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<tr><td>SCHOOL: Clancy Catholic College YEAR: 11 STAGE: 6</td><td>TEACHING PERIOD: 8 weeks TERM: 1</td></tr>
<tr><td>SYLLABUS: NESA Stage 6 Textiles and Design</td><td>FOCUS AREA: Design</td></tr>
<tr><td colspan="2">This unit introduces students to the basic and fundamental concepts of textile design, material properties, and the Australian textiles industry. Students will develop knowledge and skills in textile investigation, experimentation, and design processes while exploring historical and contemporary applications of textiles.</td></tr>
<tr><td>Summative Task: Thread to Trend

Students will design and produce a small textile item (that would be useful in their home e.g. pillow cushion, wall hanging, placemat set, etc) that applies the elements and principles of design and uses sustainable textile properties. Students will also complete a written design portfolio, with practical samples, following their design process, and evaluation of their final product. Portfolio will be created and uploaded as a Google Doc onto Google Classroom, allowing teachers to monitor and track progress.</td><td>Students to make adjustments:

● EAL/D
○ 2 students
● GIFTED/EXTENSION
○ 2 students</td></tr>
</table>

Unit created in AT1 to influence creation of resources

<table>
<tr><th colspan="2">Stage 6 Design and Technology Unit</th></tr>
<tr><td>COURSE: Design and Technology</td><td>UNIT: Concept to Creation</td></tr>
<tr><td>SCHOOL: Clancy Catholic College YEAR: 11 STAGE: 6</td><td>TEACHING PERIOD: 8 weeks TERM: 1</td></tr>
<tr><td>SYLLABUS: NESA Stage 6 Design and Technology</td><td>FOCUS AREA: Design and Technology (Design Theory and Practice and Process)</td></tr>
<tr><td colspan="2">This unit introduces students to design theory and practice where they investigate and analyse the design process, and apply it to real life design situations and problems that need to be solved. Students identify factors affecting design, and the impact they have on various aspects including individuals, society and the environment. Students also have the opportunity to collaborate with peers to develop and transform ideas.</td></tr>
<tr><td>Summative Task: Thread to Trend

Students will identify a real-world problem within their local community, school environment, or a broader social context. They will research and investigate the issue, develop a design solution, and present their findings in a portfolio format created and uploaded as a Google Doc onto Google Classroom, allowing teachers to monitor and track progress.</td><td>Students to make adjustments:

● EAL/D
○ 1 student
● GIFTED/EXTENSION
○ 3 students</td></tr>
</table>

Textiles and Design Preliminary Resources

Resource 1: Introduction to Textiles and Design

Area of Study: Design

Outcomes:

P1.1 - Describes the elements and principles of design and uses them in a variety of applications

P1.2 - Identifies the functional and aesthetic requirements and features of a range of textile items

Lesson Description/Intention:

- This lesson is an introduction to the Year 11 Preliminary Course of Textiles and Design. We will discuss what the course includes and what is expected of you this year regarding the preliminary content. This lesson focuses on testing your prior knowledge on textiles and design.

INSTRUCTIONS:

PART ONE

1. You will be given a copy of the 'Textiles and Design' Syllabus. Listen and take notes from the teacher's introduction and explanation of the syllabus and the course.

PART TWO

2. **Turn and Talk:** Turn to the person next to you and discuss what you already know about textiles and design
3. **Class Mindmap:** In your workbook, draw up a mind map for 'What is Textiles and Design?', and write down class discussion answers, as well as your own contributions.
    a. Scaffolded Mind Map Template

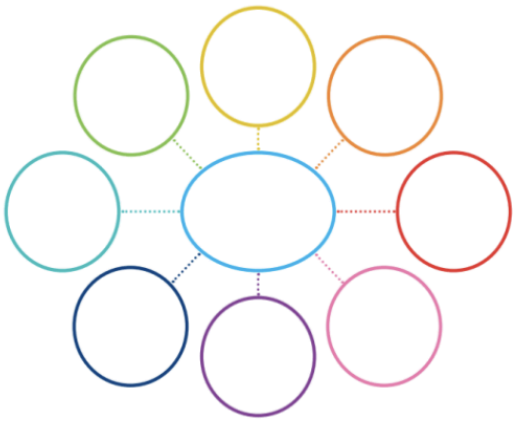


Figure 1: Mind map example (Twinkle Template)

PART THREE

1. Complete the pre-test Google Form: 'YEAR 11 PRELIMINARY TEXTILES AND DESIGN PRE-TEST'
    a. You will be given 15-20 minutes to complete the test. If you do not finish the pre-test in class, you must complete homework due before NEXT LESSON.

b. Attempt every question to the best of your ability, even if you are unsure. This is an INFORMAL task.

c. Submit when you have attempted every question.

