



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 (Textiles)

Year Level 12

Curriculum Level: 7

| 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 | * | * | * | | | |
| Technological Products | * | | * | * | | |
| Technological Systems | | | | | | |
| Characteristics of Technology | | | | | | |
| Characteristics of technological outcomes | | | * | * | | |
| Design | * | * | * | * | | |
| Implementation of techniques and processes | * | * | * | | | |

Focus Strands and *Components* and Achievement/Learning Objectives for assessment purposes

Technological Practice

Brief Development

Justify the nature of an intended outcome in relation to the issue to be resolved and justify specifications in terms of key stakeholder feedback.

Outcome Development and Evaluation

Critically analyse their own and others' outcomes and evaluative practices to inform the development of ideas for feasible outcomes. Undertake a critical evaluation that is informed by ongoing experimentation and functional modelling, stakeholder feedback, and trialling in the physical and social environments. Use the information gained to select, justify, and develop an outcome. Evaluate this outcome's fitness for purpose against the brief. Justify the evaluation using feedback from stakeholders and demonstrating a critical understanding of the issue.

Technological Knowledge

Technological Products

Understand the concepts and processes employed in materials evaluation and the employed in materials evaluation and the implications of these for design, development, maintenance, and disposal of technological products.

Design in Technology

Knowledge of Design

Demonstrate understanding of advanced concepts in design.

Construction and Mechanical Technologies *Pattern Making*

Make advanced adaptations to a pattern to change the structural and/or style features of a design.

Construct a textiles product Implement advanced procedures to make a textiles product (optional)

| 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 indicators of achievement |
|---|--|--|---|
| This column reflects the planned sequence and activities | Students are learning to: | Demonstrates what students know and understand and the assessment strategy e.g. | Curriculum Links e.g. Nature of Tech Strand Characteristics of Tech Outcomes |
| Introduction to the year <ul style="list-style-type: none"> • Issue of course booklets • Explanation of school policies • Financial costs for the year • Timeline • Course Endorsement | Students are learning to: <ul style="list-style-type: none"> • Forward plan • Set goals | | |
| Knowledge and skill development: <u>Pattern Adaptation</u> <ul style="list-style-type: none"> • Terminology associated with pattern making • Pattern symbols • Demonstrate a range of adaptations to increase knowledge and practise skill. • Students start assessment task and design two style and/or structural changes to a 3 piece pattern. • Students carryout pattern adaptations and test by toiling • Students provide annotated photographs of the changes and patterns correctly marked up. (7 weeks) | Students are learning to: <ul style="list-style-type: none"> • Apply structural and style changes to a pattern • Mark a pattern with the appropriate symbols. • Toile to test their patterns. | Assessment Strategy: Verbal feedback to students as they carry out pattern adaptation. Summative feedback against AS 91350 | Construction and Mechanical Technologies. Pattern Making Students can: undertake advanced adaptations to a pattern that has three or more pieces, by making changes to pieces to enable structural and/or style design features to be achieved. <ul style="list-style-type: none"> • correctly labelling the adapted pattern with grainline, cutting information, pattern piece names, dots and notches. • demonstrate independence and accuracy when constructing a toile/or mock-up; testing and refining the pattern where necessary, to ensure the final pattern correctly interprets the design and provides the correct fit for the body or item. • undertake advance pattern |

