



HNHS Technology Vision Statement

To provide individual students with the opportunity to achieve to their highest abilities, effectively communicate knowledge and skills and be adaptable to different contexts and environments through engagement in technology education

Curriculum Area: Technology Fabric “Dressed Up”

Year Level 11

Curriculum Level: 6

Aspects of Encompass highlighted in this unit	Key competencies highlighted in this unit
Preparing responsible citizens <input checked="" type="checkbox"/>	Managing self – self-motivation, personal goals, appropriate behaviour, resourcefulness, sense of self and importance of heritage. <input checked="" type="checkbox"/>
Developing active learners <input checked="" type="checkbox"/>	Relating to others – listen actively, recognise different points of view, negotiate, share ideas. <input checked="" type="checkbox"/>
Connecting with our community <input checked="" type="checkbox"/>	Participating and contributing balancing rights, roles and responsibilities, and responding appropriately as a group member. <input checked="" type="checkbox"/>
Encouraging innovation and responsiveness <input checked="" type="checkbox"/>	Thinking – using creative, critical, meta-cognitive and reflective processes, drawing on personal knowledge and intuitions. <input checked="" type="checkbox"/>
Promoting excellence <input checked="" type="checkbox"/>	Using language, symbols, and texts – interpreting language and symbols, using ICT, recognising how choices of language and symbol affect people’s understanding. <input checked="" type="checkbox"/>
Providing a positive and enabling environment <input checked="" type="checkbox"/>	

Curriculum Strands	Year 11		Year 12		Year 13	
	Teaching and Learning	Assessed	Teaching and Learning	Assessed	Teaching and Learning	Assessed
Brief Development	*	*				
Planning for Practice	*					
Outcome Development and Evaluation	*	*				
Technological Modelling	*	*(Extension only)				
Technological Products	*	*				
Technological Systems						
Characteristics of Technology						
Characteristics of technological outcomes	*					
Subject Specific	*	*				

Assessment focus for year 11 Technology Programmes 2012

Context

Focus Strands and *Components* and Achievement Objectives

Technological Practice

Brief Development

Justify the nature of an intended outcome in relation to the need or opportunity and justify specifications in terms of key stakeholder feedback and wider community considerations.

Outcome Development and Evaluation

Critically analyse their own and others' outcomes to inform the development of ideas for feasible outcomes. Undertake ongoing experimentation and functional modelling, taking account of stakeholder feedback and trialling in the physical and social environments. Use the information gained to select, justify, and develop a final outcome. Evaluate this outcome's fitness for purpose against the brief and justify the evaluation using feedback from stakeholders.

Technological Knowledge

Technological Modelling

Understand that functional models are used to represent reality and test design concepts and that prototypes are used to test technological outcomes.

Technological Products

Understand that technological products are made from materials that have performance properties.

Nature of Technology

Characteristics of technological outcomes

Understand that some technological outcomes can be perceived as both product and system.

Understand how these outcomes impact on other outcomes and practices and on people's views of themselves and possible futures.

Construction and Mechanical technologies

Construct a textiles product

Implement techniques and procedures and tests to make a specified product using textile materials.

Design in Technology

Knowledge of Design

Understand basic concepts of design

Teaching sequence and learning activities including the Key competencies and the links to Encompass	Learning intentions	Criteria for evaluation, assessment strategies and mode of assessment	Learning outcomes linked to curriculum strands and achievement objectives
<p><u>Introduction to the Course</u>, how the year will be organised, year plan, and course outline issued.</p> <p>Skill Development (8 weeks)</p> <p><i>Student start knowledge and skill bank to apply at a later date teacher demonstrates and students practise in order to select and test appropriate techniques for bag/garment</i></p> <p><u>Practical skills:</u></p> <p>Disposal of Fullness (shaping): Darts, Knife, Box, Inverted pleats, gathers</p> <p>Seams (joining): Plain seam, overlocked, zigzag, stretch.</p> <p>Hems (finishing): Slipstitched, Machined</p> <p>Finishing techniques: Understitching, Edge stitching, Top stitching</p> <p>Students then manufacture specified bag/garment.</p> <p>Introduce technological practice about Week 7</p>	<p>Students will:</p> <ul style="list-style-type: none"> • Practise measuring/marketing out; joining; shaping and finishing techniques • Apply practical skills and manufacture a bag to a given brief and specifications • Testing of measuring/marketing out; joining; shaping and finishing techniques • Achievement of AS91058 	<p>Formative Assessment towards AS 901058 (1.21)</p> <p>Task sheet</p> <p>Self evaluation against set criteria for samples</p> <p>Final assessment of AS 91058</p>	<p>Construction and Mechanical Technologies</p> <ul style="list-style-type: none"> • Undertake basic procedures to construct a product that meets specifications • Show independence and accuracy when performing techniques in a way that economises time, effort and materials.

