NCEA Review and Maintenance Programme – 2026 updates

Review and maintenance work has been undertaken for all three levels of NZC NCEA for 2026. This pdf document contains the updated assessment materials for **Design and Visual Communication Level 1**. In January 2026 the NCEA website will be updated with these changes for Level 1, and the pdf version will be removed as it will no longer be necessary. For Levels 2 and 3, assessment materials will be updated on TKI in January. For external assessment specifications, refer to the NZQA website.

Subject: Design and Visual Communication Level 1

Product	What's changed?
Conditions of Assessment across all internal standards	Updated to provide clearer guidance around authenticity.
AS1.1 92000 Unpacking	Updated for clarification and to align with Achievement Standard revisions.
AS1.1 92000 Conditions of Assessment	Updated for clarification and to align with Achievement Standard revisions.
AS1.1 92000 Internal Assessment Activities	Updated for clarification and to align with Achievement Standard revisions. Context for activity B updated.
AS1.1 92000 Assessment Schedules	Updated for clarification and to align with Internal Assessment Activity revisions. Context for activity B updated.
AS1.1 92000 Teacher Resources	Updated for clarification and to align with Achievement Standard revisions.
AS1.2b 92001 Internal Assessment Activity	Context updated.
AS1.2b 92001 Assessment Schedule	Updated to align with revisions to Internal Assessment Activity B.
Subject Learning Outcomes	Updated for clarification and to align with 1.1 revisions.

Contents

NCEA Conditions of Assessment

across all internally assessed standards

Subject:	All NZC subjects
Achievement Standard:	All NZC internal Achievement Standards

The Conditions of Assessment across all Level 1 internally assessed standards have been updated to include clearer guidance about authenticity. Any changes to Standard Specific Conditions of Assessment will be shown separately within this document.

Conditions of Assessment

for internally assessed standards

These Conditions provide guidelines for assessment against internally assessed Achievement Standards. Guidance is provided on:

- specific requirements for all assessments against this Standard
- appropriate ways of, and conditions for, gathering evidence
- ensuring that evidence is authentic.

Assessors must be familiar with guidance on assessment practice in learning centres, including enforcing timeframes and deadlines. The NZQA website offers resources that would be useful to read in conjunction with these Conditions of Assessment.

The learning centre's Assessment Policy and Conditions of Assessment must be consistent with NZQA's Assessment Rules for Schools with Consent to Assess. This link includes guidance for managing internal moderation and the collection of evidence.

Gathering Evidence

Internal assessment provides considerable flexibility in the collection of evidence. Evidence can be collected in different ways to suit a range of teaching and learning styles, and a range of contexts of teaching and learning. Care needs to be taken to allow students opportunities to present their best evidence against the Standard(s) that are free from unnecessary constraints.

It is recommended that the design of assessment reflects and reinforces the ways students have been learning. Collection of evidence for the internally assessed Standards could include, but is not restricted to, an extended task, an investigation, digital evidence (such as recorded interviews, blogs, photographs, or film), or a portfolio of evidence.

Effective assessment should suit the nature of the learning being assessed, provide opportunities to meet the diverse needs of all students, and be valid and fair.

Ensuring Authenticity of Evidence

Authenticity of student evidence needs to be assured regardless of the method of collecting evidence. This must be in line with the learning centre's policy and NZQA's Assessment Rules for Schools with Consent to Assess.

Ensure that the student's evidence is individually identifiable and represents the student's own work. The evidence must be an accurate reflection of what the student independently knows and can do, according to the Standard being assessed. This includes evidence submitted as part of a group assessment, evidence produced outside of class time or without assessor supervision, and evidence produced with any use of generative artificial intelligence tools (GenAI). GenAI use should be carefully considered in the context of the Standard being assessed and its Conditions of Assessment, discussed with students before the assessment, and its use must be acknowledged. For example, an investigation carried out over several sessions could include:

- teacher guidance on the nature and extent of acceptable GenAI use, if any
- assessor observations and conversations
- meeting with the student at set milestones or checkpoints
- the student's record of progress, such as photographic entries or any GenAI prompts used.

NCEA Unpacking the Standard

Subject:	Design and Visual Communication
Achievement Standard:	1.1 Generate product or spatial design ideas using visual communication techniques in response to design influences
Credits:	5

The intent of the Achievement Standard

In this Achievement Standard, ākonga will generate product or spatial design ideas using visual communication techniques in response to both te ao Māori and another design influence. Designers are responsive to the whakapapa and tikanga of the people, purposes, and places they design for.

Within this Achievement Standard, ākonga will be encouraged to explore and experiment with different design ideas, revealing new possibilities that lead to the generation of their own product or spatial design ideas.

This will include the process of ideation, where designers research, review, and consider different concepts, aesthetics, approaches.

Design influences will be used to discover new ideas and open up new possibilities from different, sometimes unconventional, sources which then inform their design thinking and design idea generation. A design influence may include multiple design elements that are characteristic of either a design movement, a designer's body of work, or a design. These design ideas will familiarise ākonga with the first stages of the design process and will allow them to envision how their ideas could potentially be developed into design outcomes in the future.

Making reliable judgements

To attain this Standard, ākonga must explain the rationale for their chosen design influences, with one being drawn from te ao Māori and one drawn from another design influence. They must show how their design ideas relate to characteristics of the selected design sources for both design influences. This rationale will be explained visually, using annotations or short written statements.

Examples of a design influence from te ao Māori could reflect regional (design) styles and may be aesthetic, functional, or both. They could also be types of objects, spaces or buildings that have a particular purpose.

For higher levels of achievement, ideas need to be further developed using visual communication techniques to show an exploration of aesthetics, function or both. Ideas will be enhanced by using divergent thinking to respond to the design influences to regenerate new design ideas.

Collecting evidence

Ākonga will curate and submit a portfolio of evidence of up to 15 A3 pages (or equivalent) showcasing their design work.

Evidence in the portfolio can take a range of visual forms, digital or physical, and may include drawings, annotations, models, or animations.

For digital formats submissions will be:

- an mp4 movie file of no more than 1 minute in length
- an mp4 file of an animation or flythrough of no more than 1 minute length.

Possible contexts

The Significant Learning within this Achievement Standard focuses on developing design thinking skills. Through responding to different design influences, including that of te ao Māori, ākonga gain influence, inspiration, and understanding of diverse perspectives.

By gaining influence from te ao Māori and exploring different design influences, ākonga will not only begin to understand and appreciate different perspectives and approaches to design, but they will also begin to develop their own design style and designer voice.

The rationale for exploring a design influence from te ao Māori includes a description of the significance of the design. It may show its whakapapa as far back as the ākonga can go, in terms of finding out where a design originated. It also includes finding out about relevant tikanga — such as why the design is used in a certain way and in a certain place. This will allow ākonga to take meaning from the design. A rationale can consist of visuals with supporting notes that explain the thinking behind the ideas generated.

Where possible teachers should seek the expertise of local iwi, hapu, whānau, or kaumātua to help understand and give respect to relevant mātauranga Māori.

Practising divergent thinking and risk-taking as part of their design ideation encourages ākonga to explore design ideas in ways that can give rise to innovation. Visual techniques assessed in this Achievement Standard could include quick sketching and quick computer modelling, which aid the learner's playing with form and the generation of design ideas.

Ākonga can bring their own designer voice that connects their personal experiences with the perspectives of different design influences. By using visual communication techniques that are appropriate for the ideation process, they are able to convey divergent thinking through design idea generation. They will also extend their use of visual communication techniques to further support ideation by experimenting with shape and form using visual techniques such as drawing and modelling (both analogue and digital). Design ideas will then be derived from their ideation for future development into a product or spatial context.

NCEA Conditions of Assessment

Subject:	Design and Visual Communication
Achievement Standard:	1.1 Generate product or spatial design ideas using visual communication techniques in response to design influences
Credits:	5

Students must explain the rationale for their chosen design influence from te ao Māori and the other chosen design influence. They must explain visually with annotations or short written statements why they have selected their design sources and what characteristics they are drawing from to influence their own spatial or product design ideas.

Students may work in groups to plan and give feedback or seek feedback from their assessor, but all design work must be generated individually.

Students **must**:

- develop and submit work that is entirely their own work.

Students **must not**:

- use any form of generative AI or other tools to automatically generate content at any stage of the writing process.

