Design & Visual Communication

Level 2 NCEA Achievement Standards

Waiopehu College

Achievement Standard

Subject Reference	Design and Visual Communication 2.30				
Title	Use visual communication techniques to generate design ideas				
Level	2	**Credits**	3	**Assessment**	External
Subfield	Technology				
Domain	Design and Visual Communication				
Status	Registered	**Status date**	17 November 2011		
Planned review date	31 December 2018	**Date version published**	20 November 2014		

This achievement standard involves the use of visual communication techniques to generate design ideas.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Use visual communication techniques to generate design ideas.	• Use visual communication techniques skilfully to generate design ideas.	• Use visual communication techniques effectively to generate design ideas.

Explanatory Notes

1 This achievement standard is derived from Level 7 of the Technology learning area in *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007; and is related to the material in the *Teaching and Learning Guide for Technology*, Ministry of Education at http://seniorsecondary.tki.org.nz.

Further information can be found at http://www.technology.tki.org.nz/.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools,* Ministry of Education at http://technology.tki.org.nz/Curriculum-support/Safety-and-Technology-Education, and the Health and Safety in Employment Act 1992.

This standard is also derived from Te Marautanga o Aotearoa. For details of Te Marautanga o Aotearoa achievement objectives to which this standard relates, see the Papa Whakaako for the relevant learning area.

2 *Use visual communication techniques to generate design ideas* involves:

- using techniques to explore the functional and aesthetic qualities of the design to generate design possibilities.

Use visual communication techniques skilfully to generate design ideas involves:
- using techniques to explore in detail the functional and aesthetic qualities of the design to generate divergent design possibilities.

Use visual communication techniques effectively to generate design ideas involves:
- using techniques to comprehensively explore the functional and aesthetic qualities of the design to reflect on and extend divergent design possibilities.

3 Functional qualities may include but are not limited to:
- operation eg movement and ergonomic interface
- construction eg material and assembly
- size, scale, and proportion.

4 Aesthetic qualities may include but are not limited to:
- colour
- tone
- texture
- pattern
- shape
- balance
- surface finish.

5 *Visual communication techniques* may include but are not limited to:
- sketching
- rendering
- modelling/model making eg mock-ups and 3D constructions
- collage and overlays
- digital media eg CAD, image manipulation and animation.

6 *Design ideas* are student generated responses to a design brief. The design ideas must have identifiable functional and aesthetic qualities.

7 Assessment Specifications for this achievement standard can be accessed through the Technology Resources page found at http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/subjects/.

Replacement Information
This achievement standard replaced unit standard 7481, unit standard 7490, and unit standard 7507.

Quality Assurance

1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference 0233

NOTES:

Achievement Standard

Subject Reference	Design and Visual Communication 2.31				
Title	Produce working drawings to communicate technical details of a design				
Level	2	**Credits**	4	**Assessment**	External
Subfield	Technology				
Domain	Design and Visual Communication				
Status	Registered	**Status date**		17 November 2011	
Planned review date	31 December 2018	**Date version published**		20 November 2014	

This achievement standard involves producing working drawings to communicate technical details of a design.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Produce working drawings to communicate technical details of a design.	• Produce working drawings to clearly communicate technical details of a design.	• Produce working drawings to effectively communicate technical details of a design.

Explanatory Notes

1 This achievement standard is derived from Level 7 of the Technology learning area in *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007; and is related to the material in the *Teaching and Learning Guide for Technology*, Ministry of Education at http://seniorsecondary.tki.org.nz.

Further information can be found at http://www.technology.tki.org.nz/.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools,* Ministry of Education at http://technology.tki.org.nz/Curriculum-support/Safety-and-Technology-Education, and the Health and Safety in Employment Act 1992.

This standard is also derived from Te Marautanga o Aotearoa. For details of Te Marautanga o Aotearoa achievement objectives to which this standard relates, see the Papa Whakaako for the relevant learning area.

2 *Produce working drawings to communicate technical details of a design* involves:

- producing a set of related scaled drawings
- using conventions
- showing complex visual information.

Produce working drawings to clearly communicate technical details of a design involves:

- producing an accurate set of related scaled drawings that communicate details of a design.

Produce working drawings to effectively communicate technical details of a design involves:

- producing a coherent set of related scaled drawings that communicate details of a design.

3 *Working drawings* are a set of related 2D (orthographic) drawings that may include but are not limited to: components, assembly, sectional view, auxiliary view, true shape, surface development, and construction details.