Technological Practice (3 weeks)

(Issue task sheets and assessment schedules)

Context: *Teenagers choose their clothes to express their individuality, their interests and values.*

Issue: *What teenagers choose to wear depends on the formality of the occasion and restrictions placed on them by their peers, families and the budget imposed.*

Choose a special/significant occasion that you will be participating in and design and construct a garment to be worn specifically at this occasion and meets the needs of the wearer and the occasion.

Context 2: *There is an ever developing market for children's items. In particular items that are unique and handcrafted."*

Issue 2: *Sourcing handcrafted items that meet the individual needs of a child can be difficult for caregivers.*

Develop and construct a child's garment/ item/toy by adapting a commercial pattern. The outcome must meet the needs of a child you know and the child's caregiver.

Students explore their context and write an introductory paragraph explaining their interpretation and understanding of the context.

Knowledge development

What is technological practice? Link to technology cycle in year 10. (*show stages using Tech. Practice power point*)

Start glossary of terms: technological practice, key stakeholder, wider stakeholder, environment, need, opportunity, aesthetics, function. Refer students' techlink.org.nz as a resource and how to use the glossary.

Class Activity:

1. Using Michelle Obama's inauguration gown. How did the occasion and her role at the occasion impact on her choice? What might she have considered about the wider stakeholders in making that choice? What might she have considered as the key stakeholder when making that

- Know key terms

<p>choice. (Michelle Obama in inauguration resource)</p> <p>2. Postbox activity. Looking at the ten pictures around the room. Identify the need or opportunity the garment addresses in the picture. What were the aesthetic considerations what were the functional considerations? (post box activity resource)</p> <p>3. Develop cards of aesthetic and functional attributes. Students link the attributes to the given pictures. Notes on physical and functional attributes.</p> <p><u>Individual student practice:</u></p> <ul style="list-style-type: none"> Identifies key and surveys wider stakeholders to establish a need or opportunity within the context Explores the environment in which the need or opportunity exists Establishes key considerations and writes a conceptual statement <p><u>Planning</u></p> <p>Review planning practices used in year 10 and discuss the purpose and the effectiveness. Issue template for GANTT chart and establish the need for milestone stages and progress review points.</p> <p><u>Individual student practice:</u></p> <p>Students complete preliminary plan.</p> <p>Introduce planning tools:</p> <p>Checklists, Mind maps, Graphic organisers and review past students' use of these tools and discuss the need to use different tools in different situations.</p> <p>(organise a range of planning tools, templates and student work as exemplars)</p>	<ul style="list-style-type: none"> understand the relationship between the aesthetics and the function of the outcome to the intended environment identify a need or opportunity from the given context and issue establish a conceptual statement that justifies the nature of the outcome and why such an outcome should be developed select appropriate planning tools informed by the critical analysis of own and others' planning practices 	<p>Formative assessment</p> <p>Teacher gives verbal feedback to responses from individuals and to the class</p> <p>Teacher checks that identified need or opportunity allows students to develop a brief and prototype</p> <p>Teacher checks preliminary plan</p>	<p>Brief Development</p> <p>Justify the nature of an intended outcome in relation to the need or opportunity and justify specifications in terms of key stakeholder feedback and wider community considerations.</p> <p>Planning for Practice</p> <p>Critically analyse their own and others' past and current planning practices in order to make informed selection and effective use of planning tools. Use these to support and justify ongoing planning that will see the development of an outcome through to completion.</p>
<p><u>Technological Practice</u> (2 weeks)</p> <p><u>Research</u></p>	<p><i>Students are learning to:</i></p> <ul style="list-style-type: none"> discuss the interactions between technological 	<p>Formative assessment</p> <p>Group feedback to class teacher gives</p>	<p>Characteristics of technological outcomes</p> <p><i>Understand that some technological outcomes can be</i></p>

