



TAURARO A AREA SCHOOL GRAPHICS

Course overview 2012

VISION: "TO BE THE BEST WE CAN BE".

LEARNING AREA: Design and Visual communication
COURSE TITLE: Graphics

YEAR: 11 CURRICULUM LEVEL(S): 5-6 DURATION: 36 weeks

Course Overview

This Graphics course is developed from the Design and Visual communication Learning Objectives that align to Technology in the *New Zealand curriculum* (Ministry of Education, 2007).

Students in this course are expected to have successfully completed the year 10 Graphics and Materials Technology courses.

Course Description

Students will develop an understanding of design and visual communication through exploring and presenting design ideas in different contexts. They will develop specific skills in both freehand and instrumental drawings types. They will also learn to enhance and present their design ideas.

Throughout the year students will undertake and solve design tasks using specific design based tools and language.

In this course an emphasis is placed on enhancing student's visual literacy and inspiring a passion for the world of design.



TAURAROA AREA SCHOOL UNIT PLAN

VISION: "TO BE THE BEST WE CAN BE".

LEARNING AREA: Design and Visual Communication
UNIT TITLE: Freehand Drawing. Contexts; Mountain Bike Pack/Furniture

YEAR: 11 CURRICULUM LEVEL/S: 5-6 DURATION: 7 weeks

Unit Overview

In this unit you will be focussing primarily on developing freehand drawing skills, working towards understanding design elements, and learning how to present design ideas. Freehand sketching is the communication of ideas unassisted by the use of instruments. You will need to produce detailed freehand sketches, in proportion to clearly communicate design features.

Evidence for this achievement standard includes both two-dimensional (2D) and three-dimensional (3D) freehand sketches. The 3D freehand sketching methods you will learn are isometric, oblique, planometric and perspective. For achievement with excellence: at least two different 3D sketching methods must be used. Freehand sketches must show details of construction and/or design features, as appropriate (e.g. by use of sectional and/or exploded views).

We will also begin working towards learning how to undertake development of design ideas through graphics practice. This will involve undertaking effective development of design ideas through graphics practice. You will integrate: design judgements into your design work, the use of design principles; and your own tastes, values and views. When you develop your ideas you will be taught how to show a coherent flow to your ideas so that it is easy to spot the connections.

Your design ideas, sketches, models, CAD work, will be convincingly presented as high quality work at all time.

This unit will allow you to develop skills in producing mock-ups and using these to assist you making design decisions about 'where to next' when developing designs. It will also teach you skills in producing models that explain your final design.

Contexts

Mountain bike Safety

Mountain bike pack. Riders are pushing the limits constantly with the places they are going to and the time spent riding. Riders carry water, food and a few tools normally. Design a pack/container that a mountain biker can take with them on rides that would be suitable for emergency's situations. Consider such things as shelter, signalling, 1st aid needs, darkness, temperature.

We will look at containers currently available. We will look at bicycles and positions/spaces they have available to incorporate a pack. We will use functional models, including mock-ups, to explore and test design ideas

Furniture

We will design a chair suitable for use in a teenager's bedroom. We will explore proportion in furniture and different systems for constructing furniture. We will explore ways of presenting our drawings and using them to show different aspects of the design.