4 *Technical details* refer to the information related to the design. They describe the functional and aesthetic qualities of the design.

5 Conventions associated with orthographic drawing define such things as: line types (eg construction lines, outlines, and section lines), drawing and text layout, and dimensioning. Conventions include those which are commonly applied within a community of practice eg engineering (eg SAA/SNZ HB1:1994), or architecture – building and landscaping (eg NZS/AS 1100.101:1992 *Technical drawing – General principles*; NZS/AS 1100.301:1985 *Technical drawing – Architectural drawing*).

6 A set of related drawings refers to multiple drawings that communicate details of a design's shape and form.

7 Complex visual information may include but is not limited to: information not visible in the main outline, multi-component assembly detail, and communication of a design with complex shape and form.

8 A coherent set of drawings provides sufficient information to enable a design to be made.

9 Working drawings can be constructed using either traditional drawing equipment or computer applications.

10 *A design is* a student generated response to a design brief.

11 Assessment Specifications for this achievement standard can be accessed through the Technology Resources page found at http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/subjects/.

Replacement Information
This achievement standard replaced AS90318, unit standard 18995, and unit standard 18996.

Quality Assurance

1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference 0233

NOTES:

Achievement Standard

Subject Reference	Design and Visual Communication 2.33				
Title	Use the characteristics of a design movement or era to inform own design ideas				
Level	2	**Credits**	3	**Assessment**	Internal
Subfield	Technology				
Domain	Design and Visual Communication				
Status	Registered	**Status date**	17 November 2011		
Planned review date	31 December 2018	**Date version published**	20 November 2014		

This achievement standard involves using the characteristics of a design movement or era to inform own design ideas.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Use the characteristics of a design movement or era to inform own design ideas.	• Use the characteristics of a design movement or era to clearly inform own design ideas.	• Use the characteristics of a design movement or era to effectively inform own design ideas.

Explanatory Notes

1 This achievement standard is derived from Level 7 of the Technology learning area in *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007; and is related to the material in the *Teaching and Learning Guide for Technology*, Ministry of Education at http://seniorsecondary.tki.org.nz.

Further information can be found at http://www.technology.tki.org.nz/.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools,* Ministry of Education at http://technology.tki.org.nz/Curriculum-support/Safety-and-Technology-Education, and the Health and Safety in Employment Act 1992.

2 *Use the characteristics of a design movement or era to inform own design ideas* involves:
- describing the way elements of design are used within the design movement or era
- describing social factors that influenced the design movement or era

- generating design ideas that incorporate the identified characteristics of a design movement or era.

Use the characteristics of a design movement or era to clearly inform own design ideas involves:

- explaining the elements of design that characterise the design movement or era
- generating design ideas where it is evident that the identified characteristics of the design movement or era have been linked to the design ideas in a considered manner.

Use the characteristics of a design movement or era to effectively inform own design ideas involves:

- generating design ideas where it is evident that the identified characteristics of the design movement or era have been interpreted and embedded into the design ideas.

3 *Design movements* may include but are not limited to: Modernism, De Stijl, Bauhaus, Deconstructivism, and New Look.

4 *Design eras* may include but are not limited to: Aztec, pre-European Maori, Shogun, Renaissance, Victorian, 1920's, 1960's.

5 Elements of design are derived from the key design principles of aesthetics and function. These may include but are not limited to: shape, form, rhythm, balance, proportion, colour and contrast, durability, stability, and flexibility/rigidity.

6 Social factors may include but are not limited to: cultural, historical, societal and technological.

7 Conditions of Assessment related to this achievement standard can be found at http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

Replacement Information
This achievement standard replaced AS90321.

Quality Assurance

1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference 0233

Achievement Standard

Subject Reference	Design and Visual Communication 2.35				
Title	Develop a product design through graphics practice				
Level	2	**Credits**	6	**Assessment**	Internal
Subfield	Technology				
Domain	Design and Visual Communication				
Status	Registered	**Status date**	17 November 2011		
Planned review date	31 December 2014	**Date version published**	17 November 2011		

This achievement standard involves the development of a product design through graphics practice.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Develop a product design through graphics practice.	• Clearly develop a product design through graphics practice.	• Effectively develop a product design through graphics practice.

