

Peicai Secondary School
 Subject Overview for Semester 1 2023
 Design & Technology | Secondary 1 | Normal (Academic)

1. Assessment Mode

Students will be assessed through two Design Projects that requires demonstration of the learning outcomes across the content sections of Design and Technology. This assessment mode comprises the following components; namely a design journal, mock-ups and prototypes which will be carried out over a few weeks during curriculum time.

2. Assessment Weightage

Components	WA1 (15%)	WA2 (15%)	End of Module (70%)
Deliverables	<i>Key Tag – Design: Process (Ideation)</i>	Handphone stand- Design: Rendered 3D presentation sketch	<i>Handphone stand- Design & Technology: Design mock-up, light circuit, and final prototype</i>
Work Timeline	<i>Term 1 Week 4-6</i>	Term 2 Week 2-4	<i>Term 2 Week 6-9</i>
Submission Deadline	<i>Week 6</i>	Week 4	<i>Week 9</i>

3. Weekly Work Schedule

Term 1 [3 Jan – 10 Mar]			
Week	Chapter/Topic/Skill/Area	Assignment/ Homework	Assessment
Week 1 [2 Jan – 6 Jan]	Start Smart Program		-
Week 2 [9 Jan – 13 Jan]	Start Smart Program		-
Week 3 [16 Jan – 20 Jan] <i>18-Jan (Wed) timetable replaced with even week Monday timetable</i> <i>CNY celebrations, 20 Jan (Fri)</i>	<ul style="list-style-type: none"> Class Admin. Overview of D&T. Workshop safety briefing: Start of Project #1 [Key Tag]: <ul style="list-style-type: none"> Design Process Model (5 stages) Design need, design brief and design specifications 	<ul style="list-style-type: none"> Stating of design need, design brief and design specifications 	-
Week 4 [23 Jan – 27 Jan] <i>CNY, 23 Jan (Mon) & 24 Jan (Tue)</i>	<ul style="list-style-type: none"> Project #1 [Key Tag]: <ul style="list-style-type: none"> Random lines & curves ideation technique Generating of ideas 	Ideas #1 - #8	WA1 [Ideation]
Week 5 [30 Jan – 3 Feb]	<ul style="list-style-type: none"> Project #1 [Key Tag]: <ul style="list-style-type: none"> Random lines & curves ideation technique Generating of ideas 	Ideas #9 – #16	
Week 6 [6 Feb – 10 Feb]	<ul style="list-style-type: none"> Project #1 [Key Tag]: <ul style="list-style-type: none"> 3D freehand sketch (chosen idea) Rendering of freehand sketch (using colour pencils*) * Students to bring along their colour pencils 	<ul style="list-style-type: none"> 3D sketch of chosen idea Rendered 3D sketch of chosen idea 	

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Term 1 [3 Jan – 10 Mar]			
Week	Chapter/Topic/Skill/Area	Assignment/ Homework	Assessment
Week 7 [13 Feb – 17 Feb]	<ul style="list-style-type: none"> • Project #1 [Key Tag]: <ul style="list-style-type: none"> ○ Making of mock-up ○ Making of prototype* <p><i>* Students to bring along their aprons</i></p>	<ul style="list-style-type: none"> • Mock-up • Prototyping 	-
Week 8 [20 Feb – 24 Feb]	<ul style="list-style-type: none"> • Project #1 [Key Tag]: <ul style="list-style-type: none"> ○ Making of prototype* ○ Submission of completed prototype <p><i>* Students to bring along their aprons</i></p>	<ul style="list-style-type: none"> • Prototyping 	-
Week 9 [27 Feb – 3 Mar]	<ul style="list-style-type: none"> • Start of Project #2 [Handphone Stand]: <ul style="list-style-type: none"> ○ Design Process Model (5 stages) ○ Design need, design brief and design specifications • 3D freehand sketch (existing product) 	<ul style="list-style-type: none"> • Stating of design need, design brief and design specifications • 3D sketch of existing products 	-
Week 10 [6 Mar – 10 Mar]	<ul style="list-style-type: none"> • Project #2 [Handphone Stand]: <ul style="list-style-type: none"> ○ 3D freehand sketch (existing product) ○ Shape borrowing ideation technique • Generating of ideas 	<ul style="list-style-type: none"> • 3D sketch of existing products • Ideas #1 - #5 	-

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Term 2 [20 Mar – 26 May]			
Week	Chapter/Topic/Skill/Area	Assignment/ Homework	Assessment
Week 1 [20 Mar – 24 Mar]	<ul style="list-style-type: none"> • Project #2 [Handphone Stand]: <ul style="list-style-type: none"> ○ Generating of ideas ○ Development of chosen idea (with base) 	<ul style="list-style-type: none"> • Ideas #6 – #10 • Development of chosen idea 	-
Week 2 [27 Mar – 31 Mar]	<ul style="list-style-type: none"> • Project #2 [Handphone Stand]: <ul style="list-style-type: none"> ○ 3D presentation sketch ○ Rendering of 3D presentation sketch (using colour pencils*) <p><i>* Students to bring along their colour pencils</i></p>	<ul style="list-style-type: none"> • Rendered 3D presentation sketch 	WA2 [rendered 3D presentation sketch]
Week 3 [3 Apr – 7 Apr] <i>Good Friday, 7 Apr</i>	<ul style="list-style-type: none"> ○ Project #2 [Handphone Stand]: ○ 3D presentation sketch ○ Rendering of 3D presentation sketch (using colour pencils*) ○ Basic Electronics & Soldering <p><i>* Students to bring along their colour pencils</i></p>	<ul style="list-style-type: none"> • Rendered 3D presentation sketch • Light circuit 	
Week 4 [10 Apr – 14 Apr]	<ul style="list-style-type: none"> • Project #2 [Handphone Stand]: <ul style="list-style-type: none"> ○ Soldering of light circuit* ○ Making of mock-up <p><i>* Students to bring along their aprons</i></p>	<ul style="list-style-type: none"> • Light circuit • Mock-up 	
Week 5 [17 Apr – 21 Apr]	<ul style="list-style-type: none"> • Project #2 [Handphone Stand]: <ul style="list-style-type: none"> ○ Soldering of light circuit* ○ Making of mock-up <p><i>* Students to bring along their aprons</i></p>	<ul style="list-style-type: none"> • Light circuit • Mock-up 	
Week 6 [24 Apr – 28 Apr] <i>Hari Raya Puasa, 24 Apr (Mon)</i>	<ul style="list-style-type: none"> • Project #2 [Handphone Stand]: <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 	End of Module [Mock-up, Light Circuit, Final Prototype]
Week 7 [1 May – 5 May] <i>Labour Day, 1May (Mon)</i>	<ul style="list-style-type: none"> • Project #2 [Handphone Stand]: <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 	
Week 8 [8 May – 12 May]	<ul style="list-style-type: none"> • Project #2 [Handphone Stand]: <ul style="list-style-type: none"> ○ Making of prototype* ○ Submission of completed prototype <p><i>* Students to bring along their aprons</i></p>	<ul style="list-style-type: none"> • Prototyping 	
Week 9 [15 May – 19 May]	<ul style="list-style-type: none"> • Project #2 [Handphone Stand]: <ul style="list-style-type: none"> ○ Making of prototype* ○ Submission of completed prototype <p><i>* Students to bring along their aprons</i></p>	<ul style="list-style-type: none"> • Prototyping 	
Week 10 [22 May – 26 May]	Mini- Showcase	-	-

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