Key competencies highlighted in this unit		How students will be encouraged to develop the selected competency or competencies during the unit
Managing self – self-motivation, personal goals, appropriate behaviour, resourcefulness, sense of self and importance of heritage		Using language, symbols, and texts – Students will develop design language. Use and apply a functional and aesthetic design terms
Relating to others – listen actively, recognise different points of view, negotiate, share ideas		
Participating and contributing – balancing rights, roles and responsibilities, and responding appropriately as a group member		
Thinking – using creative, critical, metacognitive and reflective processes, drawing on personal knowledge and intuitions.		
Using language, symbols, and texts – interpreting language and symbols, using ICT, recognising how choices of language and symbol affect people's understanding		
Tauraroa Area School Cornerstone Values		How students will be encouraged to develop the selected value or values during the unit
Respect – To treat with courtesy; to hold in high regard, to honour, to care about yourself, others and our environment		Duty – To do what is right or what a person ought to do by producing appropriate design that are safe and fit for purpose.
Responsibility – To be trustworthy and accountable for your own actions		
Duty – To do what is right or what a person ought to do		
Obedience – To comply with rightful authority		
Kindness - To help, show concern for and be friendly to others		
Consideration and Concern for Others - To be kind, thoughtful, and to consider the interests of others		
Compassion - To help, empathise with, or understanding and support to those who suffer		
Honesty and truthfulness - To show integrity by not lying, staling or being unfair		

LEARNING AREA - Technology

Students' technological literacy will be developed by learning in all three strands in a mutually enhancing and integrative manner.

technological practice	technological knowledge	nature of technology
<p>Plan by generating ideas; develop briefs; organise and manage resources and time</p> <p>Generate design ideas in context</p> <p>Use of functional modelling to provide evidence for ongoing informed and critical evaluation</p> <p>Evaluate design ideas (and outcomes) using appropriate design language</p> <p>Develop and communicate outcomes that best meet the brief.</p> <p>Use freehand drawing techniques to develop conceptual design outcomes.</p>	<p>Consider functional design elements in design</p> <p>Consider the way things work individually and together as part of an overall outcome</p> <p>Use evidence and reasoning to make decisions when functional modelling and justify ongoing refinement of an outcome.</p>	

Class description / prior knowledge	Safety Issues	New Vocabulary														
Not all students have studied Graphics at year 10.		<table border="0"> <tr> <td>Aesthetic</td> <td>Function</td> </tr> <tr> <td>Movement</td> <td>Strength</td> </tr> <tr> <td>Proportion</td> <td>Safety</td> </tr> <tr> <td>Balance</td> <td>Ergonomics</td> </tr> <tr> <td>Harmony and contrast</td> <td>User friendliness</td> </tr> <tr> <td>Texture</td> <td></td> </tr> <tr> <td>Colour</td> <td></td> </tr> </table>	Aesthetic	Function	Movement	Strength	Proportion	Safety	Balance	Ergonomics	Harmony and contrast	User friendliness	Texture		Colour	
Aesthetic	Function															
Movement	Strength															
Proportion	Safety															
Balance	Ergonomics															
Harmony and contrast	User friendliness															
Texture																
Colour																
	Cross Curricula															
Learning Outcomes	Learning Activities	Resources														
<i>Students will</i>	<i>- through the use of thinking tools, co-operative activities, 6 Hats, Bloom's...</i>															
<p>Develop freehand sketching skills and knowledge that include:</p> <ul style="list-style-type: none"> • proportion, • use of thick and thin line, • sketching outside to reinforce freehand nature of sketching, • 2D and 3D • using line for texture and shading • using colour to high light features • use of short descriptive notes. 	<p>Three different techniques/ media used in presentations.</p> <p>Observation, mark one class observation sketch, and mark two homework sketches of a house and/or piece of furniture</p>	<p>Coloured pencils</p> <p>Coloured paper</p> <p>Card</p> <p>Bike (where possible provide a range of different bikes)</p> <p>Tape and scissors.</p>														