| | | | |
|--|---|---|--|
| | | | adaptation in a manner that economises time, effort and materials. |
| <p>Introduction to Technological Practice</p> <ul style="list-style-type: none"> • Discuss the context of ‘dual personality’. With the aim for students to show their understanding of sustainability. Key points to make are about differentiated learning and that the planned programme is designed for all abilities and that there are different pathways to suit different abilities. • Issue generic task sheet and ask students to start accessing stakeholders | | | |
| <p>Knowledge development: Sustainability in Design</p> <ul style="list-style-type: none"> • <u>Introduction</u> to Design. Show DVD ‘Fashion Design’ Revision of the key steps: • Pause DVD for students to take notes at summary stages. • Stages of fashion design/production (flow chart from Shaping Sustainable fashion edited by Alison Gwilt and Time Rissenen)—link this process to a simple t shirt. • Issue Fashion and textile typical supply chain designed by Farrer and Fraser (2009) Discuss the social, ethical and environmental issues related to clothing (big picture) • DVD ‘Ecofashion’ and complete task sheet . • Issue: ‘Linking sustainable strategies with the process of design and production’ chart from shaping sustainable fashion. Discuss intervention designers can take part in to contribute to the sustainability of their end product. Discuss the strategies students may use to begin sustainable design. <p>Homework. Watch the following You tube videos:</p> <ul style="list-style-type: none"> • ‘The environmental impact of the cotton t shirts’ (to introduce the idea of sustainability) • ‘White gold the true cost of cotton’ and | <p>Students are learning to:</p> <ul style="list-style-type: none"> • Understand the decisions made at different steps of the development of a garment have social, ethical and environmental implications. • Recognise designers who are developing ‘eco-fashion’ • Analyse organic textiles. | <p>Students have achieved this when:</p> <p>Assessment Strategy Formative Informal discussion and a check of student notes.</p> | <p>Students can:</p> <ul style="list-style-type: none"> • explain the relationship between lifecycle design, innovation and sustainability. • explain how lifecycle analysis is undertaken and how this determines the focus for design intervention. • discuss the competing priorities and compromises made as a result of lifecycle analysis when developing a sustainable technology. |

| | | | |
|--|--|--|--|
| <ul style="list-style-type: none"> • ‘Katharine Hamnett on organic cotton’ • Students research an eco friendly fabric e.g. Bamboo, Soy, Silver, Hemp, Silk, Corn fibre, Banana fibre, Pineapple fibre and Nettles • And one sustainable designer and why they have earned that title e.g. Untouched world, Starfish, Miranda Brown, Descendant Denim, Chalky Digits, Tika Merino, Kow Tow, Kate Sylvester, Standard Issue, and maybe Icebreaker. • Students report back to class. (Developing active learners) | | | |
| <p>Technological Practice Planning</p> <ul style="list-style-type: none"> • Discuss examples of timelines/GANTT charts used at level one • Students reflect on own planning tools others have used. • Discuss the value and purpose of planning and the organisation of resources prior to key stages. • Develop planning-timeline with key milestones (Managing Self, Thinking) | <p><i>Students are learning to:</i></p> <ul style="list-style-type: none"> • Evaluate the use of planning tools • Allocate a time frame • Establish progress review points • Understand that planning is dynamic and iterative | <p>Students have achieved this when:</p> <p><u>Assessment Strategy</u> Students produce a timeline with progress review points and develop a template for a planning sheet to be used for key stages</p> <p><u>Formative Assessment</u> Teacher checks validity of timeline and planning sheet as a useful tool.</p> | <p>Students can:</p> <p>Planning for Practice</p> <ul style="list-style-type: none"> • critically analyse existing planning tools and project management practices to inform the selection of planning tools appropriate for the technological practice to be undertaken. |
| <p>Knowledge development</p> <p>Teacher facilitates group discussion on the best ways to establish and record key information on the key stakeholder, wider stakeholders and the environment in which the issue resides. (Developing active learners)</p> <p>Individual students plan to collect information by researching the context, the issue and the socio/physical environment in which</p> | <p>Students are learning to:</p> <ul style="list-style-type: none"> • Analyse research information and establish key considerations for future practice • Communicate information in a way that suits their | <p>Students have achieved this when:</p> <p>A conceptual statement has been written</p> <p>Formative Assessment</p> <p>Teacher gives feedback on the conceptual statement.</p> | <p>Planning for Practice</p> <ul style="list-style-type: none"> • use planning tools to set achievable goals, manage all resources, plan critical review points, and revise goal and resources as necessary to ensure the effective completion of an outcome <p>Brief Development</p> <ul style="list-style-type: none"> • establish a conceptual statement that justifies the |