Students may have access to a full range of Design and Visual Communication tools.

Evidence for parts of this assessment can be in te reo Māori, English, or New Zealand Sign Language.

NCEA Internal Assessment Activity

Activity name:	1.1a Inviting spaces
Subject:	Design and Visual Communication
Achievement Standard:	92000
Credits:	5
Assessment Activity Version:	4

Note to teacher: This Internal Assessment Activity may be used unchanged, or can be adapted by the teacher, ensuring that all requirements of the Achievement Standard are still met. This textbox should be removed prior to sharing the activity with your students.

What to do

You will start the design process by exploring design influences, one from te ao Māori and another relevant to you, as a designer. These design influences will help you to generate design ideas. Both of these design influences will help you generate design ideas for a product or spatial design to encourage purposeful zones for people to engage with in a public space.

This activity provides an opportunity to explore how design is an act of manaakitanga. seeking new ways to improve the lives of people and their places.

You will find selected design sources that represent your chosen design influences and then identify characteristics from them that you could include in your own design ideas.

Keep your ideas broad and let them develop and change as you gather inspiration from your selected design sources.

Step 1: Collect selected design sources

Collect images, photographs, drawings, to provide details of your design influences. As you are designing for a particular public space, you may want to visit the site to take photos and gather information to inform your design ideas.

Design influence 1

Research a design influence from te ao Māori and gather selected design sources that represent it.

Design influences are the identified elements of design that are characteristic of the selected design sources and may be aesthetic, functional, or both. They may be the various uses, styles, motifs, symbolisms, and meanings within the selected design sources that influence your design ideas.

It is important to consider tikanga Māori to ensure authentic, respectful, and responsible use of design ideas from te ao Māori. The appropriate use of a design influence from te ao Māori is required for achieving this Standard.

Design Influence 2

Research a second design influence that is important to you as a designer. Your second design influence can also be from te ao Māori. It should be a designer or other human-made design influence. Gather images and information to support your understanding of the design influence you have chosen.

You must explain:

- your rationale for choosing both design influences
- how you have considered the design influences and used them to inform your design ideas.

Present your explanations visually using annotations or short written statements.

Step 2: Identify characteristics

Using the selected design sources, identify characteristics of the design influences that you find interesting and inspiring to help you to generate your own ideas.

When using the selected design sources to identify characteristics to reference in your own design ideas you may look for:

- uses
- styles
- motifs
- symbolisms
- meanings.

Think about if these characteristics are:

- aesthetic
- functional
- or both.

Step 3: Generating design ideas

Using the images you gathered as inspiration, generate initial ideas that:

- respond to the characteristics of the design influences you've chosen
- do not need to be made to a particular scale
- show consideration of aesthetics and function
- show respectful awareness of any tikanga related to design influences in your drawings.

You can use any visual communication mode or technique, such as a paper or card model, photos or digital models, *thumb nails* or exploratory drawings for a quick start of ideas.

Your design ideas can be inspired by the selected characteristics of the design influence.

Examples include:

- form (3D)
- shape (2D)
- pattern
- texture
- colour
- material
- surface finish.

Step 4: Generating and experimenting with design ideas

Use the forms you generated in Step 3 as inspiration to develop a range of product or spatial design ideas that combine the different elements and characteristics in creative or unexpected ways. You can use different modes, such as sketched models, digital models, or exploratory drawings to visually explain your design thinking.

Step 5: Extending design ideas

In extending your ideas, think about what it will look like and how it will be used by the public. Questions you may want to answer to help with your thinking include:

- How many people will use it?
- What is the purpose of the inviting space?
- How will it look and 'feel'?
- Is it positioned to admire a view?
- Who might use the design (families, adults, children)?

And think about how the design will be in its setting. For example:

- Will it blend with its natural surroundings?
- Is it suitable for the outdoors in terms of its durability?
- Is it movable or fixed?

Summarise your design thinking with a concluding set of design drawings (digital or analogue) that explain the thinking behind your design ideas. To produce these drawings, you are encouraged to think divergently to identify and use any successful methods of experimentation you discovered while generating your design ideas.

How to present your learning

You will submit a portfolio of work that will include the following evidence:

- the rationale for the chosen design influences explained visually with annotations or short written statements, why you have chosen them, and what aspects you are drawing on to influence your designs
- a collage of research images for each of the design influences selected (one page per design influence)

- a range of forms generated from the research images, explained through a series of drawings or models (or both)
    - it is recommended that appropriate photos of the model are submitted rather than physical models.
- exploration of how you've extended any of the forms (including ongoing inspiration from your original research images), which led to new potential design ideas
    - these can also be conveyed as a series of drawings or models (or both), along with appropriate research images from the original collage of images, site photographs, and maps.
- a concluding set of design ideas in the form of drawings or models or both (digital or analogue) that summarise key design thinking.

Evidence in the portfolio can take a range of visual forms, digital or physical, and may include drawings, annotations, models, and animations.

For digital formats submissions will be:

- an mp4 movie file of no more than 1 minute in length
- an mp4 file of an animation or flythrough of no more than 1 minute length
- a typical portfolio, which might consist of around 15 A3 single-sided pages or slides.

Timeframe

This project will run for five to seven weeks (approximately 20-28 hours of class time).

There will be at least one mid-project checkpoint (to assess your progress) as well as ongoing feedback and feedforward from your teacher.

Getting started

Identify your design influences

Gather images of ‘traditional’ and ‘contemporary’ examples of your design influences.

Your design influences could be:

- a regional design style and the meanings behind it
- a specific type or form of object, space, or building
- a traditional or contemporary item
- the designs of a Māori designer
- a design style from te ao Māori.

If using a designer as a design influence think about *such things as*:

- their design biography

- why you chose them
- what is it you find interesting about their work.

If using an item as a design influence, where possible, find:

- details of construction
- how aesthetic and functional considerations have been met in these examples.

If using a design style from te ao Māori, where possible identify design features, such as relationship or whakapapa to mana whenua, local, or regional styles.

With the guidance of your teacher, and where possible with guidance of local kaumātua or kuia, share your examples and seek their knowledge around the importance of your chosen design influence in relation to its origin, iwi, or hapū. Using the information conduct further research on traditional design styles associated with the area or origin.

Make sure that you have referenced the source(s) of the images you have gathered and who the original creators were.

Cultural safety is vital when working within te ao Māori. You need to investigate what is the appropriate placement of images or designs from te ao Māori. For this assessment it is important to understand origins, placements, and reproduction of design elements such as kōwhaiwhai and tāniko patterns. This includes the placement of a pattern on an object. Some ideas may be suitable for placement on a shelter but would not be appropriate for a children's play area. You can seek guidance from your teacher on this.

Answer these questions to help focus your initial research:

- What are the origins of your selected design sources?
- What are the functions of your selected design sources?
- How do people interact with them?
- What is the significance of your chosen selected design sources in relation to what you are designing?

Use your answers to help shape your design ideas.

Teacher Guidance

The teaching and learning for this Assessment Activity is intended to support divergent thinking and idea generation. Exploration, experimentation, playfulness, and risk-taking are to be continually encouraged while being culturally respectful.

A design influence considers design elements that are characteristic of either a design movement, a designer's body of work, or a design. Student responses to this Assessment Activity will be visual and depend on the nature of the body of images and drawings collated and the associated visual literacy that can be expressed.

To aid idea generation, you may want to arrange for your students to:

- visit the site or area, where they could take photos, do quick sketches and other ways to record information about the site
- listen to a local iwi member or a talk from the School Kaumātua regarding the area.

If your students are approaching local knowledge holders, you will need to advise them on how to go about this respectfully. This could include advice on how to conduct an interview.

While the extending of design ideas is intended to move towards the consideration of aesthetics, function, or both as required for product or spatial design ideas, the prevalent design thinking here is not to be driven by needing to reach a design outcome or resolved solution that meet a set of criteria or brief considerations. Having some different potential ideas is sufficient.

In Steps 1 and 2 (research gathering), examples of contexts could include:

- meditation nook
- hammock garden
- sensory garden
- reading corner
- nature trail
- art installation
- yoga platform
- water feature
- picnic grove
- bird-watching station and so on.

Teachers support students to develop effective research strategies, to for example, use a range of search terms to gather a wider selection of relevant and useful images they can visually analyse aesthetically and functionally, their selected design sources in depth.