<p>Develop understandings of design terms during exercise (ie within context). For example: when drawing a drink bottle introduce terms such as ergonomics, proportion.</p> <p>Learn how to represent basic shapes and shading/backgrounds</p> <p>Learn how to communicate simple furniture designs using sketches and descriptive notes. Communication techniques will include: crating, proportion, use of section views. Use chair details resource, Chair to illustrate communication techniques to students</p> <p>Learn how to sketch exploded views .Bring in a bike and draw bike areas and container contents.</p> <p>Describe mock-ups as part of <i>functional modelling</i> and their importance when designing.</p> <p>Learn how to construct card mock-ups. Students will produce a card mock-up of their container and test it on bike. Swap bikes of different styles to teach students the importance of sound research and that not all designs suit all bikes</p>	<p>To gain achievement with excellence two different 3D methods must be used. To clearly communicate design ideas, candidates must present freehand sketches that demonstrate well defined details of a design, and communicate, with little doubt, design features and use language effectively and descriptively.</p> <p>Photo of mock-up in place on bike with evaluative notes based around form and function of design concept.</p>	
Assessment		
Before	During	At the conclusion of unit
nil	Formative feedback on standards requirements.	<p>External: AS91063 V1 <i>Produce freehand sketches that communicate design features.</i> 3 credits</p> <p>Contributes to internal: AS91068 <i>Undertake development of design ideas through Graphics practice.</i> 6 credits</p>
Extension / Enrichment Activities:		Support Provided:
<p>Refer to excellence criteria of standards.</p> <p>Introduce a Fashion design unit to extend detail drawings and introduce complexity.</p>		
Teacher Reflection and Evaluation:		
Students who benefited from extension / support activities:		



TAURAROA AREA SCHOOL UNIT PLAN

VISION: "TO BE THE BEST WE CAN BE".

LEARNING AREA: Design and Visual communication

UNIT TITLE: House Design. Architectural drawing

YEAR: 11

CURRICULUM LEVEL(s): 5-6

DURATION: 14 weeks

Unit Overview

In this unit we continue to collect evidence *for AS91063 V1 Produce freehand sketches that communicate design features*. We also focus on formal/instrumental drawing skills. We will be drawing tracings in pen and ink and using Sketch-up CAD software to develop ideas and skills for the next unit.

In this unit we will be producing instrumental, multi-view working drawings of houses using graphic symbols and conventions that are used by architectural drafting technicians and designers.

We will produce multi-view working drawings in orthographic projection, accurately to scale, using standards, symbols and conventions accurately and appropriately.

Working drawings of your building design may include, where appropriate, component details, assembly, sectional views, and dimensions in third-angle orthographic projection with three views.

We will use the work of an influential designer to effectively inform our design ideas. Effectively inform means that the distinctive aesthetic and functional elements that are characteristic of the designer's work are clearly evident in your designs and have been integrated in ways that are effective in the new context. Influential designers are those recognised in the context of their work as leading practitioners. The work of a designer could be an individual product or spatial design or a body of work. A designer could include a group design practice. We will identify and explain the aesthetic characteristics that are typical of your chosen designers work and use these in your own building design.

When designing your building you will need to undertake effective development of design ideas though using graphics practice. You will integrate design principles into your work, along with the distinctive aesthetic and functional elements that characterised the designer's work that you studied, and evaluate these against the brief specifications to make informed design judgements. You will present your ideas using high quality presentation techniques.

Use of graphics practice requires you to undertake and present a coherent and connected process.

Context

Bach/Cabin Design

A relative (client) of yours wants to a holiday bach or cabin. He has a large section for it. Your client doesn't have any children, but will be inviting friends to stay occasionally. He is keen on fishing / surfing / tramping / hunting and loves the outdoors. He does not like to follow trendy home fashions and doesn't want a typical holiday home. He wants a very original place and he is open to all sorts of styles and ideas – he loves architecture. That is why he has picked you to design it! He particularly likes the architecture of (select an influential designer)

The bach needs to be less than 150m square as anything over that is too large, costly and loses its 'cabin/bach' feel. He does not want a big fancy family-sized kitchen, just a basic one. He plans on spending a lot of time outside on the deck/patio.

The site plan will be given: Either....

- a. On a hill with some bush and a view to the sea.
- b. Right next to a beach.

