

Peicai Secondary School
Subject Overview for Semester 2 2023
Design & Technology | Secondary 3 | Express

1. Assessment Mode

Students will be assessed through a written assessment and a Design Project (coursework) that requires demonstration of the learning outcomes across the content sections of Design and Technology. This assessment mode of the Design project (coursework) comprises the following components; namely a design journal, mock-ups, prototype and presentation board which will be carried out over a few weeks during curriculum time.

2. Assessment Weightage

Components	WA3 (15%)	End of Year (EOY) (55%)	Written Paper (40%)
		Coursework (60%)	
Deliverables	Written (Design Process and Mechanisms)	1-Design Journal 2-Presentation Board (Design Situation and Contextual Use of Product) 3-Mock Up 4-Final Prototype	80 marks Q1 (26 marks) Application of Design Q2-Q3 (54 marks) Application of Technology - Electronics, Mechanisms and Structures
Work Timeline	<i>Not Applicable</i>	<i>Term 3 Week 1 - Term 4 Week 2</i>	
Submission Deadline	<i>*Written Paper (Wk 6/ 8- TBC)</i>	<i>Term 4 Week 2</i>	

3. Weekly Work Schedule

Term 3 [26 June – 01 Sept 2023]			
Week	Chapter/Topic/Skill/Area	Assignment/ Homework	Assessment
Week 1 [26 Jun – 30 Jun] <i>Hari Raya Haji, 29 Jun</i>	<ul style="list-style-type: none"> Class Admin. Subject Overview for Semester 2 <p>Recap on design process</p>	Worksheet- design process	EOY (Design Journal)
	<ul style="list-style-type: none"> Introduction of Design & Make Project [Glue Gun Holder]: through Task sheet (with Rubrics) <ul style="list-style-type: none"> Design Process Model (5 stages) Gantt Chart Design need, design brief and design specifications <p>* Students to bring along their iPad</p>	<ul style="list-style-type: none"> Gantt Chart Photo Analysis (5W1H) PIES analysis Stating of design need, design brief and design specifications 	
Week 2 [3 Jul – 7 Jul] <i>Youth Day, 3 Jul</i>	OBS Camp		

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Term 3 [26 June – 01 Sept 2023]			
Week	Chapter/Topic/Skill/Area	Assignment/ Homework	Assessment
Week 3 [10 Jul – 14 Jul] HBL	<ul style="list-style-type: none"> • Recap <ul style="list-style-type: none"> • Design process & mechanism • Introduction to Topic on Structures <p><i>* Students to bring along their iPad</i></p>	<ul style="list-style-type: none"> • Worksheet-Structures Study Guide Chp 7-Structures	
	<ul style="list-style-type: none"> • Project [Glue Gun Holder]: • Research on Glue Gun Holder stands • Generating of ideas using <u>Shape borrowing</u> and SCAMPER ideation techniques 	Existing products of Glue Gun Holders Study Guide Chp 3 Generating and Developing Ideas <ul style="list-style-type: none"> • Ideas #1-2 (using Shape borrowing) 	Coursework End-of-Year (Design Journal)
Week 4 [17 Jul – 21 Jul]	<ul style="list-style-type: none"> • Project [Glue Gun Holder]: <ul style="list-style-type: none"> ○ Research on Glue Gun Holder stands ○ Generating of ideas using Shape borrowing and SCAMPER ideation techniques <p><i>* Students to bring along their iPad</i></p>	<ul style="list-style-type: none"> • Ideas #3-4 (using SCAMPER technique) 	Coursework End-of-Year (Design Journal)
Week 5 [24 Jul – 28 Jul]	<ul style="list-style-type: none"> • Project [Glue Gun Holder]: <ul style="list-style-type: none"> ○ Decision Matrix (Idea Selection) ○ Development of chosen idea ○ Working out details for prototyping <p><i>* Students to bring along their iPad</i></p>	<ul style="list-style-type: none"> • Work out dimensions of final idea • Materials list 	Coursework End-of-Year (Design Journal) [Ideas #1-#4 assignment]
Week 6 [31 Jul – 4 Aug] WA3	Project [Glue Gun Holder]: <ul style="list-style-type: none"> ○ Building mock-ups for designing <p><i>* Students to bring along their aprons</i></p>	<ul style="list-style-type: none"> • Mock-ups making and evaluation 	