Using a range of photos, drawings and diagrams will help to describe a design influence more fully. This will support the development of the students' own visual communication techniques.

To attain this Standard, students must explain their rationale for the chosen design influence from te ao Māori and their other design influence. Students must consider tikanga and kawa, in how they choose and incorporate design influences from te ao Māori. They must visually explain why they have chosen aspects of their design influences to inform their designs using annotations or short written statements.

Examples of a design influence from te ao Māori could reflect regional (design) styles and the meanings behind them. They could also be types of objects, spaces or buildings that have a particular purpose. It is the characteristics of the design influences that the students have identified that they will incorporate into their design ideas. The design influence should not be derived from natural forms.

In Step 3 (initial generation of forms), support students to be freer and more playful by guiding them towards iterating their ideas, they may not know the direction the designs will take from the outset.

It is helpful to have a clear delineation between 'forms' and 'design ideas' to help engender greater risk-taking and play that can allow mistakes to be accepted. To facilitate this generation,

providing a range of strategies of form generation and manipulation can help (such as rotation, addition, subtraction, or repetition) — this is best done with visual examples.

In Step 4 (experimenting with design ideas), students are beginning to reconcile their 'creative' ideas into potential design ideas. This is about finding useful connections that show how some creative starting points can lead to some more imaginative design ideas that may not have been expected.

Supporting ways that cultural influences and perspectives can be incorporated into design ideas in some way shows that there can be different approaches and responses to a design situation.

In Step 5 (visually extending design ideas), provide students with some basic understanding of the design principles of aesthetics, function, or both can be introduced. Some consideration of the people and location should be included. (Recognising that, in te ao Māori, people and place cannot be separated by the taonga being designed).

Exploring and using cultural influences is useful for generating a visual dialogue. If students select their own culture, it allows them to bring their own experiences into this dialogue. This sort of discussion does not need to be formalised in their portfolio. However, being able to have informal discussions in class is going to enrich their cultural awareness of each other and the views and values they each bring to the classroom.

Having a concluding set of design visuals does not have to be a specific requirement to the assessment. However, it does provide the opportunity for some students to clarify their thinking and to make sense of their work. Many students will be able to do this through the earlier phases of the project. This approach supports a further set of evidence that may support some students who have not been so clear and intentional in their approach to their work. It suits those students who might prefer outcome driven tasks.

A diverse use of visual communication techniques and materials can provide students with a universal design for learning approach. Providing a variety of materials and techniques and using more than one media is to be encouraged. Students can try quick digital drawings, paper or card model making, rough sketching and rendering (using different media, such as pencils, pens, markers, pastels, paint, and so on) to find what might works best for them. Exploring different media can be a useful strategy for encouraging more varied form generation and manipulation.

Site information could be provided about the location. Gathering visual imagery could also take place. Ideally, the location is local so that either the class or the students can visit themselves.

Having supporting site photos and maps is helpful, as well as any information on the history of the site within the community.

Design and Visual Communication Assessment Schedule: Assessment Activity 1.1a

Activity Title: Inviting spaces

Achievement Standard: 92000 Generate product or spatial design ideas using visual communication techniques in response to design influences

Achievement	Achievement with Merit	Achievement with Excellence
Achievement Criteria		
At the Achieved level, the student is able to generate product or spatial design ideas using visual communication techniques in response to design influences	At the Merit level, the student is able to develop product or spatial design ideas using visual communication techniques in response to design influences	At the Excellence level, the student is able to extend product or spatial design ideas using visual communication techniques in response to design influences
For all levels of achievement, the student is able to provide rationale for both design influences used in the context of product or spatial design, of which one must be an appropriate te ao Māori design influence.		
Teacher Judgement		
At the Achieved level, the student is able to: • use visual communication techniques to generate own design ideas that relate to characteristics of selected design sources.	At the Merit level, the student is able to: • use visual communication techniques to draw on the characteristics of selected design sources to expand own design ideas.	At the Excellence level, the student is able to: • use visual communication techniques to draw on the characteristics of selected design sources and apply divergent thinking to regenerate new design ideas.
At all levels, the student is able to provide rationale for both design influences used in the context of product or spatial design, of which one must be an appropriate te ao Māori design influence.		

Overall level of achievement will be based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.

For example (description of possible student evidence for this activity)

Achievement	Achievement with Merit	Achievement with Excellence
At the Achieved level, the student has: • recognised characteristics of the identified te ao Māori design influence AND another selected design influence • explored the aesthetics, function, or both of product or spatial design ideas • used visual communication techniques to explore different design ideas that relate to the design influences • created design ideas that are respectful of, and responsive to, the selected te ao Māori design influence and another selected design influence in designs for the public space • provided a rationale for both influences. The student may have included a collection of images identifying a theme, the whakapapa or significance of the design, or precedence of the design. *For example, designs may include annotations, qualitative judgements, and visuals with supporting evidence that explain the thinking behind the ideas generated when providing rationale. The product or spatial design may visually show how the characteristics of the chosen design influences shaped their design ideas.* (Student response to this	At the Merit level, the student has: • used visual communication techniques to create product or spatial design ideas for the public space that incorporate aesthetic, functional, or both considerations by drawing on the characteristics of the selected design sources • shown development by progressing the product or spatial design ideas for the public space.	At the Excellence level, the student has: • used visual communication techniques to create new product or spatial design ideas by drawing on the characteristics of the selected design sources and applying divergent thinking to regenerate new design ideas for the public space.

activity will be visual and depends on the nature of the body of images and drawings collated and the associated visual literacy that can be expressed.)		

Overall level of achievement will be based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.

Design and Visual Communication Teacher Resource

Activity Title: Inviting spaces (1.1a)

Achievement Standard: 92000

AS 1.1 Generate product or spatial design ideas using visual communication techniques in response to design influences

This assessment is intended to support teaching and learning within product or spatial design contexts in DVC classrooms. The assessment links te ao Māori design situations to enable teachers and students to engage with design at a local level. Creative idea generation, experimentation, and extension are encouraged throughout. Experimentation stages encourage divergent thinking, negotiating aesthetics, function, or both considerations. Students will not reach a final design outcome in this assessment.

Students are encouraged to reflect on and use inspiration derived from the school's or community's cultural heritage to inform design thinking and creativity.

Teachers do not need to be cultural experts to engage with this learning and assessment. It is intended to encourage teachers to begin to understand design thinking from a te ao Māori perspective. It offers a guide for ways to engage in te ao Māori in rich and meaningful ways. As teachers build knowledge and confidence with te ao Māori concepts, wider cultural contexts can be added. Those teachers who have a good understanding of mātauranga Māori are welcome to create wider design contexts for their students.

Not every school, hapū, or iwi will have cultural experts available to share subject-specific cultural knowledge. It is not a must for this assessment but can add rich learning for DVC classrooms. Subject forums can provide support for teachers who wish to embark on this learning. A list of resources and references can be found at the bottom of this guide.

Part 1: Collect selected design sources

Students begin the assignment by considering the cultural significance of the design context from a te ao Māori perspective. Students are then encouraged to learn about the local cultural history. This learning is necessary to substantiate students' knowledge, in order to make considered and meaningful responses. Students' generation of ideas in response to te ao Māori and another design influence is assessed. Students select design influences from both te ao Māori, and another design influence. The design influence from te ao Māori could be a regional design style and the meanings behind it and may relate to a specific type or form of object, space, or building. This object, space, or building may have a specific purpose.

Designers may also be chosen as a design influence. Students are guided to learn about Māori designers and architects (a list of references is supplied to provide teachers and students with a starting point) alongside national and international designers. This learning is intended to create an appreciation for local and indigenous designers and design considerations in contemporary design practice. Linking to national and international design influences locates Aotearoa New Zealand design within local and international standards.

Students must explain their rationale for the chosen design influence from te ao Māori and their other chosen design influence. They must explain visually with annotations or short written statements why they have chosen them and what aspects of them they are drawing on to influence their designs.

Part 2: Identify characteristics

Students are encouraged to find characteristics of their selected design sources that are meaningful to them. Using their design influences as inspiration they can find styles, uses, motifs, symbols, and meanings they can reinterpret in their own design ideas. They are encouraged to consider if the characteristics are aesthetic, functional, or both.