Requirements :

- Living area connected to kitchen and outdoors
- Sun needed in the living area
- Basic kitchen
- Outdoor area for BBQ and relaxing
- 2 large bedrooms with closets
- Toilet, shower, basin. (no bath)
- Washing machine and tub handy to a door
- No garage

Key competencies highlighted in this unit		How students will be encouraged to develop the selected competency or competencies during the unit
Managing self – self-motivation, personal goals, appropriate behaviour, resourcefulness, sense of self and importance of heritage		Participating and contributing – balancing rights, roles and responsibilities, and responding appropriately as a group member. Students will look at environmental and social impacts of design on architecture.
Relating to others – listen actively, recognise different points of view, negotiate, share ideas		
Participating and contributing – balancing rights, roles and responsibilities, and responding appropriately as a group member		
Thinking – using creative, critical, meta-cognitive and reflective processes, drawing on personal knowledge and intuitions.		
Using language, symbols, and texts – interpreting language and symbols, using ICT, recognising how choices of language and symbol affect people’s understanding		
Tauraroa Area School Cornerstone Values		How students will be encouraged to develop the selected value or values during the unit
Respect – To treat with courtesy; to hold in high regard, to honour, to care about yourself, others and our environment		Duty – To do what is right or what a person ought to do by exploring the rights and responsibilities around house design.
Responsibility – To be trustworthy and accountable for your own actions		
Duty – To do what is right or what a person ought to do		
Obedience – To comply with rightful authority		
Kindness - To help, show concern for and be friendly to others		
Consideration and Concern for Others - To be kind, thoughtful, and to consider the interests of others		
Compassion - To help, empathise with, or understanding and support to those who suffer		
Honesty and truthfulness - To show integrity by not lying, staling or being unfair		

LEARNING AREA - Technology

Students' technological literacy will be developed by learning in all three strands in a mutually enhancing and integrative manner.

<p>technological practice Plan by generating ideas; develop briefs; organise and manage resources and time</p> <p>Use ongoing informed and critical evaluations</p> <p>Develop and communicate outcomes.</p> <p>Instrumental drawing. Use of scales.</p>	<p>technological knowledge Use of resources their part in enabling the success of a technological outcome and their current and long-term availability and viability</p> <p>The way things work individually and together as part of an overall outcome</p> <p>Developing an understanding of the factors involved in house design</p> <p>Appropriate ethics, legal requirements, protocols, and the needs of and potential impacts on stakeholders and the site of the development and outcome location.</p> <p>Sites, efficiency and solar design discussed.</p>	<p>nature of technology Understanding of historical and contemporary technological developments; environmental impacts and implications</p> <p>Look at current practice through DVD and trip to sites.</p>
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Class description / prior knowledge	Safety Issues	New Vocabulary
<p>Most students have not studied graphics before, having knowledge of design language and freehand production and presentation techniques.</p>	<p>Follow EOTC policy and guidelines for school trip</p>	<p>Orthographic Elevations Plan Scale Dimensions</p>
	<p>Cross Curricula</p>	
<p>Learning Outcomes <i>Students will</i></p>	<p>Learning Activities <i>- through the use of thinking tools, co-operative activities, 6 Hats, Bloom's...</i></p>	<p>Resources</p>
<p>Learn how to sketch elevations; the importance of linework and line weights, proportion; and how to represent architectural components e.g. downpipes, window details, floor heights</p> <p>How to draw elevations of a simple building (e.g. a shed). They will record preliminary sketches with dimensions. Draw up in class using instrumental drawing techniques including: use of scale, conventional layout, dimensions and title block</p>	<p>Observations, homework exercise, elevation of house</p> <p>Produce Elevations of shed, to scale with dimensions and title block.</p>	<p>Tracing paper Ink pens Magazines School trip Designer booklets and PowerPoint</p>