Resource 2: Design Features and Elements and Principles of Design

Area of Study: Design

Outcomes:

P1.1 - Describes the elements and principles of design and uses them in a variety of applications

P1.2 - Identifies the functional and aesthetic requirements and features of a range of textile items

Lesson Description/Intention:

- Students can describe and apply the elements and principles of design
- Students will understand how aesthetics and function influence textile products

INSTRUCTIONS:

PART ONE:

1. Open the PADLET link and brainstorm at least ONE functional factor and ONE aesthetic factor
    a. Create two posts (ONE functional factor and ONE aesthetic factor)
    b. Include a description AND image of the factor
    c. (NOTE: you cannot write the same factors that have already been written by another student).

PART TWO:

1. Listen to the teacher's presentation and take notes in the workbook (in a mindmap or traditional note taking) on the elements of design and principles of design.
2. Using CANVA, create a moodboard that showcases AT LEAST THREE elements and principles of design on EACH focus area of textile (Here are examples of mood boards):
    d. Apparel
    e. Furnishings
    f. Costume
    g. Textile arts
    h. Non-apparel

PART THREE:

1. Label and annotate the design features of this backpack and complete the following questions.

NEXT. (2025)

Identify the textile focus area of this item.

_____

Evaluate how the design features of this item have been influenced by the elements and principles of design.

_____

_____

_____

_____

_____

_____

_____

_____

Resource 3: **Informal Task**

Area of Study: Design

Outcomes:

P1.1 - describes the elements and principles of design and uses them in a variety of applications

P1.2 - identifies the functional and aesthetic requirements and features of a range of textile items

P2.2 - develops competence in the selection and use of appropriate manufacturing techniques and equipment

Lesson Description/Intention:

In this lesson, you will complete an informal task that involves researching and evaluating textile focus areas, specific items and their design features. You will also research sustainable textiles that are used by Indigenous cultures. A scaffold is provided for support students and can be used to prompt research that will be presented in an infographic.

INSTRUCTIONS:

PART ONE

1. In the table below, research an example and image of the textile focus area (can be from the moodboard).
2. **Evaluate** the textiles functional and aesthetic purposes of the item.

Textile Focus Area	Example/Image	Functional Purposes	Aesthetic Purposes
Apparel			

Furnishings			
Costume			
Textile-Arts			
Non-apparel			

PART TWO

3. Research a sustainable textile that Indigenous cultures utilise
4. **Evaluate** its use of the elements and principles of design, as well as its functional and aesthetic features
5. Present findings in an engaging infographic/poster on CANVA
    a. *Scaffold provided to EAL/D and support students (BELOW)*
    b. All students can use below scaffold and questions as a guide to produce in their creative infographic/poster

RESEARCH ACTIVITY SCAFFOLD

1. Research organic cotton.

- What is it?

- Where and how is it produced?

- What is it used for?

- How is it sustainable?

- Include an image/description

2. Evaluate TWO **<u>functional</u>** and **<u>aesthetic</u>** features of the textile:

3. Complete a PMI chart of this textile

PLUS	MINUS	INTERESTING

Resource 4: Manufacturing Techniques (Theory and Practical Lesson)

Area of Study: Design

Outcomes:

P2.2 - develops competence in the selection and use of appropriate manufacturing techniques and equipment

P2.3 - manages the design and manufacture of textile projects

P4.1 - identifies and selects textiles for specific end-uses based on analysis of experimentation.