<p>Class activity to examine garments worn at the beginning of the 1930's compared with the beginning of the 21st century. e.g. trousers</p> <p>What are the key differences in style? What parts of the body are emphasised? What are the key aesthetics of the garment? What are the key functions of the garment? How is the garment suitable for the social environment of the time? How is the garment suitable for the physical environment of the time?</p> <p><u>Individual student practice:</u> Teacher leads planning.</p> <p>Class discussion on the protocols of research. The need to respect the Copyright Act and Intellectual property.</p> <p>Students start to identify ideas and note garment attributes/specifications</p> <ul style="list-style-type: none"> • Students begin specific research annotating the design principles of existing outcomes in order to generate design ideas. • Consult with key and wider stakeholders in order to screen design ideas that could be appropriate for the person, occasion and context. 	<p>outcomes, people, and social and physical environments within particular socio-technological environments</p>	<p>feedback.</p>	<p><i>perceived as both product and system. Understand how these outcomes impact on other outcomes and practices and on people's views of themselves and possible futures.</i></p> <p>Outcome Development and Evaluation</p> <p><i>Critically analyse their own and others' outcomes to inform the development of ideas for feasible outcomes.</i></p>
<p><u>Technological Modelling</u></p> <p>Using a Case Study such as Furnware (try and find a different example)</p> <ul style="list-style-type: none"> • explaining the purpose of the technological modelling undertaken to develop and trial a technological outcome • discussing how decisions made about a technological outcome considered 'what could happen' and 'what should happen' • discussing how technological modelling identifies risk to support decision making. • How students will conduct technological modelling in their own practice. 	<ul style="list-style-type: none"> • discuss examples to illustrate how evidence and reasoning is used during functional modelling to identify risk and make informed and justifiable design decisions • explain how evidence gained from prototyping was used to justify outcome evaluation as fit for purpose or in need of further 	<p>Formative Assessment</p> <p>Using case study – written feedback on first part of case study.</p>	<p>Technological Modelling</p> <p><i>Understand the role and nature of evidence and reasoning when managing risk through technological modelling.</i></p>

	<p>development.</p> <ul style="list-style-type: none"> discuss examples to illustrate how prototyping provides information to determine maintenance requirements to ensure minimal risk and optimal performance over time. 		
<p><u>Design Elements</u></p> <p><u>Knowledge Development</u></p> <p>Design Principles of Colour, line, texture, balance, symmetry and optical illusions etc.</p> <p>Functional requirements of movement, comfort, crease resistance, 'laundryability', stain resistance etc.</p> <p><u>Skill Development</u></p> <p>Fashion Drawing using a template</p> <p>Useful annotation</p>	<ul style="list-style-type: none"> generate design ideas that are informed by research and the critical analysis of existing outcomes establish the specifications for an outcome as based on the nature of the outcome required to address the need or opportunity, consideration of the environment in which the outcome will be situated and resources available 	<p>Teacher gives individual feedback on the design principles task sheet</p> <p>Teacher gives feedback on quality of research and relevance of specifications</p>	<p>Outcome Development and Evaluation</p> <p><i>Critically analyse their own and others' outcomes to inform the development of ideas for feasible outcomes.</i></p> <p><i>Undertake ongoing experimentation and functional modelling, taking account of stakeholder feedback and trialling in the physical and social environments. Use the information gained to select, justify, and develop a final outcome. Evaluate this outcome's fitness for purpose against the brief and justify the evaluation using feedback from stakeholders.</i></p> <p>Brief Development</p> <p><i>Justify the nature of an intended outcome in relation to the need or opportunity and justify specifications in terms of key stakeholder feedback and wider community considerations.</i></p>
<p><u>Individual student practice:</u></p>	<p><i>Students are learning to:</i></p> <ul style="list-style-type: none"> use planning tools to 	<p>Formative assessment</p>	<p>Planning for Practice</p> <p><i>Critically analyse their own and</i></p>