<p>Develop an understanding of humans impact on the environment (DVD and notes).</p> <p>Research the work of an existing designer. Introduce the Frank Gery video. Show designer PowerPoint. Students encouraged to research and collect information on designers.</p> <p>Develop an appreciation of differences in housing design (visit local homes and distinguish the features that characterises their design).</p> <p>Visit the proposed site for the back Site visit. Students provided with information on sun, wind, building regulations, aspect, site access, rainfall.</p> <p>Learn how to:</p> <ul style="list-style-type: none"> • represents architectural design ideas using bubble diagrams to conceptualise rooms • use scaled templates of rooms to refine a floor plan <p>Learn how to use Sketch-Up to present detailed design ideas. Focus students on drawing one room and illustrating the reflecting the distinctive aesthetic and functional element that characteristics of the selected influential designer. Show students how to present ideas as a collage using colour and texture to highlight design ideas</p> <p>Learn how to use Sketch-up or card to explore design ideas through modelling. Use students chosen floor plan. – Note: design must reflect an influential designers work.</p> <p>Learn how to use models to present a freehand orthographic sketch of house in 3 views.</p>	<p>Students produce a document showing designers work, influences and evaluate using design language</p> <p>Produce a model on Sketch-up showing an interpretation on designers work. Use notes on print out to show how it reflects the designers work</p> <p>Students take notes then present a site plan and 'bubble diagrams' for their proposed section, evaluate against brief</p> <p>Produce floor plan, evaluate against brief</p> <p>Presentation drawing.</p> <p>Present final idea, evaluate against brief and designers work.</p> <p>Produce freehand drafts</p> <p>Submission for external achievement standard completed.</p>	
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Learn how to present a final instrumental drawing to scale, 3 views including sectioned end elevation and tracing.		
Assessment		
Before	During	At the conclusion of unit
nil	Formative feedback on standards requirements.	<p>Achievement Standard 91067 v1, <i>Graphics Use the work of an influential designer to inform your own design ideas</i> 3 Credits (Internally Assessed)</p> <p>Achievement Standard 91068 v1, <i>Graphics Undertake development of design ideas through graphics practice</i> 6 credits (Internally Assessed)</p> <p>Contributes to: External: AS91063 V1 <i>Produce freehand sketches that communicate design features.</i> 3 credits</p>
Extension / Enrichment Activities:		Support Provided:
Refer to excellence criteria of standard.		
Teacher Reflection and Evaluation:		
Students who benefited from extension / support activities:		
Ideas and notes to make the unit better:		



TAURAROA AREA SCHOOL UNIT PLAN

VISION: "TO BE THE BEST WE CAN BE".

LEARNING AREA: Design and Visual communication

UNIT TITLE: Rendering and Paraline drawing

YEAR: 11

CURRICULUM LEVEL(s): 5-6

DURATION: 10 weeks

Unit Overview

In this unit you will use rendering techniques to effectively communicate the form of own design ideas. Rendering may be applied to sketched or instrumental drawing.

You will use rendering techniques to:

- indicate the tonal qualities produced by an identified light source and its three dimensional effects on the object's form.
- clearly communicate by consistently applying these techniques to communicate form and surface qualities, e.g. highlights, reflections and shadow.
- effectively communicate the form and surface qualities,
- realistically communicate a designs design qualities to an audience.

Form refers to an object's shape and surface qualities. Examples of surface qualities relate to the materiality; colour, texture and finish of the object.

You will produce accurate instrumental Paraline drawings that show your design features. You will use exploded or sectional views to show the internal detail and/or using complex features of your design.

Drawings will be selected to show your idea most effectively from the following paraline drawing types: isometric, trimetric, diametric, oblique and planometric.

Context

Electronic communications media players e.g. camera, DVD players or phones. Design present and illustrate a multi-media player.

Students selected rendered final drawing may be selected from any context studied this year.