Part 3: Generate ideas

Students begin generating ideas that link to the identified characteristics for a product or spatial design. The generation of ideas is inspired by new knowledge and imagery, and informs creative play and risk-taking. Students should begin to explore their own design identity.

Part 4: Explore ideas

Students begin to experiment through guided creative play. People, places, alternative materials, construction, and aesthetic and/or functional considerations are made. Site maps and plans for spatial design are encouraged to add further authentic learning opportunities. Divergent design and thinking strategies are encouraged to help students explore ideas in innovative and imaginative and culturally appropriate ways.

References

Ellis. N. (2016), *A Whakapapa of Tradition: 100 Years of Ngāti Porou Carving, 1830-1930.* Auckland University Press, Auckland.

Neich. R. (2001), *Carved Histories: Rotorua Ngati Tarawhai Wood Carving.* Auckland University Press, Auckland.

Walters. M, Walters. R, Walters. S. (2014), *Marae: Te Tatau Pounamu, A Journey Around New Zealand's Meeting Houses.* Random House, Auckland.

Māori architecture — whare Māori (Te Ara)

Pine Taiapa:

Taiapa, Pineāmine (Te Ara)

Selwyn Muru:

Selwyn Muru (Ngā Pae o te Māramatanga Media Centre)

Rangimarie Hetet:

Hetet, Rangimārie (Te Ara)

Powhiri Process:

Powhiri — Tikanga Series of Videos (Rauawaawa Kaumatua Charitable Trust)

Mead. S. M. (ed.), (1984), *Te Māori: Māori Art from New Zealand Collections.* Heinemann, pp 73-5.

Sketch up tutorials

Sketchup Tutorial For Beginners — Part One (MasterSketchUp)

Sketchup Tutorial For Beginners — Part Two | Groups & Components (MasterSketchUp)

SketchUp Tutorial — 1 — Beginner SketchUp Tutorial (Jake Day Williams)

Ten mistakes beginners make in SketchUp and How to avoid them (TheSketchUpEssentials)

NCEA Internal Assessment Activity

Activity name:	1.1b Dream whānau bach
Subject:	Design and Visual Communication
Achievement Standard:	1.1 Generate product or spatial design ideas using visual communication techniques in response to design influences
Credits:	5
Assessment Activity Version:	4

Note to teacher: This Internal Assessment Activity may be used unchanged, or can be adapted by the teacher, ensuring that all requirements of the Achievement Standard are still met. This textbox should be removed prior to sharing the activity with your students.

What to do

You will generate and explore a range of ideas for a dream whānau bach. Use both of the starting points below to help you generate, experiment, and extend ideas that relate to the characteristics of the selected design sources.

Starting Point 1: The work of an architect

Choose *one* of the following architects:

- Ludwig Mies van der Rohe
- Shigeru Ban
- Glenn Murcutt
- Rau Hoskins
- Daniel Libeskind
- Nicola and Lance Herbst Architects
- John Scott
- Nicolas Dalton
- Andrew Patterson.

Engage with examples of architecture designed by your chosen architect. These can be shown as a collection of images (photographs or drawings) supported with descriptive annotations. Include a rationale for choosing them, their style, heritage, and what they represent (eg, design movement), as well as a description of the design elements that are characteristic of each design source.

Identify and show characteristics (design elements) of the chosen architect's work that you would like to use for idea generation. These characteristics can be shown by identifying and/or highlighting parts of the image from your collection.

Generate a range of starting ideas. Experiment with ideas (2D shapes, 3D forms, materials) influenced by the images collected. What are the characteristics that capture your attention? Use any visual communication techniques that will help you to explore quick ideas.

Starting Point 2: Te ao Māori design influence

Engage with examples of an appropriate te ao Māori design influence. These can be shown as a collection of images (photographs or drawings) supported with descriptive annotations. Include a rationale for choosing them and a description of the significance of the designs.

Identify and show the characteristics (design elements) of the selected te ao Māori design influence that you would like to use for idea generation. These characteristics can be shown by identifying and/or highlighting parts of the image from your collection.

Generate a range of starting ideas. Experiment with ideas (2D shapes, 3D forms, materials, and so on) influenced by the images you have engaged with. What are the characteristics of these images that capture your attention? Are these characteristics aesthetic, functional, or both? What are the cultural safety aspects to consider when engaging with te ao Māori designs? Use any visual communication techniques that will help you to explore quick ideas.

Explain your rationale. For the chosen design influence from te ao Māori and your other chosen design influence, you must explain your rationale for choosing them and how you have considered them in your design ideas. You must explain visually with annotations or short written statements, why you have chosen them and what aspects of them you are drawing on in your designs.

Examples of a design influence from te ao Māori could reflect regional (design) styles and the meanings behind them. They could also be types of objects, spaces, or buildings that have a particular purpose.

Visual communication techniques that can be used to generate ideas include:

- Build quick models using materials such as paper, card, bamboo skewers, twigs, and blue tack.
- Sketch over the collected images.
- Produce quick freehand 2D and 3D sketches.
- Make collages using coloured paper shapes.
- Use digital modelling.

Experiment and explore to develop your ideas further

Develop some of your ideas further by experimenting with them to find out how they could be used as a dream whānau bach for this site. You should extend some ideas from each of your two starting points and show your exploration of both function and aesthetics. You might extend the ideas separately *or* you may combine them together.

Use visual communication techniques to think divergently and extend your ideas in interesting directions arriving at new ideas. Experiment further with form and purpose. You could add features such as interior spatial arrangement, materials, relationship with site and people, and so on. Try using visual techniques such as quick models, digital models, freehand sketches, and exploratory drawing.

You do not have to generate a resolved design idea.

How to present your learning

This assessment should be presented as a visually communicated portfolio of your best design ideas in either digital, paper, or 3D formats.

You will submit a portfolio of work which will include:

- the rationale for the chosen design influences explained visually, with annotations or short written statements, why you have chosen them and what aspects you are drawing on to influence your designs
- showing source images for each selected starting point
- using notes or labels to identify characteristics of the source images that may be aesthetic, functional, or both
- exploring ideas from each of the selected design sources you collected
- extending ideas for a dream whānau bach design using visual techniques to experiment with aspects of form and function
- extending ideas from each starting point either separately or combining them together
- acknowledging all research sources including owners, authors, and correct citing of internet links.

Visual communication techniques that could be used include:

- sketch models using CAD software
- hand drawn 2D and 3D sketches
- photography
- overlays.

Your portfolio should be approximately 15 A3 sheets (analogue or digital) in length and could be presented showing visuals and some annotation or voiceover explanation.

Timeframe

This project will run for five to seven weeks (approximately 20-28 hours of class time, plus home learning).

There will be at least one mid-project checkpoint (to assess your progress) as well as ongoing feedback and feedforward from your teacher.

Getting started

Get to know the site by doing any of the following:

- visit the site if you are nearby
- look at the site on an online mapping programme
- watch a tourism video about the site and local area

- read about the site and local area on the Council website.

Talk with your teacher about other possible projects that involve a site and a building if a dream whānau bach does not suit your context.

Engage with the work of an architect by doing any of the following:

- watch an online video about the architect and their work
- watch or listen to online videos of the architect talking about their work
- web search for images of the architect's work
- read books about the architect's work
- read an online encyclopaedia entry for the architect
- go on a virtual tour of a building by the architect.

Engage with te ao Māori design influences by doing any of the following:

- think about how te ao Māori design influences could inform your design ideas for the dream whānau bach
- talk to mana whenua about te ao Māori design influences
- what are tikanga for sharing knowledge, such as through waiata, karakia, whakataukī or whakatauākī, and so on?
- ask friends or whānau to tell you what they know about te ao Māori design influences
- read a book that describes te ao Māori design influences or find information on the internet
- visit a local gallery or museum to find exhibits about te ao Māori design influences.

Teacher Guidance

The teaching and learning for this Assessment Activity is intended to support divergent thinking and idea generation. Exploration, experimentation, playfulness, and risk-taking are to be continually encouraged, whilst being culturally respectful. Visual techniques and materials that help students to be experimental and playful should be chosen. For example, making quick models out of paper, twigs, bamboo skewers, and blue tack might help students to be more experimental and creative with their starting ideas. Collage is also a useful technique to help students to be playful with shapes.

Students will generate and explore a range of ideas for a dream whānau bach. Use both design influences to help generate, experiment, and extend ideas that relate to the characteristics of the selected design sources.

