were generally limited to just a few small 2-D and sometimes 3-D sketches of how the design may be assembled. This is not enough to achieve at the higher levels. Candidates who considered the functional aspects of their design visually and explored these fully through detailed sketches and modelling were more successful. The aesthetic qualities of the designs were often well presented. A combination of pens, pencils, or marker pens and, in some cases, collage were used to show texture, pattern, and finish.

### **Research/Mood boards:**

Applied research to inform function and design influence on the actual design pages was good and informative for the marker but some schools are still submitting multiple pages of research and design influences that contribute nothing to the student evidence for the standard. This should be removed. This includes work in visual diaries. For this standard, all that is required is the work that shows the candidate's ability to use visual communication techniques to generate ideas.

Design ideas must be candidate-generated responses to design briefs.

## 91338: Produce working drawings to communicate technical details of a design

Candidates who were awarded **Achievement** commonly:

- produced a set of interconnected 2-D instrumental working drawings to show technical details; most commonly, this involved a plan, elevations, and clearly related cross section or produced a set of working drawings that were referenced and included detailed plans and elevation showing exterior detailing
- used recognised drawing conventions appropriate to the drawings being produced, e.g. labelling, scale, basic line types – construction lines, outlines, section lines
- referenced drawings, e.g. north point and appropriate labelling of elevations (for architectural drawings), cross-sections plane conventions and labelling.

Candidates who were assessed as **Not Achieved** commonly:

- produced a set of interconnected drawings that did not show enough technical details about the design; the most common example was a working drawing of a product that contained a plan or top view, end elevation, and a sectional view that lacked any technical details of distinct parts and their assembly
- produced drawings that were not linked (interconnected); in other words, lacked information that connected one drawing to the next or drew drawings that were not relevant and useful in communicating details of the design.

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

- produced a set of interconnecting 2-D instrumental working drawings that clearly communicated technical details of the design. Drawings clearly showed construction information or complex detailing that related to the design
- drew skilfully and accurately
- applied drawing conventions to working drawings in a skilful and appropriate manner.

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

- communicated the technical details of their design effectively and presented their work to a high standard using appropriate conventions
- produced drawings that were consistently drawn accurately and included information and details to clearly understand the design. These drawings often included sectional views, with enlarged details, which allowed the design to be effectively communicated
- applied drawing conventions appropriately and skilfully to the drawing type being presented.

### Standard-specific comments

This standard suits candidates with strengths in CAD and/or those with strong 2-D manual drawing skills. It is about producing a set of related two-dimensional instrumental working drawings that show one's own design and its technical details.

An increased number of candidates presented their working drawings using CAD. It was pleasing to see that there is an improved understanding of how to use this software.

Some presented 3-D drawings to support the working drawings. These are not needed because this standard is about producing working drawings, i.e. a set of related 2-D drawings.

Working drawings need to have an element of complexity in terms of form or level of information communicated. These drawings must communicate technical details of the design's shape and form and must show complex visual information using conventions that are associated with the type of drawing being produced.

Simple drawings that included a plan, elevations, and a cross-section often lacked the detailing that clarified the workings and/or construction of the design. Often all that needs to be added to these drawings is some technical detailing, e.g. enlarged construction details or parts and/or assembly, to increase the clarity and complexity of the communication and, therefore, making it a more complete set of related drawings.

Those candidates who achieved well produced a coherent set of working drawings that were accurate and showed quality drawing skills, including appropriate conventions. The views were correctly scaled, used symbols to indicate sectioning, and details were clearly labelled and referenced to each other.

The importance of relating (linking) the set of drawings using conventions is crucial in communicating complex and technical information to inform all supporting drawings.

### **Spatial design:**

Architectural drawings often included a plan drawn to 1:100 or 1:50 scale that showed benches, baths, showers, and fittings which clearly indicate the function of the rooms. Two, or even four, elevations were drawn to a scale of 1:100 or 1:50, these views often indicating materials used and were usually supported with a cross section at 1:50 and one to two enlarged details drawn to a scale of 1:10 or 1:5.

These showed more detailed information about the construction. A few candidates presented cross sections at 1:20, which allowed for more complex visual information to be shown clearly without drawing enlarged details. For architectural work to achieve well, candidates must reference their drawings. In many cases, this is as simple as placing a north symbol on the plan view and referencing this to the elevations. Candidates who failed to reference their drawings to one another or label their views were restricted in their achievement levels.

### **Product design:**

Product design often included a plan (top view) and sectional elevation drawn to a standard scale, typically 1:20 or 1:10.

The cross-section was supported with enlarged details drawn at 1:5 scale which showed the construction and function of the product. To enable these drawings to be viewed effectively, these details must be referenced to the elevations/cross section.

Candidates who showed clear and accurate detailing, using conventions appropriate to this type of drawing, achieved well.

**CAD Drawings:**

Although CAD work was seen across all standards, it was predominantly used to produce working drawings.