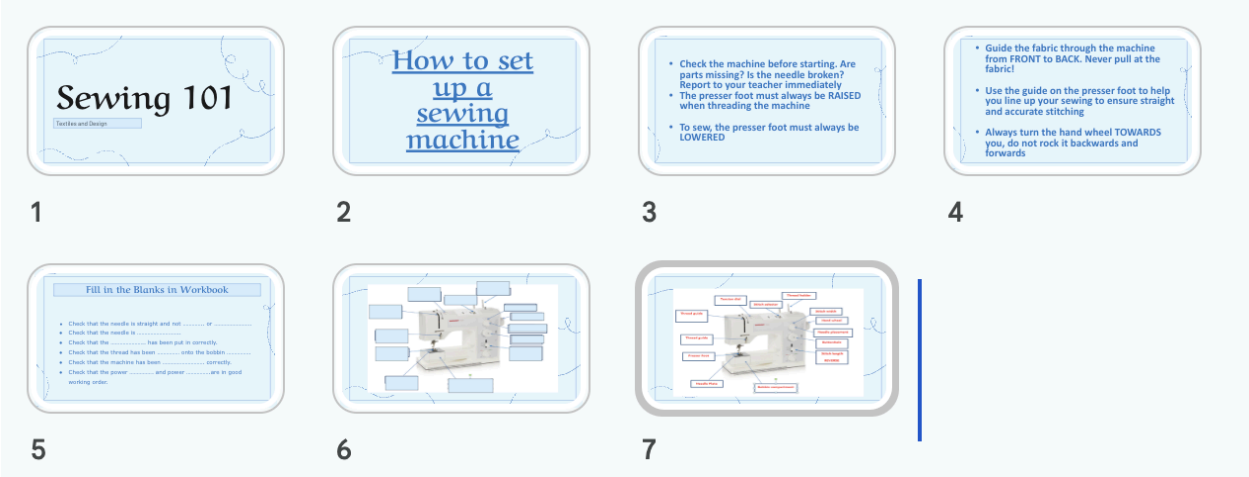
Lesson Description/Intention:

- This lesson is an introduction for textile and practice revision for experienced students regarding practical concepts. The teacher will demonstrate how to set up a sewing machine and basic stitches. Students will move at their own pace through activities and practical activities.

INSTRUCTIONS:

PART ONE:

1. Listen to and complete activities in Google Slide presentation.



2. Watch this video again if needed on how to set up a sewing machine (in presentation).

PART TWO:

1. Watch teacher demonstration on how to set up a sewing machine, and then try on your own.
2. When you have practiced to set up the sewing machine, you are to complete the paper sewing sheets to practice basic stitches. You can then get scrap fabrics and practice the same stitches on fabric instead.
3. FAST FINISHERS: If you are confident in stitching and setting up a sewing machine, you are to use ChatGPT/Generative AI, to develop an instruction/scaffold sheet to create a simple scrunchie and pouch drawstring bag to practice sewing techniques. Once you have checked with your teacher, you can use scrap fabrics to produce the mini project.

Design and Technology Preliminary Resources

Resource 1: **Design Theory and Process**

Outcomes:

P1.1 - examines design theory and practice, and considers the factors affecting designing and producing in design projects

Lesson Description/Intention:

- This lesson involves analysing and investigating design theory and process, and how it is applied in real life situations. You will watch a video on an Introduction to the Design Process, discussing the design process and researching a case study on TESLA.

INSTRUCTIONS:

PART ONE

1. As a class, you will watch this video on an Introduction to the Design Process and create your notes in your own form of note taking (e.g. bullet points, mindmap, brainstorm, etc)
2. **Class Brainstorm/Discussion:** What is a designer? What makes a person a designer? Who are some designers you know? What have they designed? What factors may affect the choices a designer makes? (Factors Affecting Design)
3. You will receive a worksheet (created with ChatGPT) that identifies the Stages of the Design Process, and will discuss and take notes through a teacher-led class discussion.

STAGES OF THE DESIGN PROCESS

STAGE	DESCRIPTION	EXAMPLES/QUESTIONS
1. Identifying a Need or Opportunity	Recognising a problem or a need in society, the market, or an individual context.	What problem am I trying to solve? Who is the target user?
2. Research and Investigation	Gathering information, exploring existing solutions, and identifying constraints.	What materials are suitable? What has been done before?
3. Generating Ideas	Brainstorming multiple solutions and creative approaches.	What are some ways I could solve this problem?
4. Developing and Refining Ideas	Sketching, modelling, and refining the concept using feedback.	How can I improve my idea? Which design is most feasible?
5. Producing/ Constructing	Creating the prototype or final product using appropriate tools and techniques.	How will I construct my design safely and accurately?
6. Evaluation	Reviewing how well the design meets the original need or criteria.	Does it solve the problem? How can it be improved?