| | | | |
|--|---|---|--|
| <p>the issue resides in order for students to:</p> <ul style="list-style-type: none"> • Start to identify important considerations that are identified as a result of research to date. Considerations of the social and physical environment and physical and functional attributes. • Write a conceptual statement in order to establish a need(s) or opportunity. | <p>individual learning style</p> | | <p>nature of the outcome and why such an outcome should be developed with reference to the issue it is addressing</p> |
| <p>Idea Generation</p> <ul style="list-style-type: none"> • Students plan next steps including resources required (Managing Self) • Discuss means of researching historical and contemporary fashion and communicating conceptual ideas: e.g internet search, magazines, existing solutions, drawings, quick models, notes. • Designer study and inspirations for sustainability and innovation (Encouraging innovation and responsiveness) • Sourcing relevant information • Students conduct own research and produces concepts for discussion with stakeholders. (Relating to Others) • Reflecting on the table of considerations students write individual initial briefs and specifications • Teacher introduces the concept of Intellectual Property and the considerations students must be aware of when sourcing information and in protecting their own ideas (Preparing responsible citizens) | <p><i>Students are learning to:</i></p> <ul style="list-style-type: none"> • Understand the cycle of fashion and historical links between trends, global, social, ethical and economic influences and technological innovation on fashion style • Apply design principles to a particular figure type • Work within relevant codes of practice • identify an issue as a result of exploring the context • determine a need or opportunity and associated stakeholders • reflect ongoing consideration of the social and physical environment where the outcome will be developed and situated • reflect ongoing key stakeholders' opinions | <p>Students have achieved this when:</p> <ul style="list-style-type: none"> • They have analysed a range of relevant research and applied the knowledge gained to their own practice • They have established an initial brief and specifications <p>Formative Assessment Teacher gives individual written and verbal feedback on the research to date and the initial brief and specification towards AS 91354 (Brief Development)</p> | <p>Planning for Practice</p> <ul style="list-style-type: none"> • use planning tools to set achievable goals, manage all resources, plan critical review points, and revise goal and resources as necessary to ensure the effective completion of an outcome <p>Outcome Development and Evaluation</p> <ul style="list-style-type: none"> • generate design ideas that are informed by research and critical analysis of existing outcomes <p>Characteristics of technological outcomes</p> <ul style="list-style-type: none"> • justify how the design elements appear to have been • prioritised in technological outcomes • justify the fitness for purpose of technological outcomes • in terms of their physical and functional nature and the socio-technological environment/s they are used within. |

| | | | |
|---|---|--|---|
| <p>Knowledge Development</p> <ul style="list-style-type: none"> • Show power point on sustainability with particular emphasis on Design for Sustainability • Students write a case study comparing the life cycle of a cotton t shirt with the life cycle of an organic cotton t shirt (Preparing responsible citizens) | <p><i>Students are learning to:</i> Understanding advanced issues in design by:</p> <ul style="list-style-type: none"> • Discussing the competing priorities and compromises made by designers in the production of a t shirt. • Relating these decisions to their own work | <p>Formative Assessment towards AS 91363</p> | <p>Demonstrate understandings of advanced issues in design. Students can:</p> <ul style="list-style-type: none"> • explain the relationship between lifecycle design, innovation and sustainability. • explain how lifecycle analysis is undertaken and how this determines the focus for design intervention. discuss the competing priorities and compromises made as a result of lifecycle analysis when developing a sustainable technology |
| <p>Knowledge and skill development Individual concept development including functional modelling: Introduce the concept of technological modelling as part of development and the difference between functional modelling and prototyping. Use the case study on Zambesi to demonstrate how professional technologists use technological modelling to mitigate and manage risk and then relate this to fashion and the two main reasons for modelling in this domain area and show examples where possible: 1. Modelling <u>possibility</u> for inclusion/exclusion. Students are encouraged to trial ideas through modelling to see if their conceptual ideas will function as intended. It may be part or whole of a garment and the function will be determined by Does it work? E,g, Can the wearer move? And then How does it affect the aesthetics? 2. Modelling <u>probability</u> for inclusion/exclusion. Used when a key feature has been decided on but the ‘How to’ has yet to be established and so the student will model some or all the steps in order to see if the feature can be successfully interpreted.</p> | <p>Students are learning to:</p> <ul style="list-style-type: none"> • establish potential conceptual designs through generating and evaluating design ideas that are informed by research, including the analysis of existing outcomes • use evidence from research and functional modelling, including feedback from stakeholders, to evaluate conceptual designs • select and communicate the final conceptual design for an outcome • justify the outcome’s potential fitness for purpose. | <p>Formative Assessment Class and individual conferencing as evidence of functional modelling takes place and the design ideas are developed.</p> | <p>Technological Modelling</p> <ul style="list-style-type: none"> • discuss examples to illustrate why the status of evidence gained from technological modelling might change across contexts • explain the role of technological modelling in ascertaining and mitigating risk • describe examples to illustrate the strengths and weaknesses of technological modelling for risk mitigation <p>Outcome Development and Evaluation</p> <ul style="list-style-type: none"> • develop design ideas for outcomes that are justified as feasible with evidence gained through functional modelling • critically analyse evaluative practices used when functional modelling to inform own functional modelling |