Students will engage with examples of an appropriate te ao Māori design influence. These can be shown as a collection of images (photographs or drawings) supported with descriptive annotations. Include a rationale for choosing them and a description of the significance of the designs.

A design influence considers design elements that are characteristic of either a design movement, a designer's body of work, or a design. A student response to this Assessment Activity will be visual and depends on the nature of the body of images and drawings collated

and the associated visual literacy that can be expressed.

Suggested architects to engage with include:

- Ludwig Mies van der Rohe who uses horizontal planes separated by glass curtain walls.
- Glenn Murcutt who uses natural light thoughtfully in his designs and aims to “tread lightly on the Earth.”
- Daniel Libeskind who uses a wrapping envelope to create interesting spaces within his buildings and they often express anguish.

To attain this Standard, students must explain their rationale for the chosen design influence from te ao Māori and the other chosen design influence. They must explain visually with annotations or short written statements, why they have chosen them and what aspects of them they are drawing on to influence their designs.

Examples of a design influence from te ao Māori could reflect regional (design) styles and the meanings behind them. They could also be types of objects, spaces, or buildings that have a particular purpose.

A design influence considers design elements that are characteristic of either a design movement, a designer's body of work, or a design. A student response to this Assessment Activity will be visual and depends on the nature of the body of images and drawings collated and the associated visual literacy that can be expressed.

Design and Visual Communication Assessment Schedule: Assessment Activity 1.1b

Activity Title: Dream whānau bach

Achievement Standard: 92000 Generate product or spatial design ideas using visual communication techniques in response to design influences

Achievement	Achievement with Merit	Achievement with Excellence
Achievement Criteria		
At the Achieved level, the student is able to generate product or spatial design ideas using visual communication techniques in response to design influences	At the Merit level, the student is able to develop product or spatial design ideas using visual communication techniques in response to design influences	At the Excellence level, the student is able to extend product or spatial design ideas using visual communication techniques in response to design influences
For all levels of achievement, the student is able to provide rationale for both design influences used in the context of product or spatial design, of which one must be an appropriate te ao Māori design influence.		
Teacher Judgement		
At the Achieved level, the student is able to: • use visual communication techniques for generating dream whānau bach design ideas that relate to characteristics of selected design sources.	At the Merit level, the student is able to: • use visual communication techniques to draw on the characteristics of selected design sources to expand own design ideas for a dream whānau bach.	At the Excellence level, the student is able to: • use visual communication techniques to draw on the characteristics of selected design sources and apply divergent thinking to regenerate new design ideas for a dream whānau bach.
At all levels, the student is able to provide rationale for both design influences used in the context of dream whānau bach design ideas, of which one must be an appropriate te ao Māori design influence.		

Overall level of achievement will be based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.

For example (description of possible student evidence for this activity)

Achievement	Achievement with Merit	Achievement with Excellence
At the Achieved level, the student has: • recognised characteristics of the identified te ao Māori design influence AND another selected design influence • explored the aesthetics, function, or both of product or spatial design ideas • used visual communication techniques to explore different design ideas that relate to the design influences • created design ideas that are respectful of, and responsive to, an appropriate te ao Māori design influence and another selected design influence in design ideas for the dream whānau bach • provided a rationale for both influences. The student may have included a collection of images identifying a theme, the whakapapa or significance of the design, or precedence of the design. *For example, designs may include annotations, qualitative judgements, and visuals with supporting evidence that explain the thinking behind the ideas generated when providing rationale. The product or spatial design may visually show how the characteristics of the chosen design influences shaped their design ideas.* (Student response to this activity will be visual and	At the Merit level, the student has: • used visual communication techniques to create spatial design ideas for the dream whānau bach that incorporate aesthetic, functional, or both considerations by drawing on the characteristics of the selected design sources • shown development by progressing the product or spatial design ideas for the dream whānau bach.	At the Excellence level, the student has: • used visual communication techniques to create new design ideas by drawing on the characteristics of the selected design sources and applying divergent thinking to regenerate new dream whānau bach design ideas.

depends on the nature of the body of images and drawings collated and the associated visual literacy that can be expressed.)		

Overall level of achievement will be based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.

Design and Visual Communication Teacher Resource

Activity Title: Dream whānau bach (1.1b)

Achievement Standard: 92000

AS 1.1 Generate product or spatial design ideas using visual communications techniques in response to design influences

This assessment is intended to support teaching and learning within product or spatial design contexts in DVC classrooms. The assessment links te ao Māori design situations to enable teachers and students to engage with design at a local level. Creative idea generation, experimentation, and extension are encouraged throughout. Experimentation stages encourage divergent thinking negotiating aesthetic, functional, or both considerations. Students will not reach a final design outcome in this assessment.

Students are encouraged to reflect on, and use inspiration derived from the school's or community's cultural heritage to inform design thinking and creativity.

Teachers do not need to be cultural experts to engage with this learning and assessment. It is intended to encourage teachers to begin to understand design thinking from a te ao Māori perspective. It offers a guide for ways to engage in te ao Māori in rich and meaningful ways. As teachers build knowledge and confidence with te ao Māori concepts, wider cultural contexts can be added. Those teachers who have a good understanding of mātauranga Māori are welcome to create wider design contexts for their students.

Not every school, hapū, or iwi will have cultural experts available to share subject-specific cultural knowledge. It is not a must for this assessment but can add rich learning for DVC classrooms. Subject forums can provide support for teachers who wish to embark on this learning. A list of resources and references can be found at the bottom of this guide.

Part 1: Selected design sources

Students begin the assignment by considering the cultural significance of the design context from a te ao Māori perspective. Students are then encouraged to learn about the local cultural history. This learning is necessary to substantiate students' knowledge, in order to make considered and meaningful responses. Students' generation of ideas in response to te ao Māori and another design influence is assessed. Students select design influences from both te ao Māori and another design influence. The design influence from te ao Māori could be a regional design style and the meanings behind it and may relate to a specific type or form of object, space, or building. This object, space, or building may have a specific purpose.

Designers may also be chosen as a design influence. Students are guided to learn about Māori designers and architects (a list of references is supplied to provide teachers and students with a starting point) alongside national and international designers. This learning is intended to create an appreciation for local and indigenous designers and design considerations in contemporary design practice. Linking to national and international design influences locates Aotearoa New Zealand design within local and international standards.

Students must explain their rationale for the chosen design influence from te ao Māori and their other chosen design influence. They must explain visually with annotations or short written statements, why they have chosen them and what aspects of them they are drawing on to influence their designs.

Part 2: Identify characteristics

Students are encouraged to find characteristics of their selected design sources that are meaningful to them. Using their design influences as inspiration they can find styles, uses, motifs, symbols, and meanings they can reinterpret in their own design ideas. They are encouraged to think about if the characteristics are aesthetic, functional, or both.

Part 3: Generate ideas

Students begin generating ideas that link to the identified characteristics for a product or spatial design. The generation of ideas is inspired by new knowledge and imagery, informs creative play and risk taking. Students should begin to explore their own design identity.

Part 4: Explore ideas

Students begin to experiment through guided creative play. People, places, alternative materials, construction, and aesthetic considerations are made. Site maps and plans for spatial designs are encouraged to add further authentic learning opportunities. Divergent design and thinking strategies are encouraged to help students explore ideas in innovative and imaginative ways and culturally appropriate ways.

References

Ellis. N. (2016), *A Whakapapa of Tradition: 100 Years of Ngāti Porou Carving, 1830-1930*. Auckland University Press, Auckland.

Neich. R. (2001), *Carved Histories: Rotorua Ngati Tarawhai Wood Carving.* Auckland University Press, Auckland.

Walters. M, Walters. R, Walters. S. (2014), *Marae: Te Tatau Pounamu, A Journey Around New Zealand's Meeting Houses.* Random House, Auckland.

Māori architecture — whare Māori (Te Ara)

Pine Taiapa:

Taiapa, Pineāmine (Te Ara)

Selwyn Muru:

Selwyn Muru (Ngā Pae o te Māramatanga Media Centre)

Rangimarie Hetet:

Hetet, Rangimārie (Te Ara)

Powhiri Process:

Powhiri — Tikanga Series of Videos (Rauawaawa Kaumatua Charitable Trust)

Hirini Moko Mead — Mead Māori art restructured, reorganised, reexamined and reclaimed:

Mead. S. M. (ed.), (1984), *Te Māori: Māori Art from New Zealand Collections*. Heinemann, pp 73-5.

