

# Year 10 Design and Technologies

## Work rate calendar (WRC) 2024

## Term 1

All students are expected to participate in all online lessons and complete all assessment as outlined in this **Work rate calendar**.

Teachers may adjust topics, class work, assessment and submission dates. Adjustments will be communicated via QLearn or during lessons.

Assessment				
<b>Supervised assessment</b>		Summative exams are to be supervised by the student's official exam supervisor.		
<b>Non-supervised assessment</b>		Students must sign declaration of academic integrity.		
Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	22 Jan – 26 Jan	Unit 1: Rapid Design and Prototyping	Monday 22 January — Welcome calls for students: Prep – Year 12	<b>Class Activities</b> QUIZ – Design Thinking Activity 1 – Design process Activity 2 – Intro to sketching Activity 3 – Construction Lines
			Wednesday 24 January — Learning for success: Prep – Year 12	
			Friday 26 January — Australia Day Holiday	
			<b>Introduction to Design Thinking and sketching</b> Introduction to Design thinking, course and housekeeping Techniques for sketching Construction Lines and 2D shapes	
2	29 Jan – 2 Feb		<b>Sketching &amp; Cad for 3D design</b> Sketching - Basic 3D shapes; combining basic shapes to create complex shapes What is Prototyping and Introduction to CAD Introduction to Tinkercad	<b>Class Activities</b> Activity 4 – Crating Objects Activity 5 – Rendering Sketches Activity 6 – Tinkercad Tutorials Activity 7 – CAD design
3	5 Feb – 9 Feb		Friday 9 February — Senior orientation day: Years 10–12	<b>Class Activities</b> Activity 8 – Sketch/Cad Rounding Activity 9 – Sketch practice (Video game & Blender)
			<b>Sketching for purpose</b> Sketching - Crating and Rounding Prototyping – Crating and Rounding using negative space Design for Laser cutting <b>Assessment handed out and explained</b>	<b>Checkpoint 1 – Decoration</b> Decoration file to teacher Activity 10 – Lasercut tree
4	12 Feb – 16 Feb		<b>Investigation &amp; Research - documenting and communicating</b> Investigate & Research: Mind mapping & research	<b>Class Activities</b> Activity 11 – Mindmap & Research
5	19 Feb – 23 Feb		<b>Generate Idea's – designing for purpose</b> Sketching – 3 concept sketches with annotations Sketching – Final design sketch with annotations	<b>Class Activities</b> Activity 12 – Sketching Idea's
6	26 Feb – 1 Mar		<b>Prototyping</b> Digitally Prototype chosen design Evidence of work in project folio	<b>Checkpoint 2 – Prototype</b> Submit model file to teacher for printing and posting. Activity 13 – Lasercut Prototype
7	4 Mar – 8 Mar	<b>Prototyping (refining)</b> Evidence of work in project folio	<b>Class Activities</b> Activity 14 – Refining your prototype.	
8	11 Mar – 15 Mar	<b>Documenting and communicating design process (folio)</b> Evidence of work in project folio	<b>SA1 Draft</b> Due Mon 11 <sup>th</sup> March	
9	18 Mar – 22 Mar	<b>Evaluation</b> Evaluation and recommendations, completion of folio	Activity 15 - Evaluation	
10	25 Mar – 29 Mar	Thursday 28 March — Cross country / Fun run: Prep – Year 12	<b>SA1 Final</b> Due Mon 25 <sup>th</sup> March	
		Friday 29 March — Good Friday		
		<b>Final Folio submission</b> Submission of final design folio		

# Year 10 Design and Technologies

## Work rate calendar (WRC) 2024

### Term 2

All students are expected to participate in all online lessons and complete all assessment as outlined in this **Work rate calendar**.

Teachers may adjust topics, class work, assessment and submission dates. Adjustments will be communicated via QLearn or during lessons.