Explanatory Notes

1 This achievement standard is derived from the Level 7 achievement objectives from the Technology learning area in *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and is related to the material in the *Teaching and Learning Guide for Technology*, Ministry of Education, 2010 at http://seniorsecondary.tki.org.nz.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools,* Learning Media, Ministry of Education, 1998; and The Health and Safety in Employment Act 1992.

Further information can be found at http://www.techlink.org.nz.

2 *Develop a product design through graphics practice* involves:
- exploring and refining design ideas that draw on product design knowledge
- making design judgements on the positive and/or negative aspects of aesthetic and functional features of the design in response to a brief.

Clearly develop a product design through graphics practice involves:
- reviewing and refining design ideas that incorporate product design knowledge

- making design judgements on relevant features of the design, in response to the brief, that inform the progression of design ideas.

Effectively develop a product design through graphics practice involves:
- reviewing and refining well-considered design ideas that integrate product design knowledge throughout the development.

3 *Product design* is the design of objects and artefacts and may relate to: fashion, packaging, media products, consumer products and engineered products.

4 Product design knowledge includes design approaches, technical knowledge and visual communication techniques relevant to the specific product design context. These may include but are not limited to:
- design tools used for the development of product design ideas (eg market research, anthropometrics, ergonomes, mock-ups, and models)
- technical knowledge of materials, joining, fitting, assembly, finish, fasteners, sustainability and environmental considerations
- product visual communication techniques and approaches (eg product design drawings and rendering, prototypes, models, and animation).

5 *Graphics practice* involves expressing a visual literacy through the development of a design idea by applying design and visual communication techniques and knowledge.

6 Design judgements are supported by qualitative and/or quantitative data through research. Design judgements are decisions made, or opinions expressed, and may reflect a designer's perspectives, values, tastes, or views.

7 Evidence presented for assessment against this achievement standard may be generated using traditional media approaches or computer applications.

8 Conditions of Assessment related to this achievement standard can be found at www.tki.org.nz/e/community/ncea/conditions-assessment.php.

Replacement Information
This achievement standard and AS91343 replaced AS90324, AS90325, 7491, 7492, 7508, 7509, and 7512.

Quality Assurance

1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference 0233

Achievement Standard

Subject Reference	Design and Visual Communication 2.36
Title	Use visual communication techniques to compose a presentation of a design

Level	2	**Credits**	4	**Assessment**	Internal
Subfield	Technology				
Domain	Design and Visual Communication				

Status	Registered	**Status date**	17 November 2011
Planned review date	31 December 2018	**Date version published**	20 November 2014

This achievement standard involves using visual communication techniques to compose a presentation of a design.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Use visual communication techniques to compose a presentation of a design.	• Use visual communication techniques to compose a skilful presentation of a design.	• Use visual communication techniques to compose an effective presentation of a design.

Explanatory Notes

1 This achievement standard is derived from Level 7 of the Technology learning area in *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007; and is related to the material in the *Teaching and Learning Guide for Technology*, Ministry of Education at http://seniorsecondary.tki.org.nz.

Further information can be found at http://www.technology.tki.org.nz/.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools,* Ministry of Education at http://technology.tki.org.nz/Curriculum-support/Safety-and-Technology-Education, and the Health and Safety in Employment Act 1992.

2 *Use visual communication techniques to compose a presentation of a design* involves:

- using presentation techniques and the application of compositional principles, modes and media to promote the design.

Use visual communication techniques to compose a skilful presentation of a design involves:

- integrating presentation techniques and the application of compositional principles, modes and media in the composition of a cohesive presentation.

Use visual communication techniques to compose an effective presentation of a design involves:

- composing a presentation that captures and promotes the essence of the design in a convincing manner.

3 *Visual communication techniques* require the understanding and use of compositional principles, graphic modes and media, for the purpose of the presentation.

4 Compositional principles may include but are not limited to: proximity, alignment, hierarchy and the use of positive/negative space.

5 Modes may include but are not limited to: digital applications, photography, image manipulation, animation, models and the range of conventional drawing and sketching methods.

6 Media may include but are not limited to: pastels, airbrush, colour pencils, collage, marker pens, paint, gouache, card, and digital media.

7 Conditions of Assessment related to this achievement standard can be found at http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

Replacement Information

This achievement standard and AS91342 replaced AS90324, AS90325, unit standard 7491, unit standard 7492, unit standard 7508, unit standard 7509, and unit standard 7512.

Quality Assurance

1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

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Consent and Moderation Requirements (CMR) reference 0233