

Peicai Secondary School
Subject Overview for Semester 2 / 2022
Design and Technology [Secondary Three (Express)]

Semester 2			
Term 3 [27 June – 2 September]			
Week	Chapter/Topic/Skill/Area	Assignment/Homework	Assessment
Week 1 [27 Jun - 1 Jul]	Sem 2 Overview Introduction to Project 2 - Drop Ball Game (coursework); PROJECT REDESIGN (You are a toy designer....) <ul style="list-style-type: none"> • Critique of current drop ball game design • Overall Project Planning <ul style="list-style-type: none"> - Using Gantt Chart • Theme Analysis of Drop Ball Game <ul style="list-style-type: none"> - Introduction to Mood board • Identify Problem Situations <ul style="list-style-type: none"> - Using 5W1H method to analyze a design situation and linking to P.I.E.S needs 	Google Drive / Classroom (iPad) (i) Padlet (for students to post critique comments) (ii) Mood board (1 page) (collect images of variations of drop ball games for inspiration) (iii) Problem Situations (application of PIES needs analysis (2pages))	
Week 2 [4 Jul - 8 Jul] <i>4 Jul- Youth Day Holiday</i> <i>7Jul-HBL</i>	<ul style="list-style-type: none"> • Conduct research on existing products <ul style="list-style-type: none"> - Using PMI analysis technique. • Design Considerations <ul style="list-style-type: none"> - Using ACCESS FM to identify considerations, limitations/ constraint factors that designers will have to consider before designing a product. • Design Specifications & Design Brief <ul style="list-style-type: none"> - Extension on design considerations by providing more specific details and justification for the chosen specs. 	Google Drive / Classroom (iPad) (i) Existing Product Analysis (Similar Products of Drop ball games) (2 pages) (ii) Design Brief, Specs, Considerations (1 page) (using 5W1H technique of unpacking design situation to write design brief) (using ACCESS FAME to articulate design specifications based on design factors)	WA 3
Week 3 [11 Jul - 15 Jul] <i>11 Jul- Hari Raya Haji</i>	<ul style="list-style-type: none"> • Ideation <ul style="list-style-type: none"> - Using Random Line Trigger, Shape Borrowing and SCAMPER techniques to generate ideas for drop ball game. 	Google Drive / Classroom (iPad), Sketchbook App (i) Ideation using random line trigger, shape borrowing and SCAMPER (3 pages)	EYE
Week 4 [18 Jul - 22 Jul] <i>20 Jul- HBL</i>	<ul style="list-style-type: none"> • Ideation <ul style="list-style-type: none"> - Using Random Line Trigger, Shape Borrowing and SCAMPER techniques to generate ideas for drop ball game. 	Google Drive / Classroom (iPad), Sketchbook App (i) Ideation using shape borrowing and SCAMPER (3 page, 1 page for each technique)	EYE

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<p>Week 5 [25 Jul - 29 Jul]</p>	<ul style="list-style-type: none"> • Ideation <ul style="list-style-type: none"> - Selection of Chosen Idea using decision matrix • Development of chosen idea <ul style="list-style-type: none"> - Drop ball path layout - Ball collection compartment <p>Visual design communication</p> <p>(sketch, annotation (part label + explanation, choice of material + reason))</p> <p>How to show movement (types of movement)</p> <p>Magnification of detail</p>	<p>Google Drive / Classroom (iPad)</p> <p>(i) Idea Selection Matrix (1 page)</p> <p>(ii) Development – Drop ball path layout (1 page)</p> <p>- Ball collection compartment (1 page)</p>	<p>EYE</p>
<p>Week 6 [1 Aug - 5 Aug] <i>1 Aug - HBL</i></p>	<ul style="list-style-type: none"> • Making of prototype – Ball collection frame <ul style="list-style-type: none"> - Sanding and finishing - Wood - Filing, Sanding, Polishing - Acrylic Panel • Working Drawing <ul style="list-style-type: none"> - Orthographic Projection 	<p>Google Drive / Classroom (iPad), Bring Apron</p> <p>(i) Orthographic Projection (1 page)</p>	<p>EYE</p>
<p>Week 7 [8 Aug - 12 Aug] <i>8 Aug - NDP Celeb 9 Aug - NDP 10 Aug - NDP Hol 11-12 Aug - WA3</i></p>	<ul style="list-style-type: none"> • Making of prototype – Ball collection frame <ul style="list-style-type: none"> - Sanding and finishing - Wood - Filing, Sanding, Polishing - Acrylic Panel 	<p>Bring Apron</p>	
<p>Week 8 [15 Aug - 19 Aug] <i>15-17 Aug - WA3 (D&T Theory Paper)</i></p>	<ul style="list-style-type: none"> • WA3 Theory paper <u>Topics/Areas to be tested:</u> Design topics • Making of prototype – Ball collection frame <ul style="list-style-type: none"> - Sanding and finishing - Wood - Filing, Sanding, Polishing - Acrylic Panel 	<p>Bring Apron</p>	<p><u>Weighted Assessment</u> 3 <i>Duration:1 hour, Marks : 40</i></p>
<p>Week 9 [22 Aug - 26 Aug] <i>23 Aug - HBL</i></p>	<ul style="list-style-type: none"> • Go through WA3 Theory paper • Making of Prototype - Ball collection compartment <ul style="list-style-type: none"> - Sanding and finishing - Wood - Filing, Sanding, Polishing - Acrylic Panel 	<p>Bring Apron</p>	
<p>Week 10 [29 Aug - 2 Sep] <i>1 Sep - TD Celeb (Thu) 2 Sep - TD Hol (Fri)</i></p>	<ul style="list-style-type: none"> • Making of Prototype - Ball collection compartment <ul style="list-style-type: none"> - Sanding and finishing - Wood - Filing, Sanding, Polishing - Acrylic Panel - Assembly of parts • Update of Gantt Chart for submission 	<p>Google Drive / Classroom (iPad), Bring Apron</p> <p>(i) Gantt Chart (1 page)</p> <p>(ii) Final Prototype</p>	<p>EYE</p>

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Term 4 [12 September – 28 October]			
Week	Chapter/Topic/Skill/Area	Assignment/Homework	Assessment
Week 1 [12 Sep - 16 Sep]	Theory Revision - Electronics - Mechanism - Design Process -	Revision Guidebook	
Week 2 [19 Sep - 23 Sep]	Theory Revision - Electronics - Mechanism - Design Process	Revision Guidebook	
Week 3 [26 Sep - 30 Sep]	End of Year Examination		
Week 4 [3 Oct - 7 Oct]	End of Year Examination		
Week 5 [10 Oct - 14 Oct]	Error Analysis		
Week 6 [17 Oct – 21 Oct] <i>19 Oct- Promotion Exercise</i>	Error Analysis		
Week 7 [24 Oct – 28 Oct] <i>24 Oct- Deepavali</i>	Post-examination Activities		

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