<p>Students plan their second milestone stage (3 weeks)</p> <p><u>Functional Modelling</u></p> <p>Introduce students to the idea of functional modelling and link it to industry practice e.g. Andrea Moore, past students evidence.</p> <p>(source examples)</p> <p>The key idea being ‘how to make it happen’ and managing risk. Key ideas:</p> <ul style="list-style-type: none"> interpreting a 2D design accurately into a 3 D model (the front and back views flow into each other) the model fits the wearer (testing accurate transferring and interpretation of measurements) the model flatters the wearer (testing design principles) key features are trialled (how can it happen) pockets, collars etc impact of % stretch or bias cut of fabric social and environment acceptability of style on wearer feasibility of design interpretation <p><u>Individual student practice:</u></p> <ul style="list-style-type: none"> students carry out functional modelling evidence is collected through photographs and annotations students use photographs and developed design drawings to seek stakeholder feedback specifications are developed 	<p>record initial plans and ongoing revisions in ways which provide justification for planning decisions made.</p> <ul style="list-style-type: none"> describe practical and functional reasoning and discuss how they work together to enhance decision making during technological modelling explain the role of technological modelling in the exploration and identification of possible risk/s undertake functional modelling to refine design ideas and enhance their ability to address the specifications evaluate design ideas in terms of their ability to support the development of a conceptual design for a feasible outcome evaluate the conceptual design against the specifications to 	<p>Teacher gives feedback on second milestone stage</p> <p>Teacher talks to students on an individual basis to ascertain their understanding of functional reasoning and management of risk</p> <p>Summative assessment on AS91048 (1.5)</p>	<p><i>others’ past and current planning practices in order to make informed selection and effective use of planning tools. Use these to support and justify ongoing planning that will see the development of an outcome through to completion.</i></p> <p>Functional Modelling</p> <p><i>Understand the role and nature of evidence and reasoning when managing risk through technological modelling.</i></p> <p>Outcome Development and Evaluation</p> <p><i>Critically analyse their own and others’ outcomes to inform the development of ideas for feasible outcomes. Undertake ongoing experimentation and functional modelling, taking account of stakeholder feedback and trialling in the physical and social environments. Use the information gained to select, justify, and develop a final outcome. Evaluate this outcome’s fitness for purpose against the brief and justify the evaluation using feedback from stakeholders.</i></p>
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	determine the proposed outcomes potential fitness for purpose		
<p><u>Knowledge Development</u></p> <p><u>Materials Research</u></p> <p>Key terms associated with textile materials:</p> <p>Fibre, Yarn, Knit, Woven, Natural, Manmade, Synthetic, Regenerated</p> <p>(develop a resource for this activity)</p> <p><u>Performance Properties of Materials:</u></p> <p>warmth, strength, flexibility, crease resistance, drape, form, durability, absorbency, colour, texture, appearance, sheen, style</p> <p><u>Individual student practice:</u></p> <ul style="list-style-type: none"> • identify desirable performance properties of the material(s) to best interpret their design • investigate a range of possibilities • discuss the pros and cons of the possible materials in terms of fitness for purpose • consult with stakeholders • specify other components needed to complete the prototype e.g. buttons, zippers etc. • Confirm the brief and specifications • Produce 'flats' 	<ul style="list-style-type: none"> • know and can apply key terms • evaluate suitability of materials/components, based on their performance properties, to select those appropriate for use in the production of a feasible outcome • communicate specifications that allow an outcome to be evaluated as fit for 	<p>Summative assessment</p> <p>Technological products task.</p> <p>AS91049(1.6)</p> <p>Formative assessment</p> <p>Teacher conferences with students as to suitable materials and components for developing the design</p> <p>Summative assessment on</p>	<p>Technological Products</p> <p>Understand how materials are formed, manipulated, and transformed in different ways, depending on their properties, and understand the role of material evaluation in determining suitability for use in product development.</p> <p>Brief Development</p> <p><i>Justify the nature of an intended outcome in relation to the need</i></p>

	<p>purpose.</p> <ul style="list-style-type: none"> justify the specifications in terms of key and wider community stakeholder considerations. 	AS91044 (1.1)	<p><i>or opportunity and justify specifications in terms of key stakeholder feedback and wider community considerations.</i></p>
<p><u>Knowledge and Skill Development</u></p> <p><u>Manufacture and trialling of the Prototype</u></p> <p><u>Individual student practice:</u></p> <ul style="list-style-type: none"> student plans 3rd milestone stage (9 weeks) techniques associated with the style and or the materials selected are trialled and tested prior to manufacture <p>As per brief and specifications:</p> <ul style="list-style-type: none"> garment is manufactured with consideration of relevant codes of practice photographic evidence and annotations are collected throughout stakeholders are consulted where key decisions are needed as to fitness for purpose the completed prototype is evaluated as being fit for the intended purpose within the intended environment 	<ul style="list-style-type: none"> use planning tools to record initial plans and ongoing revisions in ways which provide justification for planning decisions made. produce and trial a prototype of the outcome to evaluate its fitness for purpose and identify any changes that would enhance the outcome use stakeholder feedback to support and justify key design decisions and evaluations of fitness for purpose. 	<p>Formative assessment</p> <p><i>Teacher gives feedback on planning for 3rd milestone stage. Confirms brief and specifications</i></p> <p>Summative assessment of AS91047 (1.4) and AS 91058 (1.20)</p>	<p>Planning for Practice</p> <p><i>Critically analyse their own and others' past and current planning practices in order to make informed selection and effective use of planning tools. Use these to support and justify ongoing planning that will see the development of an outcome through to completion.</i></p> <p>Outcome Development and Evaluation</p> <p><i>Critically analyse their own and others' outcomes to inform the development of ideas for feasible outcomes. Undertake ongoing experimentation and functional modelling, taking account of stakeholder feedback and trialling in the physical and social environments. Use the information gained to select, justify, and develop a final outcome. Evaluate this outcome's fitness for purpose against the brief and justify the evaluation using feedback from stakeholders.</i></p>

Review the successful aspects of this unit considering curriculum requirements, your teaching and the needs of your students	What aspects need revising for next time?
	Are there any specific resources or aspects of professional development you need to contribute to the further success of this unit?

