

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

**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 &amp; 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
<b>Week 1</b> [2 Jan – 6 Jan]	<b>Start Smart Program</b>		-
<b>Week 2</b> [9 Jan – 13 Jan]	<b>Start Smart Program</b>		-
<b>Week 3</b> [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"> <li>• Class Admin.</li> <li>• Overview of D&amp;T.</li> <li>• Workshop safety briefing:</li> <li>• Start of Project #1 [Key Tag]:               <ul style="list-style-type: none"> <li>○ Design Process Model (5 stages)</li> <li>○ Design need, design brief and design specifications</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Stating of design need, design brief and design specifications</li> </ul>	-
<b>Week 4</b> [23 Jan – 27 Jan] <i>CNY, 23 Jan (Mon) &amp; 24 Jan (Tue)</i>	<ul style="list-style-type: none"> <li>• Project #1 [Key Tag]:               <ul style="list-style-type: none"> <li>○ Random lines &amp; curves ideation technique</li> <li>○ Generating of ideas</li> </ul> </li> </ul>	Ideas #1 - #8	WA1 [Ideation]
<b>Week 5</b> [30 Jan – 3 Feb]	<ul style="list-style-type: none"> <li>• Project #1 [Key Tag]:               <ul style="list-style-type: none"> <li>○ Random lines &amp; curves ideation technique</li> <li>○ Generating of ideas</li> </ul> </li> </ul>	Ideas #9 – #16	
<b>Week 6</b> [6 Feb – 10 Feb]	<ul style="list-style-type: none"> <li>• Project #1 [Key Tag]:               <ul style="list-style-type: none"> <li>○ 3D freehand sketch (chosen idea)</li> <li>○ Rendering of freehand sketch (using colour pencils*)</li> </ul> </li> <li>• * Students to bring along their colour pencils</li> </ul>	<ul style="list-style-type: none"> <li>• 3D sketch of chosen idea</li> <li>• Rendered 3D sketch of chosen idea</li> </ul>	

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

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

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