Sketch up tutorials

Sketchup Tutorial For Beginners — Part One (MasterSketchUp)

Sketchup Tutorial For Beginners — Part Two | Groups & Components (MasterSketchUp)

SketchUp Tutorial — 1 — Beginner SketchUp Tutorial (Jake Day Williams)

Ten mistakes beginners make in SketchUp and How to avoid them (TheSketchUpEssentials)

NCEA Internal Assessment Activity

Activity name:	1.1c Spatial or product design inspired by design influences
Subject:	Design and Visual Communication
Achievement Standard:	1.1 Generate product or spatial design ideas using visual communication techniques in response to design influences
Credits:	5
Assessment Activity Version:	4

Note to teacher: This Internal Assessment Activity may be used unchanged, or can be adapted by the teacher, ensuring that all requirements of the Achievement Standard are still met. This textbox should be removed prior to sharing the activity with your students.

What to do

Explore design influences, one from te ao Māori and another relevant to you as a designer, to identify characteristics you can include in your own design ideas for a product or spatial design. The second design influence may also be from te ao Māori. The design influences should be either a designer or a human-made design influence.

The design influence from te ao Māori could be a:

- regional design style and the meanings behind it
- specific type or form of object, space, or building.

The product or spatial design idea does not have to be set at the start of your exploration and may develop as you gather inspiration from your selected design sources.

Step 1. Collect selected design sources

Collect images, photographs, drawings, details of your design influences.

Design influence 1

Research a design influence from te ao Māori and gather selected design sources. Gather images and information to support your understanding of the design influences you have chosen.

Make sure that you have referenced the source(s) of the images you have gathered and who the original creators were. What are the cultural safety aspects to consider in using designs from te ao Māori?

Gather images of ‘traditional’ and ‘contemporary’ examples of your design influence. Where possible, find:

- details of construction
- design features, such as relationship or whakapapa to mana whenua, local, or regional styles.

With the guidance of your teacher, and where possible with guidance of local kaumātua or kuia, share your examples and seek their knowledge around the importance of your chosen design in relation to its origin, iwi, or hapū. Using the information conduct further research on traditional design styles associated with the area or origin.

Answer these questions to help focus your initial research:

- What are the origins of your selected design sources?
- What are the functions of your selected design sources?
- How do people interact with them?
- What is the significance of your chosen selected design sources in relation to what you are designing?

Design influence 2

The second design influence can be another designer or other influence.

Potential designers to select as your second design influence are listed below or choose another in consultation with your teacher.

Suggested Traditional Practice: Rangi Kipa, Pine Taiapa and The NZ Māori Arts and Crafts Institute, Te Puia, Rotorua.

Suggested Contemporary Practice: Selwyn Muru, Ian Scott, John Scott, Rewi Thompson, Tere Insley, Perry Royal, Rau Hoskins, Elisapeta Heta, Raukura Turei, and Rebecca Green.

For each selected designer, give a short explanation about:

- their design biography
- why you chose them
- what is it you find interesting about their work
- a selection of images of their work.

For the chosen design influence from te ao Māori and your other chosen design influence, you must explain your rationale for choosing them and how you have considered them in your design ideas. You must explain visually, with annotations or short written statements, why you have chosen them and what aspects of them you are drawing on in your designs.

Step 2. Identify characteristics

Identify characteristics of the design influences that you would like to use to help you generate ideas that you find interesting and inspiring.

When looking for characteristics of your design influences you may identify the uses, styles, motifs, symbols, and meanings of the selected design sources.

Think about if these characteristics are aesthetic, functional or both.

Step 3. Generate ideas

Generate a range of starting ideas inspired by your selected design sources:

- If you are designing a product, think about who it is for and how it will be used?
- If you are creating a spatial design, think about where it will be and what will it be used for?

Step 4. Explore design ideas

Use visual communication techniques to explore these ideas and help shape your thoughts around a spatial or product design.

Experiment with your initial ideas to develop them further by making models and drawings that show alternative design options. Show your experimentation with the ideas inspired by the characteristics the design influences and extending them by experimenting with aspects of form and function.

When experimenting with your design, consider:

- how people will interact with the space or product
- alternative materials it could be made from
- how it might go together (construction)
- alternatives to form, shape, pattern, texture, colour, and positioning (eg, could it go somewhere else?)
- for site specific design contexts, the use of maps and site plans
- using visual communication techniques to explore a range of different ideas
- trying to combine your ideas in different ways
- extending your ideas to practise divergent thinking by looking again at the characteristics of your design influences.

How to present your learning

This assessment should be presented as a visually communicated portfolio of your best design ideas in either digital, paper, or 3D formats.

Ideas can be created and presented in a variety of ways including:

- rapid vis and quick sketches
- freehand 2D and 3D drawing modes
- instrumental 2D and 3D drawing modes
- digital 2D and 3D drawing modes
- photographs
- model making
- overlays
- CAD

- animation modelling
- a slide presentation
- a recorded class presentation.

You also need to provide a rationale for the chosen design influences explained visually with annotations or short written statements, why you have chosen them, and what aspects you are drawing on to influence your designs.

A portfolio of up to 15 A3 single-sided pages is suggested for this work. Work presented to a class or with audio content should require fewer written notes. Photographs of models count towards the overall recommended page amount, and it is recommended that appropriate photos of the models are submitted rather than physical models.

Timeframe

This project will run for five to seven weeks (approximately 20-28 hours of class time, plus home learning).

There will be at least one mid-project checkpoint (to assess your progress) as well as ongoing feedback and feedforward from your teacher.

Getting started

To support you in this mahi, before you begin you could:

- learn about mana whenua, your local hapū and iwi
- visit local museums, marae, or the library to find resources
- meet with kaumātua or kuia to hear local histories.

Teacher Guidance

The teaching and learning for this Assessment Activity is intended to support divergent thinking and idea generation. Exploration, experimentation, playfulness, and risk-taking are to be continually encouraged, whilst being culturally respectful. The assessment encourages linking to te ao Māori through researching design influences to identify their design characteristics. This enables teachers and students to engage with design at a local level in a culturally safe way.

To attain this Standard, students must explain their rationale for the chosen design influence from te ao Māori and the other chosen design influence. They must explain visually with annotations or short written statements, why they have chosen them and what aspects of them they are drawing on to influence their designs.

A design influence considers design elements that are characteristic of either a design movement, a designer's body of work, or a design.

Examples of a design influence from te ao Māori could reflect regional (design) styles and the meanings behind them. They could also be types of objects, spaces or buildings that have a particular purpose.

A design influence considers design elements that are characteristic of either a design movement, a designer's body of work, or a design. Student response to this Assessment Activity will be visual and depends on the nature of the body of images and drawings collated and the associated visual literacy that can be expressed.

Design and Visual Communication Assessment Schedule: Assessment Activity 1.1c

Activity Title: Spatial or product design inspired by design influences

Achievement Standard: 92000 Generate product or spatial design ideas using visual communication techniques in response to design influences

Achievement	Achievement with Merit	Achievement with Excellence
Achievement Criteria		
At the Achieved level, the student is able to generate product or spatial design ideas using visual communication techniques in response to design influences	At the Merit level, the student is able to develop product or spatial design ideas using visual communication techniques in response to design influences	At the Excellence level, the student is able to extend product or spatial design ideas using visual communication techniques in response to design influences
For all levels of achievement, the student is able to provide rationale for both design influences used in the context of product or spatial design, of which one must be an appropriate te ao Māori design influence.		
Teacher Judgement		
At the Achieved level, the student is able to: • use visual communication techniques to generate own design ideas that relate to characteristics of selected design sources.	At the Merit level, the student is able to: • use visual communication techniques to draw on the characteristics of selected design sources to expand own design ideas.	At the Excellence level, the student is able to: • use visual communication techniques to draw on the characteristics of selected design sources and apply divergent thinking to regenerate new design ideas.
At all levels, the student is able to provide rationale for both design influences used in the context of product or spatial design, of which one must be an appropriate te ao Māori design influence.		

Overall level of achievement will be based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.