| | | | |
|--|--|---|--|
| <p>Students undertake functional modelling by:</p> <ul style="list-style-type: none"> ▪ Sketching/ Photos/Notes to communicate ideas ▪ ongoing planning and further identification of key considerations, their interactions and prioritization leading to brief refinement, ▪ developing their design ideas in the form of a toile ▪ including regular communication with all stakeholders. ▪ (Thinking) | | | <ul style="list-style-type: none"> • undertake functional modelling to evaluate design ideas and • develop and test a conceptual design to provide evidence of the proposed outcome's ability to be fit for purpose <p>Brief Development</p> <ul style="list-style-type: none"> • establish the specifications for an outcome using stakeholder feedback, and 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>Knowledge development Material Search Classification of Fibres Performance of materials, natural and manmade in relation to the intended outcome. Using a range of fabric samples. Students need to experience the look and feel of different fabrics and then investigate handle. Building up a vocabulary of words that describe these attributes i.e. colour, texture, pattern, repetitive, stripe, spots, smooth, rough, crisp, drapes, warm, cool to the touch. Then performance as to function in terms of insulation, resilient, crease resistant, fire resistant, launders, resists alkalis, resists acids, mildew resistant etc. (Using language, symbols and texts)</p> <p>How the construction of the fabric impacts on the properties of the end product and subjective and objective evaluation procedures and the importance of textiles in the material world beyond fashion Issue task sheets so that students have practice at linking fabric choice to the aesthetics and functional properties of the</p> | <p><i>Students are learning to:</i></p> <ul style="list-style-type: none"> • explain the relationship between the performance properties of materials selected and the performance specifications of a product • describing different material evaluation procedures undertaken to determine the suitability of materials for use in the development of a product • explaining how the knowledge and techniques underpinning the material evaluation procedures and why they were used to support the material selection decisions in the development of a product. | <p>Students have achieved this when:</p> <ul style="list-style-type: none"> • Use subjective and objective evaluation tools to select appropriate materials • Can explain the use of evaluative tools in another context <p>Formative assessment Class discussion Leading to summative assessment for selected students AS 91359</p> | <p>Technological Products</p> <ul style="list-style-type: none"> • discuss examples of material evaluation procedures undertaken to support material selection decisions and justify the appropriateness of these procedures • discuss examples to explain how material evaluation impacted on design and development decisions <p>Outcome Development and Evaluation</p> <ul style="list-style-type: none"> • evaluate suitability of materials/components, based on their performance properties, to select those appropriate for use in the production of a feasible outcome |