PART TWO

1. INFORMAL TASK - TESLA CASE STUDY
    a. Research and investigate each stage of TESLA's design process. (Use the previous worksheet to help you). (Website available for support students)
    b. Analyse design choices made by designers, and factors that have ultimately influenced their designs.
    c. Evaluate TESLA cars using a PMI chart. What are the positives and weaknesses about their design and choices, and what could be improved and further considered?
    d. Present findings to the class in a multimode presentation (Google Slide, infographic, website, video, AI presentation mode) and submit on Google Classroom.

Resource 2: **Factors Affecting Design**

Outcomes:

P1.1 - examines design theory and practice, and considers the factors affecting designing and producing in design projects

Lesson Description/Intention:

- This lesson you will investigate and analyse an item of your choosing, and compare and contrast the factors affecting the design. The teacher and class will discuss the factors affecting design and why it is important to consider, and then you will have the opportunity to apply and expand your knowledge in an independent activity.

INSTRUCTIONS:

PART ONE

1. Select a physical and tangible item of your choosing (e.g. technology, fashion, furniture, food, etc)
2. Consult with teacher to get approval for item
3. Outline and Describe the item, and its overall purpose and end user.

PART TWO

1. Complete the Decision-Making Matrix below regarding the chosen item:

Factors Affecting Design	Questions/Prompts	Rating (1–5)	Evaluation
Appropriateness of the Design Solution	Does it solve the intended problem effectively?		
Needs	Does it meet the needs of the end user?		
Function	Does it work and carry out its purpose?		
Aesthetics	Is it visually appealing and suitable for its use and users?		
Finance	Is it affordable for users and cost-effective to produce and use?		
Ergonomics	Is it comfortable, efficient, and safe to use for users?		
Work Health and Safety	Were safety and WHS considerations taken into account in its design process?		
Quality	Is it durable and long lasting?		
Environmental Consequences	Does it positively or negatively impact the environment? Is it sustainable?		

Obsolescence	Is it designed to last long term?		
Life Cycle Analysis	What is the environmental impact across its entire life?		

PART THREE

1. Building upon exam writing skills, answer the reflective and evaluative questions below:
    a. Evaluate the success of this design.

b. In your opinion, justify which design factor had the most significant effect on the product's end use success/failure.

c. Compare and contrast TWO design factors that have had an impact on this design.

Resource 3: **Impact of a range of design and technology activities on the individual, society and the environment**

Outcomes:

P2.2 explains the impact of a range of design and technology activities on the individual, society and the environment through the development of projects

Lesson Description/Intention:

- In small groups, you will complete a research activity that explores the impact of a technological advancement/design concept on individuals, society and the environment.

INSTRUCTIONS:

PART ONE

1. In pairs, select a technology/design concept that is used in everyday life. Examples include:
    a. Smartphones
    b. Electric Vehicles
    c. Solar Panels
    d. Fast Fashion
2. Create a timeline displaying how the technology has developed and evolved its impact on individuals, society and the environment.

PART TWO

1. You will analyse the impact of your chosen technology in THREE specific areas (Individual, Society and Environment), while also considering these syllabus points:
    a. personal values
    b. cultural beliefs
    c. Sustainability
    d. safety and health
    e. community needs
    f. individual needs
    g. Equity

2. Use the scaffold to help you answer the questions for this section (constructed with the assistance of ChatGPT - OpenAI, 2025):

Impact on:	Questions/Prompts
The Individual	**Personal Benefits:** How does the product or technology improve the lives of individuals? (e.g. convenience, health, social connection) **Personal Challenges:** What challenges or negative effects could arise for the individual? (e.g. addiction, privacy concerns, cost)
Society	**Cultural Influence:** How does technology shape or change society's values, behaviors, and lifestyles? (e.g. social media and communication) **Economic Influence:** How does it impact jobs, industries, and global markets? (e.g. automation and job displacement, economic opportunities in green technology)
The Environment	**Positive Environmental Impact:** How does the product contribute to environmental sustainability? (e.g. renewable energy technologies, waste reduction) **Negative Environmental Impact:** How might it harm the environment? (e.g. resource extraction, e-waste)

PART THREE

1. Evaluate and reflect on the positive and negative influences of your chosen concept. Consider sustainability and ethical considerations.
2. Present all findings and research in a presentation with the help and use of GenAi (e.g. SteveAi)

EXTENSION OPTION ACTIVITY

- **Create:** Imagine an improved version of the chosen technology that minimizes its negative societal or environmental impacts. What changes would you make?

