

VCE INDUCTION PACKAGE 2022

UNITS 3 AND 4

PRODUCT DESIGN & TECHNOLOGY



Name:

Welcome letter

Dear students,

Welcome to Product Design & Technology Study Units 3 and 4

If you are well organised, motivated and have a good work ethic, you will have an enjoyable and successful year in Product Design & Technology.

In order to get the most out of this course, there are a number of things that we strongly suggest that you do over the summer and continue throughout 2021.

1. Complete the holiday homework task by the due date.
2. Buy the required textbook and materials.
3. Familiarise yourself with the detailed course outline provided in this package.
4. Develop a good working relationship with your class teacher and maintain regular communication with them throughout the year.
5. Develop a study timetable that will assist you in meeting the work deadlines.
6. Ensure that you become familiar with the resources (prescribed textbook, websites, notes, other textbooks)
7. Visit the VCAA website regularly to familiarise yourself with the study design, resources, past examination papers and to read the examiners' reports:
<http://www.vcaa.vic.edu.au/Pages/vce/studies/designtech/destechindex.aspx>
8. Become familiar with the school's VCE compliance policy by reading the VCE handbook located on MOODLE.
9. Communicate with students who have studied the subject in previous years to get their perspective and suggestions for success.
10. Ensure that you have a balanced life that consists of schoolwork, exercise, sport, leisure, rest and a healthy diet.

If you have any queries about the course, please contact me at school or by email.

On behalf of the Product Design & Technology study staff, we wish you all the best for your studies next year,

Regards,
Heather Aeschlimann

NAME OF TEACHER	EMAIL ADDRESS	LOCATION
Mrs. H. Aeschlimann	aeschlimannh@vermontsc.vic.edu.au	S 8-10 Design Technology

OUTLINE OF STUDY

Unit 3: Applying the Product design process

AREA OF STUDY 1: Designing for end-user/s

In this area of study students examine the product design process and develop skills in writing a design brief, which is vital for the development of a viable solution. They focus on identifying and designing for a potential end-user/s of an intended product. They consider methods used to establish an end-user/s' needs for the development of a solution to a design problem.

Outcome 1

On completion of this unit the student should be able to investigate and define a design problem, and discuss how the design process leads to product design development.

AREA OF STUDY 2: Product development in industry

This area of study focuses on the factors, processes and systems that influence the design and development of products within industrial settings. Students explore specific cases and the reasons why design and innovation are integral to value-adding to products. They also examine how companies react to market demands and technological developments. Students look at the role of market research in determining end-user/s' needs in relation to sustainability.

Outcome 2

On completion of this unit the student should be able to explain and analyse influences on the design, development and manufacture of products within industrial settings.

AREA OF STUDY 3: Designing for others

This area of study focuses on students working as designers and applying the product design process to meet the requirements of an end-user/s. Students identify specific needs of the end-user/s by referring to the product design factors and conducting research. Students prepare a design brief that guides their work for this area of study and for Areas of Study 2 and 3 in Unit 4. They examine appropriate techniques for recording and communicating data, information, visualisation of ideas, design options and working drawings and for obtaining end-user/s' feedback. They appropriately acknowledge resources and the IP of others. Students use creative and critical design thinking techniques throughout the product design process.

Outcome 3

On completion of this unit the student should be able to document the product design process used to meet the needs of an end-user/s, and commence production of the designed product.

Unit 4: Product development and evaluation

AREA OF STUDY 1: Product analysis and comparison

In this area of study students examine design factors that influence the success of commercially available products. Products are analysed and evaluated in terms of the product design factors. Students develop an understanding of what people value and how they evaluate products using qualitative and quantitative methods, and consider the impacts and consequences of product design success and failure.

Outcome 1

On completion of this unit the student should be able to compare, analyse and evaluate similar commercial products, taking into account a range of factors and using appropriate techniques.