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Term 3 [26 June – 01 Sept 2023]			
Week	Chapter/Topic/Skill/Area	Assignment/ Homework	Assessment
Week 7 [7 Aug – 11 Aug]	<ul style="list-style-type: none"> • Project [Glue Gun Holder]: <ul style="list-style-type: none"> ○ Building mock-ups for designing ○ Planning the steps for prototyping <p><i>* Students to bring along their iPad</i></p>	<ul style="list-style-type: none"> • Mock-ups making and evaluation. Planning prototyping steps 	
Week 8 [14 Aug – 18 Aug] <i>National Day Celebration, 8 Aug</i> <i>National Day, 9 Aug</i> <i>National Day Sch Holiday, 10 Aug</i> WA3	<ul style="list-style-type: none"> • Project [Glue Gun Holder]: <ul style="list-style-type: none"> ○ Making of prototype* • <i>* Students to bring along their aprons</i> <p style="text-align: center;">WEIGHTED ASSESSMENT 3 Topics tested: Design Process and Mechanisms</p>	<ul style="list-style-type: none"> • Prototyping 	WA3
Week 9 [21 Aug – 25 Aug]	<ul style="list-style-type: none"> • Project [Glue Gun Holder]: <ul style="list-style-type: none"> ○ Making of prototype* <p><i>* Students to bring along their aprons</i></p>	<ul style="list-style-type: none"> • Prototyping 	Coursework End-of-Year (Design Journal) <i>[mock-up, final prototype]</i>
Week 10 [28 Aug – 1 Sep] <i>Teachers' Day Celebration, 31 Aug</i> <i>Teachers' Day, 1 Sep</i>	<ul style="list-style-type: none"> • Project [Glue Gun Holder]: <ul style="list-style-type: none"> ○ Making of prototype* ○ Prototype Evaluation <p><i>* Students to bring along their aprons</i></p>	<ul style="list-style-type: none"> • Prototyping • Testing of Prototype 	

**This subject overview is tentative and is subject to changes.*

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Term 4 [11 Sep – 27 Oct]			
Week	Chapter/Topic/Skill/Area	Assignment/ Homework	Assessment
Week 1 [11 Sep – 15 Sep]	<ul style="list-style-type: none"> • Project [Glue Gun Holder]: <ul style="list-style-type: none"> ○ 3D sketch and rendering of developed idea (using iPad Sketchbook *) <p><i>* Students to bring along their iPad</i></p>	Presentation Board 1 (Problem situation, Design Brief and Specifications) with Rendered sketch of developed idea	Coursework End-of-Year (Design Journal) [Rendered sketch of developed idea] 2 Presentation Boards (online)
Week 2 [18 Sep – 22 Sep]	<ul style="list-style-type: none"> • Project [Glue Gun Holder]: <ul style="list-style-type: none"> ○ 3D sketch and rendering of developed idea (using iPad Sketchbook *) <p><i>* Students to bring along their iPad</i></p>	<ul style="list-style-type: none"> • Presentation Board 2 (Contextual Use of Design with Use in Environment) 	
Week 3 [25 Sep – 29 Sep]	<ul style="list-style-type: none"> • Revision of topics for Exam Design Process & Technologies in D&T (Electronics, Mechanisms and Structures) 	<ul style="list-style-type: none"> • Lesson activity-Revision Guide 	
Week 4 [2 Oct – 6 Oct]	END OF YEAR EXAMS		
Week 5 [9 Oct – 13 Oct]	END OF YEAR EXAMS		
Week 6 [16 Oct – 20 Oct]	Error Analysis Week/ Script Check		

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Assessment Rubrics for Coursework

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Source: https://www.seab.gov.sg/docs/default-source/national-examinations/syllabus/olevel/2022syllabus/7059_y22_sy.pdf