Resource 4: **Creative and Collaborative Approaches**

Outcomes:

P3.1 investigates and experiments with techniques in creative and collaborative approaches in designing and producing

Lesson Description/Intention:

- TEAM PROJECT! Learn how to work collaboratively with others to generate, test and prototype design solutions using various materials, techniques and constraints/considerations.

INSTRUCTIONS:

PART ONE

1. In groups of 4-5, you will be assigned a design problem:
    a. Living Green
    b. Mobility Accessibility
    c. Stay Organised
    d. Student Assistance
2. On an A3 piece of paper/whiteboard, you have 5 minutes to brainstorm as many concepts and design directions associated with your problem as possible.
3. On another piece of paper, your group has 15 minutes to sketch ideas using the SCAMPER method.
4. After your group has concluded their ideation, you are to develop and write a Design Brief statement according to your design problem.
5. Assign group roles and tasks needed to work towards solving the design problem. You will need to have a discussion on what must be prioritised, and multiple contributions needed. Discuss strengths and weaknesses amongst group members to determine the best fit for roles.

PART TWO

1. PROTOTYPING: You will develop one of your group's ideas into a quick and rough prototype.
2. You can use materials available in class such as recycled cardboard/paper, scrap fabric, tape, yarn, boxes, etc.

PART THREE

1. After you have created a prototype for your design solution, you must complete an evaluation.
    a. PMI chart
    b. Evaluation matrix
    c. Evaluation on how your new solution with impact individuals, society and the environment

EXTENSION/FAST FINISHERS

1. Swap your prototype and evaluation with another group, and complete a peer evaluation through a SWOT analysis

STRENGTHS	**WEAKNESSES**
OPPORTUNITIES	**THREATS**

Reflection

These resources have been created to support Stage 6 Year 11 Preliminary students with their learning in both Textiles and Design, and Design and Technology. The first four resources align with the previous unit plan from Assignment 1, for the NESA Stage 6 Textiles and Design syllabus, in which the resources start from introducing the course and syllabus to students, and working on developing their skills and knowledge in Textiles and Design. Additionally, the other four resources align with the Stage 6 Design and Technology NESA syllabus, building on student's design thinking and development. These resources for both Design and Technology, and Textiles and Design are sequential, allowing students to complete them in logical order, contributing to their development and advancement in their knowledge and skills.

For Textiles and Design, Resource 1 and 2 focus on the initial introduction to the unit, in which the activities diagnostically and informally assess the students and their prior knowledge in the course. The relevant syllabus outcomes include P1.1 and P1.2 (NESA, 2013) in which students focus on learning the main features of a textile item, including elements and principles of design, as well as functional and aesthetic factors. These resources promote mainly lower order thinking of Bloom's Taxonomy (1956), as students remember, understand and apply concepts in the resources. For example, going through the syllabus and having class discussions allow students to remember and understand textiles and design concepts, and have the opportunity to apply some of their new knowledge in the PADLET and design features activity. Resources 3 and 4, promote higher order and creative thinking strategies as the knowledge gained and developed earlier, can be adapted to research, evaluate, and analyse textiles, and create a mode to present their findings and designs. Scaffolds and suggested materials are provided in all four resources to assist EAL/D and support students, as well as extension options/activities for students who can excel and finish early. Support teacher resources such as presentations and videos are embedded within resources to explain and display to students examples of content, which they can refer to when studying and completing activities.