AREA OF STUDY 2: Product manufacture

This area of study focuses on the skills, production techniques and processes employed to make a product to suit the needs of an end-user/s. Students continue to implement their scheduled production plan, apply skills and processes including risk management in the safe use of materials, tools, equipment and machines, and complete the product to specified standards of quality. They monitor and record their progress and make modifications if necessary.

Outcome 2

On completion of this unit the student should be able to apply a range of production skills and processes safely to make the product designed in Unit 3, and manage time and resources effectively and efficiently.

AREA OF STUDY 3: Product evaluation

This area of study focuses on the student's application of evaluation criteria, the performance of checks and tests, and gaining end-user/s' feedback to determine how well a product meets the needs and requirements outlined in the design brief developed in Unit 3.

Outcome 3

On completion of this unit the student should be able to evaluate the finished product through testing and feedback against criteria, create end-user/s' instructions or care labels and recommend improvements to future products.

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In Design and Technology the student's level of achievement will be determined by school-assessed coursework, a school-assessed task and an end-of-year examination.

Percentage contributions to the study score in Product Design and Technology are as follows:

- School-assessed Coursework Unit 3 12 percent
- School-assessed Coursework Unit 4 8 percent
- School-assessed Task Units 3 and 4 50 percent
- End-of-year examination: 30 percent

SAC Unit 3 Outcome and Assessment Dates 2022 TBC

OUTCOME	MARK	ASSESSMENT TASK	DATE
Unit 3 Outcome 1 Investigate and define a design problem, and discuss how the design process leads to product design development.	25	A structured, annotated design brief, evaluation criteria and an explanation of how the designer will research and develop design ideas from the design brief, with reference to product design factors.	TERM 1 WEEK 5
Unit 3 Outcome 2 Explain and analyse influences on the design, development and manufacture of products within industrial settings.	35	The student's performance on the outcome is assessed using one or more of the following: <ul style="list-style-type: none">• extended response• a short written report• an oral presentation accompanied by notes and/or visual materials.	TERM 2 WEEK 1
Total marks 60 *School-assessed Coursework for Unit 3 contributes 12 per cent.			

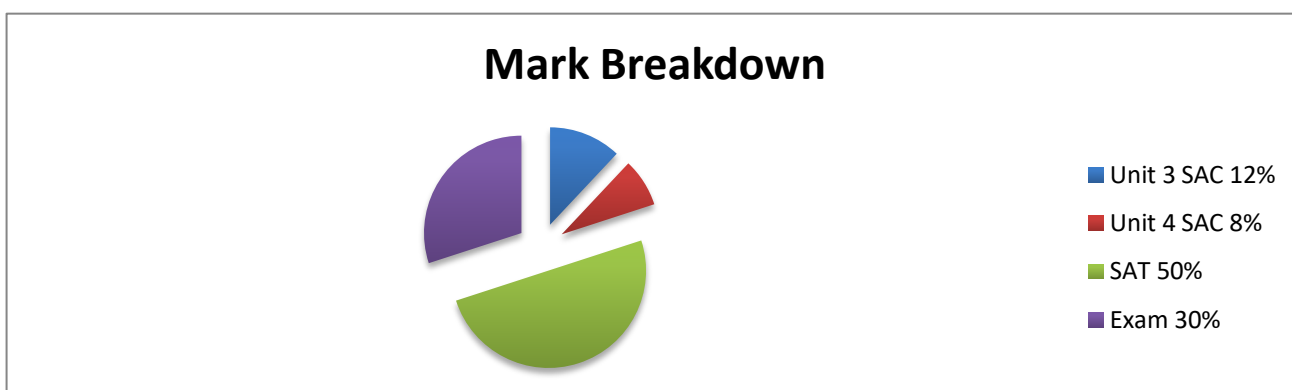
SAC Unit 4 Outcome and Assessment Dates 2022 TBC

OUTCOME	MARK	ASSESSMENT TASK	DATE
Unit 4 Outcome 1 Compare, analyse and evaluate similar commercial products, taking into account a range of factors and using appropriate techniques.	40	The student's performance on the outcome is assessed using one or more of the following: <ul style="list-style-type: none"> • an extended response • a short written report • structured questions • an oral presentation accompanied by notes • an annotated visual report. 	TERM 3 WEEK 3
Total marks 40 *School-assessed Coursework for Unit 4 contributes 8 per cent.			