For example (description of possible student evidence for this activity)

Achievement	Achievement with Merit	Achievement with Excellence
At the Achieved level, the student has: • recognised characteristics of the identified te ao Māori design influence AND another selected design influence • explored the aesthetics, function, or both of product or spatial design ideas • used visual communication techniques to explore different design ideas that relate to the design influences • created design ideas that are respectful of, and responsive to, an appropriate te ao Māori design influence and another selected design influence • provided a rationale for both influences. The student may have included a collection of images identifying a theme, the whakapapa or significance of the design, or precedence of the design. *For example, designs may include annotations, qualitative judgements, and visuals with supporting evidence that explain the thinking behind the ideas generated when providing rationale. The product or spatial design may visually show how the characteristics of the chosen design influences shaped their design ideas.* (Student response to this activity will be visual and depends on the nature of the	At the Merit level, the student has: • used visual communication techniques to create spatial or product design ideas that incorporate aesthetics, function, or both considerations by drawing on the characteristics of the selected design sources • shown development by progressing the product or spatial design ideas.	At the Excellence level, the student has: • used visual communication techniques to create new design ideas by drawing on the characteristics of the selected design sources and applying divergent thinking to regenerate new design ideas.

body of images and drawings collated and the associated visual literacy that can be expressed.)		

Overall level of achievement will be based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.

Design and Visual Communication Teacher Resource

Activity Title: Spatial or product design inspired by design influences (1.1c)

Achievement Standard: 92000

AS 1.1 Generate product or spatial design ideas using visual communications techniques in response to design influences

This assessment is intended to support teaching and learning within both product or spatial design contexts in DVC classrooms. The assessment links te ao Māori design situations to enable teachers and students to engage with design at a local level. Creative idea generation, experimentation, and extension are encouraged throughout. Experimentation stages encourage divergent thinking, negotiating aesthetic and/or functional considerations. Students will not reach a final design outcome in this assessment.

Students are encouraged to reflect on, and use inspiration derived from the school's or community's cultural heritage to inform design thinking and creativity.

Teachers do not need to be cultural experts to engage with this learning and assessment. It is intended to encourage teachers to begin to understand design thinking from a te ao Māori perspective. It offers a guide for ways to engage in te ao Māori in rich and meaningful ways. As teachers build knowledge and confidence with te ao Māori concepts, wider cultural contexts can be added. Those teachers who have a good understanding of mātauranga Māori are welcome to create wider design contexts for their students.

Not every school, hapū, or iwi will have cultural experts available to share subject-specific cultural knowledge. It is not a must for this assessment but can add rich learning for DVC classrooms. Subject forums can provide support for teachers who wish to embark on this learning. A list of resources and references can be found at the bottom of this guide.

Part 1: Select design sources

Students begin the assignment by considering the cultural significance of the design context from a te ao Māori perspective. Students are then encouraged to learn about the local cultural history. This learning is necessary to substantiate students' knowledge, in order to make considered and meaningful responses. Students' generation of ideas in response to te ao Māori and another design influence is assessed. Students select design influences from both te ao Māori, and another design influence. The design influence from te ao Māori could be a regional design style, and the meanings behind it, and may relate to a specific type or form of object, space, or building. This object, space, or building may have a specific purpose.

Designers may also be chosen as a design influence. Students are guided to learn about Māori designers and architects (a list of references is supplied to provide teachers and students with a starting point) alongside national and international designers. This learning is intended to create an appreciation for local and indigenous designers and design considerations in contemporary design practice. Linking to national and international design influences locates Aotearoa design within local and international standards.

Students must explain their rationale for the chosen design influence from te ao Māori and their other chosen design influence. They must explain visually with annotations or short written statements, why they have chosen them and what aspects of them they are drawing on to influence their designs.

Part 2: Identify characteristics

Students are encouraged to find characteristics of their selected design sources that are meaningful to them. Using their design influences as inspiration they can find styles, uses, motifs, symbols, and meanings they can reinterpret in their own design ideas. They are encouraged to think about if the characteristics are aesthetic, functional, or both.

Part 3: Generate ideas

Students begin generating ideas that link to the identified characteristics for a product or spatial design. The generation of ideas is inspired by new knowledge and imagery, informs creative play and risk taking. Students should begin to explore their own design identity.

Part 4: Explore ideas

Students begin to experiment through guided creative play. People, places, alternative materials, construction, and aesthetic considerations are made. Site maps and plans for spatial design are encouraged to add further authentic learning opportunities. Divergent design and thinking strategies are encouraged to help students explore ideas in innovative and imaginative ways and culturally appropriate ways.

References

Ellis. N. (2016), *A Whakapapa of Tradition: 100 Years of Ngāti Porou Carving, 1830-1930.* Auckland University Press, Auckland.

Neich. R. (2001), Carved Histories: *Rotorua Ngati Tarawhai Wood Carving.* Auckland University Press, Auckland.

Walters. M, Walters. R, Walters. S. (2014), *Marae: Te Tatau Pounamu, A Journey Around New Zealand's Meeting Houses.* Random House, Auckland.

Māori architecture — whare Māori (Te Ara)

Pine Taiapa:

Taiapa, Pineāmine (Te Ara)

Selwyn Muru:

Selwyn Muru (Ngā Pae o te Māramatanga Media Centre)

Rangimarie Hetet:

Hetet, Rangimārie (Te Ara)

Powhiri Process:

Powhiri — Tikanga Series of Videos (Rauawaawa Kaumatua Charitable Trust)

Mead. S. M. (ed.), (1984), *Te Māori: Māori Art from New Zealand Collections*. Heinemann, pp 73-5.

Sketch up tutorials

Sketchup Tutorial For Beginners — Part One (MasterSketchUp)

Sketchup Tutorial For Beginners — Part Two | Groups & Components (MasterSketchUp)

SketchUp Tutorial — 1 — Beginner SketchUp Tutorial (Jake Day Williams)

Ten mistakes beginners make in SketchUp and How to avoid them (TheSketchUpEssentials)

NCEA Internal Assessment Activity

Activity name:	1.2b Presenting my dream whānau bach
Subject:	Design and Visual Communication
Achievement Standard:	1.2 Use representation techniques to visually communicate own product or spatial design outcome
Credits:	5
Assessment Activity Version:	4

Note to teacher: This Internal Assessment Activity may be used unchanged, or can be adapted by the teacher, ensuring that all requirements of the Achievement Standard are still met. This textbox should be removed prior to sharing the activity with your students.

What to do

For this Assessment Activity, you will present a final design outcome of your own, for a dream whānau bach. You must choose a design that you have not previously rendered or built as a physical model. You may discuss this with your teacher.

Talk with your teacher about other possible projects that involve a site and a building if a dream whānau bach does not suit your context.

Techniques you may use include the following:

- physical model
- hand rendered sketch
- rendered CAD image
- movie created with rendered CAD images
- animation or flythrough scenes of model created using a 3D modelling program or CAD Software.

You will need to learn the skills for the technique that you select, plan how to execute it, and then prepare the final presentation.

Your representation should visually communicate the features of your dream whānau bach. This could include showing:

- architectural details
- materials
- colour choice
- site

- textures
- patterns.

Refine your use of visual communication techniques to show the three-dimensional form, features, and materiality of your design ideas. Using multiple views, and careful use of tonality, will allow you to show details clearly, and clarify and enhance the visual communication of your design outcome.

Combine, integrate, and apply techniques with precision to create visual impact with your representation.

Make sure the purpose of the design outcome is clear, through visually communicating the design outcome in its design context, or through a heading or a written statement.

How to present your learning

You will submit a presentation that can include the following formats:

- rendered image or images on A3 paper
- pdf file of a rendered image or images
- an mp4 movie file of no more than 1 minute length
- an mp4 file of an animation or flythrough of no more than 1 minute length
- multiple photographs of your physical model taken from different angles.

The maximum submission for this Assessment Activity is 5 pages including final rendered drawings.

Timeframe

This project will run for five weeks (approximately 20 hours of class time, plus home learning).

There will be at least one mid-project checkpoint (to assess your progress) as well as ongoing feedback and feedforward from your teacher.

Getting started

RESEARCH

Below are some questions to help you clarify your thinking.

- What are different ways that you can present your dream whānau bach design?
- What are the different techniques that are used?

- What details can be presented for your dream whānau bach?
    - textures
    - materials
    - colours
    - patterns.