| | | | |
|--|---|---|--|
| <p>garment. (Participating and contributing)</p> <p>Research and analyse a case study and look at the material evaluation techniques. This could follow on from the work on sustainability and the decisions made when selecting materials.</p> | <ul style="list-style-type: none"> discussing how the relationship between the evaluation of materials and a product's design (including maintenance and disposal considerations) influenced material selection decisions during the development of the product. | | |
| <p>Revising the Brief</p> <ul style="list-style-type: none"> Guide students in to collecting the evidence gained to date and evaluate against the prioritised considerations. Reflect on key decisions to date and students finalise their brief to include the need or opportunity being addressed, the specific social and physical environment and where the outcome will be developed and eventually implemented. There should be sufficient evidence at this point to finalise the specifications. Specifications should be fully justified throughout the functional modelling and can be tested. Provide evidence of developed briefs as exemplars. | <p>The students are learning to:</p> <ul style="list-style-type: none"> reflect ongoing consideration of the social and physical environment where the outcome will be developed and situated prioritise social and physical environmental considerations related to where the outcome will be developed and situated reflect ongoing stakeholders' opinions describe the outcome to be developed and justifying why such an outcome should be developed justify the physical and functional attributes required for an outcome produce a final brief comprised of a conceptual statement and specifications. | <p>Summative Assessment</p> <p>All evidence of brief development is presented and assessed against AS 91354</p> | <p>Brief Development</p> <ul style="list-style-type: none"> establish the specifications for an outcome using stakeholder feedback, and 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 communicate specifications that allow an outcome to be evaluated as fit for purpose justify the specifications in terms of stakeholder feedback, and 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>Prototyping (Individual practice)</p> <ul style="list-style-type: none"> • Plan all resources for manufacture • (Managing self and Thinking) • Prototype manufacture • Individual skill development. • Following relevant Codes of Practices and ethical considerations for product development. This includes: material measuring, marking out, cutting and joining, combining methods; modelling methods; properties of commonly used materials including their limitations and possibilities; use of tools and machinery when manufacturing products. (Encouraging innovation and responsiveness/preparing responsible citizens) • Ongoing interactions with all stakeholders • Synthesising evidence as decisions are made | <ul style="list-style-type: none"> • trial and select appropriate materials and/or components, tools and equipment; and apply practical techniques and processes to make the prototype • use results from testing and stakeholder feedback to inform the making and trialling of the prototype • undertake prototyping to gain specific evidence of the outcome's fitness for purpose in its intended physical and social environment • synthesise evidence from ongoing testing and stakeholder feedback to inform the making and trialling of the prototype | <p>Students have achieved this when:</p> <ul style="list-style-type: none"> • A high quality prototype which meets the developed brief and specifications has been completed <p>Formative Assessment Ongoing verbal feedback</p> | <p>Outcome Development and Evaluation</p> <ul style="list-style-type: none"> • evaluate suitability of materials/components, based on their performance properties, to select those appropriate for use in the production of a feasible outcome • undertake prototyping to gain specific evidence of an outcomes fitness for purpose and use this to justify any decisions to refine, modify and/or accept the outcome as final |
| <p>Final Evaluation</p> <p>As a class discuss evaluation/implementation and future viability.</p> <ul style="list-style-type: none"> • Individuals confirm the final brief and specification. • The outcome is placed in situ and justified as solving the issue • Student evaluates the success of the outcome and discusses how the outcome is fit for the social and physical environment. (Preparing responsible citizens) (Thinking) | <p><i>Students are learning to:</i></p> <ul style="list-style-type: none"> • justify any decisions to accept and/or modify the prototype. • Evaluate the prototype's potential to be fit for purpose in the intended social and physical environment. | <p>Students have achieved this when:</p> <ul style="list-style-type: none"> • Submit a final brief and specification • Implemented the completed outcome and evaluated the success of the outcome and their own practice <p>Summative Assessment Using the achievement criteria for 91357</p> | <p>Outcome Development and Evaluation</p> <ul style="list-style-type: none"> • use stakeholder feedback and an understanding of the physical and social requirements of where the outcome will be situated to support and justify key design decisions and evaluations of fitness for purpose. |

| | |
|--|---|
| 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? |
| | |