Key competencies highlighted in this unit		How students will be encouraged to develop the selected competency or competencies during the unit
Managing self – self-motivation, personal goals, appropriate behaviour, resourcefulness, sense of self and importance of heritage		Managing self – self-motivation, personal goals, appropriate behaviour, resourcefulness, sense of self and importance of heritage. By selecting and developing your own ideas and techniques in this unit.
Relating to others – listen actively, recognise different points of view, negotiate, share ideas		
Participating and contributing – balancing rights, roles and responsibilities, and responding appropriately as a group member		
Thinking – using creative, critical, metacognitive and reflective processes, drawing on personal knowledge and intuitions.		
Using language, symbols, and texts – interpreting language and symbols, using ICT, recognising how choices of language and symbol affect people’s understanding		
Tauraroa Area School Cornerstone Values		How students will be encouraged to develop the selected value or values during the unit
Respect – To treat with courtesy; to hold in high regard, to honour, to care about yourself, others and our environment		Responsibility – To be trustworthy and accountable for your own actions by selecting and developing your own ideas and techniques in this unit.
Responsibility – To be trustworthy and accountable for your own actions		
Duty – To do what is right or what a person ought to do		
Obedience – To comply with rightful authority		
Kindness - To help, show concern for and be friendly to others		
Consideration and Concern for Others - To be kind, thoughtful, and to consider the interests of others		
Compassion - To help, empathise with, or understanding and support to those who suffer		
Honesty and truthfulness - To show integrity by not lying, staling or being unfair		

LEARNING AREA - Technology

Students' technological literacy will be developed by learning in all three strands in a mutually enhancing and integrative manner.

<p>technological practice Plan by generating ideas; develop briefs; organise and manage resources and time</p> <p>Develop and communicate outcomes.</p> <p>Produce and present a quality presentation drawings</p>	<p>technological knowledge</p>	<p>nature of technology</p>
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Class description / prior knowledge	Safety Issues	New Vocabulary
<p>Students have not studied this area previously</p>	<p>Cross Curricula</p>	<p>Tone Complimentary and harmonious colour Isometric Trimetric Diametric Oblique Planometric. Paraline</p>
<p>Learning Outcomes <i>Students will</i></p>	<p>Learning Activities <i>- through the use of thinking tools, co-operative activities, 6 Hats, Bloom's...</i></p>	<p>Resources</p>
<p>Develop skills in presenting even graduation tones in gray scale and colour (Tone worksheets)</p> <p>Develop skills in constructing 4 basics geometrical solids - cube, cone, sphere and cylinder. Apply shading to communicate form, add shading and background to enhance presentation</p> <p>Develop own concept idea for a media player. Teacher demonstrates sketching for simple media player.</p> <p>Develop techniques in:</p> <ul style="list-style-type: none"> • applying pastels blending and masking, Use developed techniques to present a background to a media player drawing • using coloured paper to applying midtones as base, adding highlights to leading edges, 	<p>Geometrical solids worksheet rendered and presented</p> <p>Present media player drawing</p> <p>Students work up and develop a final presentation style from the demonstrated techniques using one of the drawings from this unit so far.</p>	

<p>shadow line to receding edges.</p> <p>Present all CAD drawing completed this year in paraline formats. Work presented includes, borders, titles, overlap, frame, cut and paste, photocopy (negative)</p> <p>Select own choice of drawing from year to do quality presentation of final drawing.</p>	<p>Students select and present final drawing</p>	
Assessment		
Before	During	At the conclusion of unit
<p>nil</p>	<p>Formative feedback on standards requirements.</p>	<p>Achievement Standard 91066 v1, <i>Use rendering techniques to communicate the form of design ideas</i> 3 Credits (Internally Assessed)</p> <p>External: AS91063 V1 <i>Produce instrumental paraline drawings to communicate design ideas features.</i> 3 credits</p>
Extension / Enrichment Activities:		Support Provided:
<p>Refer to excellence criteria of standard.</p>		
Teacher Reflection and Evaluation:		
<p>Students who benefited from extension / support activities:</p>		
<p>Ideas and notes to make the unit better:</p>		