DECIDE

- What technique would be best for presenting your design?

LEARN

- Practise the techniques you think would be best to present your design. The sharper your skills are, the better your work will communicate your lake house design.
- Test and trial different techniques.
- Learn techniques for drawing or modelling certain textures and materials (eg glass, metal, wood, etc) to show the materiality and surface features of your design outcome.

Design and Visual Communication Assessment Schedule: Assessment Activity 1.2b

Activity Title: Presenting my dream whānau bach

Achievement Standard: 92001 Use representation techniques to visually communicate own product or spatial design outcome

Achievement	Achievement with Merit	Achievement with Excellence
Achievement Criteria		
At the Achieved level, the student is able to use representation techniques to visually communicate own product or spatial design outcome	At the Merit level, the student is able to use representation techniques to clarify the visual communication of own product or spatial design outcome	At the Excellence level, the student is able to use representation techniques to enhance the visual communication of own product or spatial design outcome
Teacher Judgement		
At the Achieved level, the student is able to: • apply techniques to visually communicate the three-dimensional form, features, and materiality of own design outcome.	At the Merit level, the student is able to: • refine techniques to visually communicate the three-dimensional form, features, and materiality of own design outcome.	At the Excellence level, the student is able to: • integrate techniques with precision to visually communicate the three-dimensional form, features, and materiality of own design outcome with visual impact.

Overall level of achievement will be based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.

For example (description of possible student evidence for this activity)

Achievement	Achievement with Merit	Achievement with Excellence
At the Achieved level, the student has: • used representation techniques to show the effects of a light source to visually communicate the form, features, and materiality of own dream whānau bach design outcome (the light source may be conveyed inconsistently) • *for a rendered drawing, used rendering techniques to demonstrate an understanding of tone variation caused by a light source on a drawn form, including its features and its materiality of own dream whānau bach design outcome* • *for a physical model, used modelling and construction techniques, and materials to show the form, features, and materiality of own dream whānau bach design outcome.* (Student response to this activity will be visual and depends on the nature of the body of images and drawings collated and the associated visual literacy that can be expressed.)	At the Merit level, the student has: • used tonality, light, and shade consistently to clarify information about the form, features, and materiality of own dream whānau bach design outcome • *for a rendered drawing, used rendering techniques to clarify the form, features, and materiality of own dream whānau bach design outcome (materiality could include surface quality, texture, colour, and tone)* • *for a physical model, used modelling materials and construction techniques to demonstrate the clear and accurate representation of the form, features, and materiality of own dream whānau bach design outcome.*	At the Excellence level, the student has: • integrated techniques with precision to visually communicate the three-dimensional form, features, and materiality of own dream whānau bach design outcome with visual impact • *for a rendered drawing, used tonality, light, and shade to enhance the form, features, and materiality, and provided visual impact in promoting own dream whānau bach design outcome* • *for a physical model, used modelling materials and construction techniques precisely to demonstrate visual impact in promoting own dream whānau bach design outcome.*

Overall level of achievement will be based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.

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.

Achievement Standard 92000 (1.1)	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	• recognise and analyse the design characteristics of more than one design influence
	• identify and analyse design elements illustrated through existing design examples and the works of designers. This includes;
	  ○ understanding the defining qualities and characteristics that differentiate spatial design and product design;
	  ○ acknowledging the sources of research material (both images and text)	

Design influences	• analyse and understand a mātauranga Māori design influence in terms of aesthetic or functional features, or both. This includes;
	  ○ considering tikanga Māori to ensure authentic, respectful, and responsible use of design ideas from te ao Māori
	• critique how both design influences impact on their own product or spatial design ideas. This includes;
	  ○ understanding that a rationale for a design influence can be expressed through visual decision making and through the response shown through own design ideas

Divergent thinking	• use divergent thinking approaches that explore the design influences through the experimentation of their own product or spatial design possibilities. This includes;
	  ○ understanding there is no single right answer, rather that there are multiple possibilities that can be valued and respected;
	  ○ understanding that creative play is a legitimate part of divergent thinking;
	  ○ beginning to develop an emerging personal perspective reflected in the design ideas they generate and design decisions made

Visual communication	• visually communicate their design thinking;
	  ○ using any drawing or modelling mode individually or in combination as suited for product or spatial design;
	  ○ curating own visual work in terms of recognising what is important for explaining their thinking and decision making

Achievement Standard 92001 (1.2)	Use representation techniques to visually communicate own product or spatial design outcome	Credits: 5 (Internal)
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:		

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Hand render
Physical model
Digital model

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
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<tr><td>What is being assessed</td><td>Specific Learning Outcome (Students are able to….)</td></tr>
<tr><td>Effects of a light source</td><td>

For a hand render:
apply tonal effects, cast shadows, shadow lines and highlights on drawings to effectively show tonal qualities
For a physical model:
set up lighting (whether artificial or natural) in a direction that effectively shows tonal qualities when photographing the model
For a digital model:
set up the light effects and direction in relation to the digital model to effectively show tonal qualities

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<tr><td>Representing materials</td><td>

For a hand render:
apply colour media and visual textures to represent materials
For a physical model:
apply modelling materials and finishing techniques to represent materials
For a digital model:
apply digital rendering techniques to represent materials

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<tr><td>Visually communicating a design outcome</td><td>

For a hand render:
select and use the appropriate views (close ups and viewpoints) that best show the key features of the design outcome
For a physical model:
select and use the appropriate views for photographing (close ups and viewpoints) that best show the key features of the design outcome
For a digital model:
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

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	animations, students need to compose and edit their animation using cinematic principles)

Achievement Standard 92002 (1.3)	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	• critique how the needs of people impact on the developing of their own design ideas. This includes;
	  ○ understanding the needs and experiences of people appropriate to the context of their design ideas
	• apply decision-making that responds to the needs of people in progressing their design ideas. This includes;
	  ○ considering people connected to the context being designed for, to meet their needs or improve their lives	

Design practice	• critique how the needs of people impact on the developing of their own design ideas. This includes;
	  ○ considering the possible users of a potential design outcome throughout the design process
	• apply research (specialist knowledge, technical information, user experience), when and as needed. This includes;
	  ○ understanding the defining qualities and characteristics that differentiate spatial design and product design;
	  ○ understanding design elements and principles of function and aesthetics relevant to their design ideas and context;
	  ○ acknowledging the sources of research material (both images and text)
	• generate design possibilities beyond predetermined outcomes. This includes;
	  ○ understanding that design practice is about quality rather than quantity;	

	○ developing an emerging personal perspective through the design ideas they generate and any design decisions made • improve design ideas through refinement that considers possible users of the design. This includes; ○ understanding that design is an iterative process ○ applied features and details that will improve the experience for users of the design ○ fine-tuning aspects of the design to improve the aesthetic and functional qualities of the outcome for people.
Convergent thinking	• use convergent thinking, exploring design options with purpose, in order to progress and improve a design idea • engage with decision-making that is connected to people, and design knowledge in developing design outcomes
Visual communication	• use visual communication techniques to explain design features • visually communicate their design thinking and the narrative of their practice. This includes; ○ curating own visual work in terms of recognising what is important for explaining their thinking and decision making

Achievement Standard 92003 (1.4)	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	• clarify the construction and assembly details of their product design outcome OR internal spatial relationships of their spatial design outcome. This includes; ○ understanding the defining qualities and characteristics that differentiate spatial design and product design	

Instrumental drawing	• use instrumental drawing resources (digital software or manual equipment) for generating a set of coherent instrumental drawings. This includes;
	  ○ applying the principles of alignment for instrumental drawings (orthographic and exploded paraline);
	  ○ applying the principles of sectioning for conveying internal information;
	  ○ applying the principles of scale for representing a design outcome
	• apply the principles of drawing conventions. This includes;
	  ○ understanding the interrelationship between orthographic drawings (2D) and paraline drawings (3D) for communicating a design outcome;
	  ○ understanding that the use of layout, line types and labelling aids visual communication;
	  ○ understanding that an architectural floor plan is a section view where the cutting plane is typically at 1.2 m;
	  ○ understanding that the labelling of views differs between architectural and engineering design fields

Visually communicating a design outcome	• select appropriate 2D and 3D views that best explain the technical qualities and details of their design outcome • use visual conventions effectively for the clear and easy reading by a viewer (line types, labelling, dimensioning)