In some spatial designs, candidates produced plans, elevations and cross sections. Often the cross sections were drawn at a 1:50 scale supported by larger construction details drawn at 1:10 or 1:5 scale. Some candidates simply enlarged what they had drawn at the 1:50 scale, which did not add any extra constructional information to the detail and, therefore, limited their success.

In some cases, these enlarged details were imported generic details such as footings, foundations, window head and sill details, eaves/roof construction. Although these are not the candidate's own design ideas, these details are acceptable. It must be noted that any imported generic details must be correctly applied to the candidate's own design work and referenced correctly to their drawings.

Candidates who imported generic details that did not relate to their own design – i.e. the cladding, materials, or construction shown in the detail did not relate to that shown in their own design – achieved at the lower levels only. Drawings and details must relate to the candidate's own design.

Candidates using CAD must be aware when printing their drawings to check the settings on the computer to avoid drawings not printing out accurately to scale. Again, this prevented candidates achieving at the top level (this is possibly the result of candidates choosing to resize their drawings or printing to page without checking the settings). Line work was also an issue. Candidates must use the correct line tools; often lines were drawn too thick and in some cases the technical detailing was not clearly communicated. There is a need to teach the correct use of CAD programmes.

**Conventions:**

When producing working drawings, whether using CAD or instruments, candidates should be encouraged to use standard scales, e.g. 1:100, 1:50, 1:20, 1:10 or 1:5. In some cases, candidates had just made up a scale to suit the page. This is not appropriate. Teachers are reminded that there are clear drawing conventions to be used when drawing 2-D working drawings. To gain Achievement with Merit or Achievement with Excellence, these need to be applied appropriately and accurately to the type of drawing.

Working drawings must be candidate generated responses to design briefs. There should be no common class exercises or bodies of work that are not the individual student's generated ideas or solution.

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## **91339: Produce instrumental perspective projection drawings to communicate design ideas**

Candidates who were awarded **Achievement** commonly:

- produced an instrumental perspective drawing that applied the principles of perspective projection correctly, showing the correct setting up of the picture plane, eye level line, ground line, vanishing points, and station point
- produced a perspective drawing that showed some complexity in terms of detail and/or form.

Candidates who were assessed as **Not Achieved** commonly:

- produced an instrumental perspective drawing where the principles were not applied correctly; the most common fault was not projecting the vanishing points correctly from the station point and picture plane set up
- produced an instrumental perspective drawing that was simple in shape and form and lacked the communication of complex information in terms of showing any real detail.

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

- produced an instrumental perspective drawing that applied the principles of perspective projection correctly, showing the correct setting out of the picture plane, eye line, ground line, vanishing points and correctly used the height line to project the heights on the drawing
- showed some skill in projecting clearly the details of the design features, such as window frames, door frames and railings, showing thickness and depth allowing the communication of construction or materials
- produced an instrumental perspective drawing that was skilfully drawn in terms of clear and effective line work
- plotted points that allowed for more complex shapes and/or curves to be drawn.

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

- selected a view point that enabled the perspective drawing to communicate visual information about the design effectively, and the perspective drawing was highly informative and visually realistic
- produced a perspective drawing that was accurately projected. Design features were skilfully and accurately plotted, such as weatherboards, gaps in fittings, handles, guttering, flooring, and decking. A high level of drawing was used to communicate this design information.

## Standard-specific comments

### Perspective principles:

Candidates attempting this standard generally knew how to produce an instrumental perspective drawing to achieved success. They understood the principles of perspective and how to apply them. Those who could project detail of the design features accurately, generally achieved at the higher grades. Many candidates produced architectural perspective drawings.

Common issues that prevented candidates achieving at the higher levels were related to not using the height line correctly, i.e. the height line may have been projected correctly but the heights were not projected around the object correctly to plot the required points. This prevented candidates from moving past Achievement.

In some cases, the perspective drawing was too small to enable the candidate to show design features with any detail and, therefore, restricted them to Achievement.

To achieve Excellence, candidates needed to select a viewpoint that effectively communicated their design. It was pleasing to see some candidates had spent time selecting a view point and thinking carefully about the relationship between the station point, picture plane, eye line and vanishing

points before starting. This enabled them to obtain a drawing that did not distort their design and allowed the drawing to be drawn to a size to enable the design features to be shown clearly and in detail, therefore enhancing their drawing.

**CAD perspectives:**

A few candidates presented CAD perspectives. Those who achieved success presented two or three drawings – one showing the construction lines overlaying the perspective turned on, the other showing the actual perspective without the construction lines to show the features more clearly.

**Guidance:**

It is important to attach the plan and elevation to the perspective to justify projection points. Some candidates had removed these, and the markers could not verify heights.

Teachers should encourage accuracy and quality drawing skills.

There is a need to show construction clearly, especially circles and curve. These were often just drawn in. To have success at the higher levels, these points need to be plotted accurately.

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