SAT Units 3 & 4 Outcome and Assessment Dates 2022 TBC

OUTCOME	MARK	ASSESSMENT TASK	DATE
Unit 3 Outcome 3 Document the product design process used to meet the needs of an end-user/s, and commence production of the designed product.	50	<ul style="list-style-type: none"> • A folio comprising: <ul style="list-style-type: none"> – An end-user/s' profile, a design brief, evaluation criteria, research, visualisations, design options with justification of the selected option, working drawings of final option, a scheduled production plan, a list of relevant processes used for larger scale production, and a record of progress and modifications. The design folio must include documentation of decisions, and acknowledge sources of information. – Production work accompanied by a record of production progress and documentation of modifications with justification of these changes (text and images should be included). 	TERM 2 WEEK 7

<p>Unit 4 Outcome 2</p> <p>Apply a range of production skills and processes safely to make the product designed in Unit 3, and manage time and resources effectively and efficiently.</p>	20	<p>AND</p> <ul style="list-style-type: none"> • A functional product that conforms to standards of quality indicated in the design brief outline of context. 	<p>TERM 3 WEEK 8</p>
<p>Unit 4 Outcome 3</p> <p>Evaluate the finished product through testing and feedback against the criteria, create end-user/s' instructions or care labels and recommend improvements to future products.</p>	20	<p>AND</p> <ul style="list-style-type: none"> • A written report that includes evaluation of the product. <p>AND</p> <ul style="list-style-type: none"> • Relevant end-user/s instructions or care labels which highlight the features, assembly, care and/or repair of the product in any of the following formats: video tutorials, annotated image of the product or other multimedia format. 	<p>TERM 3 WEEK 10</p>
<p>Total marks 90 *School-assessed Coursework for Unit 4 contributes 50 per cent.</p>			



MOODLE: <http://moodle.vermontsc.vic.edu.au/> - My Courses – Product Design and Technology

We wish you every success for your study of Design and Technology and invite you to talk to us at any time regarding any aspect of the course.

Kind regards,

Mrs. Heather Aeschlimann

Technology and Visual Art Learning Area Leader

Glossary of Key Terms - Product Design and Technology**Glossary List - Write a definition for the following- refer to resource material**

End-User/s	
Mock up	
Style Obsolescence	
Technical Obsolescence	
Functional Obsolescence	
Planned Obsolescence	
Prototype	
Qualitative methods	
Quality measure	

Quantitative methods	
Design options (presentation drawings)	
Working drawings	
Visualisation Drawings	
Scheduled production plan	
Cradle to cradle	
Design for Disassembly	
Extended Producer Responsibility (EPR)	
Lifecycle analysis/assessment (LCA)	
Values (of a product)	

<http://www.vcaa.vic.edu.au/Pages/vce/adviceforteachers/pdt/clarification.aspx>

Designing for others -Unit 3 outcome 3 Unit 4 outcomes 2 and 3	
List one potential product that you could make:	
Need	
End – User/s	
Purpose	
Context	
Constraints	

Designing for others -Unit 3 outcome 3 Unit 4 outcomes 2 and 3	
List another potential product that you could make:	
Need	
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Designing for others -Unit 3 outcome 3 Unit 4 outcomes 2 and 3	
List another potential product that you could make:	
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COLLECT RELATED RESOURCES, DO OBSERVATIONAL DRAWINGS AND TAKE PHOTOGRAPHS

Holiday Tasks to be completed in preparation for the beginning of the 2022 school year