Additionally, the Design and Technology resources mainly promote higher order thinking strategies as it is a unit where students significantly apply design theory and practice in all aspects. These resources are developed under a socially critical pedagogical approach to teaching (Bjørke, 2016) as it involves students collaborating and interacting with one another to communicate and develop ideas, as well as evaluating them. ChatGPT has been used in an ethical way as a helpful learning tool (Lii et al, 2023),

assisting teaching to create scaffolds and prompting questions for students to utilise and think about in these resources . For example, the ‘Stages of the Design Process’ worksheet was created using ChatGPT to further elaborate the concept for students. Resources 3 and 4 in particular focus on P2.2 and P3.1 outcomes which work sequentially together for students to collaborate and investigate impacts and approaches to working towards a solution to a problem. The Design and Technology resources utilise appropriate teaching strategies to assess what students know and to monitor learning (DoE Victoria, 2020) by constantly discussing ideas and concepts, as well as promoting independent thinking of students to extend their design thinking and ideas.

Overall, these resources created for Stage 6 Preliminary Textiles and Design and Design and Technology students ultimately promote the stages of Bloom’s Taxonomy, and utilise various teaching strategies that allow students to use higher order thinking strategies to complete tasks, and apply creative thinking in their learning.

Reference List

Blank Mind Map Template. (2025). Twinkl.co.in. https://www.twinkl.co.in/resource/blank-mind-maps-au-t-l-1984

Bloom, B.S. (1956) Taxonomy of Educational Objectives, Handbook: The Cognitive Domain. David McKay, New York.

Canva. (2021, October 15). *1. Introduction to the Design Process | Theory*. YouTube. https://www.youtube.com/watch?v=3RbpQSFdP6A

Fashion Design Moodboard Templates. (2023). Makethedot.com. https://www.makethedot.com/textile-design-templates

Georgi, S. (2017). *Elements and Principles of Design*. SlideShare; Slideshare. https://www.slideshare.net/slideshow/elements-and-principles-of-design-81366577/81366577

Liu, D., Ho, E., Weeks, R., Bridgeman, A. (2023). How AI can be used meaningfully by teachers and students in 2023. https://educational-innovation.sydney.edu.au/teaching@sydney/how-ai-can-be-used-meaningfully-by-teachers-and-students-in-2023/

NESA - Board of Studies NSW. (2013). Design and Technology Stage 6 Syllabus. http://arc.nesa.nsw.edu.au/standards-packs/SP01_15390/files/support_documentation/textilesdesign_syl.pdf

NESA - Board of Studies NSW. (2013). Textiles and Design Stage 6 Syllabus. https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/stage-6-learning-areas/tas/design-and-technology-syllabus

Next Retail Limited. (2025). *Star/Heart Quilted Backpack*. Next.com.au; Next. https://www.next.com.au/en/style/su200561/158341?gad_source=4&gbraid=0AAAADn-_y8q2DhvV8zCE1SGt7x50jXYO&gclid=CjwKCAjwwe2_BhBEEiwAM1I7scSwsYB06zc5WOHZqoP-jj97vloZBD2Gt_fNPH6JWThVg6N-8GW9BhoCxPUQAvD_BwE&gclsrc=aw.ds#158341

OpenAI. (2025). *ChatGPT*. ChatGPT; OpenAI. https://chatgpt.com/

Printable Sewing Practice Sheets To Perfect Your Stitches ⋆ Hello Sewing. (2021, February 24). Hello

Sewing. https://hellosewing.com/sewing-practice-sheets/

Ramamurthy, K. (2017). *Design principles*. SlideShare; Slideshare. https://www.slideshare.net/slideshow/design-principles-82735271/82735271

Sahli, A. (2017, January 9). *Bernina Sewing Machine*. Pinterest. https://au.pinterest.com/pin/28710516355363067/

Singh, M. K. (2021). Textiles Functionalization - A Review of Materials, Processes, and Assessment. In *www.intechopen.com*. IntechOpen. https://www.intechopen.com/chapters/76400

Victorian Department of Education and Training. (2020). *High Impact Teaching Strategies*. Victoria State Government. https://www.education.vic.gov.au/Documents/school/teachers/support/high-impact-teaching-strategies.pdf

Wiffin, T. (2025, April 13). *Textiles and Design Functional and Aesthetic Factors*. Padlet. https://padlet.com/taylorwiffin2005/textiles-and-design-functional-and-aesthetic-factors-labxeq9csovu7e5a