Assessment				
Supervised assessment		Summative exams are to be supervised by the student's official exam supervisor.		
Non-supervised assessment		Students must sign declaration of academic integrity.		
Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	15 Apr – 19 Apr	Unit 2: Efficient Dynamics	<b>Introduction to Efficient dynamics</b> Introduction to unit, design thinking and house keeping. Prior Learning: Criteria for success, needs and opportunities and communicating for design. Mind Mapping – your experiences & brainstorming - cars	<b>Class Activities</b> Intro - Preferred futures Mind mapping – experiences with cars
2	22 Apr – 26 Apr		<b>Thursday 25 April — Anzac Day</b> <b>Assessment handed out and explained</b> <b>Project setup</b> Project management Plan Setup Design Folio	<b>Class Activities</b> Folio Setup Project planning in folio
3	29 Apr – 3 May		<b>(Part A) Investigate design factors</b> Design factors Emerging technologies – The car and creating designed solutions	<b>Class Activities</b> Mind mapping - design factors, in folio Research – design factors Emerging technology & trends, alternate power
4	6 May – 10 May		<b>Monday 6 May — Labour Day</b> <b>Investigate - preferred futures</b> <b>Preferred futures:</b> engineering principles - Structure, propulsion, braking, wheels, alternate energies, materials, design strategies. <b>Emerging Technologies</b> - in the car industry. Biomimicry, production, materials, other technologies/trends, alternate energy, electric/solar power.	<b>Class Activities</b> Engineering principles Biomimicry, materials Preferred futures, in folio
5	13 May – 17 May		<b>Design Brief</b> Preferred futures & engineering principles ...continued from above. <b>Design Brief: purpose, aims and criteria for success</b>	<b>Class Activities</b> Design Brief in folio <b>SA2 Checklist1</b> Submit evidence of research (Part A)
6	20 May – 24 May		<b>(Part B) Generate Ideas</b> Mood/Inspiration Board Generation of Ideas in sketch form with annotations and description 3 x rough sketches with design thinking annotations, Final sketch with annotations of key features.	<b>Class Activities</b> Moodboard Rough sketches & annotations Final sketch & annotations
7	27 May – 31 May		<b>(Part C) Produce - Prototype</b> Generation of design solution (Physical or Digital) Evidence of work in project folio, Apply feedback	<b>SA2 Draft</b> <b>Due Mon 27<sup>th</sup> May</b> Produce Prototype
8	3 Jun – 7 Jun		<b>(Part D) Evaluation and recommendations</b> Evidence of work in project folio Apply feedback Evaluation of design process and final design to criteria.	Apply draft feedback Evaluation Finalise design folio showing design process
9	10 Jun – 14 Jun		<b>Submit Final Folio</b> Completion and Submission of final design folio	<b>SA2 Final</b> <b>Due Mon 10<sup>th</sup> June</b>
10	17 Jun – 21 Jun		<b>Friday 21 June — Athletics carnival / Sports day: Prep – Year 12</b> <b>Design extension activities- Investigate other CAD solutions</b>	

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# Year 10 Design and Technologies

## Work rate calendar (WRC) 2024

Term 3

All students are expected to participate in all online lessons and complete all assessment as outlined in this **Work rate calendar**.

Teachers may adjust topics, class work, assessment and submission dates. Adjustments will be communicated via QLearn or during lessons.

Assessment				
Supervised assessment		Summative exams are to be supervised by the student's official exam supervisor.		
Non-supervised assessment		Students must sign declaration of academic integrity.		
Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	8 Jul – 12 Jul	Unit 1: Rapid Design and Prototyping	<b>Introduction to Design Thinking and sketching</b> Introduction to Design thinking, course and housekeeping Techniques for sketching Construction Lines and 2D shapes	<b>Class Activities</b> QUIZ – Design Thinking Activity 1 – Design process Activity 2 – Intro to sketching Activity 3 – Construction Lines
2	15 Jul – 19 Jul		<b>Sketching &amp; Cad for 3D design</b> Sketching - Basic 3D shapes; combining basic shapes to create complex shapes What is Prototyping and Introduction to CAD Introduction to Tinkercad	<b>Class Activities</b> Activity 4– Crating Objects Activity 5 – Rendering Sketches Activity 6 – Tinkercad Tutorials Activity 7 – CAD design
3	22 Jul – 26 Jul		Wednesday 24 July – Friday 26 July — SET plan meetings: Year 10 <b>Sketching for purpose</b> Sketching - Crating and Rounding Prototyping – Crating and Rounding using negative space Design for Laser cutting <b>Assessment handed out and explained</b>	<b>Class Activities</b> Activity 8 – Sketch/Cad Rounding Activity 9 – Sketch practice (Video game & Blender) Activity 10 – Lasercut tree <b>Checkpoint 1 – Decoration</b> Decoration file to teacher
4	29 Jul – 2 Aug		<b>Investigation &amp; Research - documenting and communicating</b> Investigate & Research: Mind mapping & research	<b>Class Activities</b> Activity 11 – Mindmap & Research
5	5 Aug – 9 Aug		<b>Generate Idea's – designing for purpose</b> Sketching – 3 concept sketches with annotations Sketching – Final design sketch with annotations	<b>Class Activities</b> Activity 12 – Sketching Idea's
6	12 Aug – 16 Aug		Wednesday 14 August — Royal Queensland (Ekka) Show Holiday <b>Prototyping</b> Digitally Prototype chosen design Evidence of work in project folio	<b>Checkpoint 2 – Prototype</b> Submit model file to teacher for printing and posting. Activity 13 – Lasercut Prototype
7	19 Aug – 23 Aug		<b>Prototyping (refining)</b> Evidence of work in project folio	Activity 14 – Refining your prototype.
8	26 Aug – 30 Aug		Friday 30 August — Student free day <b>Documenting and communicating design process (folio)</b> Evidence of work in project folio <b>Evaluation</b> Evaluation and recommendations, completion of folio	<b>SA1 Draft</b> <b>Due Mon 26<sup>th</sup> August</b>
9	2 Sept – 6 Sept		<b>Evaluation</b> Evaluation and recommendations, completion of folio	Activity 15 - Evaluation
10	9 Sept – 13 Sept		Friday 13 September — Connect excursion: Years 10–12 <b>Final Folio submission</b> Submission of final design folio	<b>SA1 Final</b> <b>Due Mon 9<sup>th</sup> Sept</b>

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# Year 10 Design and Technologies

## Work rate calendar (WRC) 2024

### Term 4

All students are expected to participate in all online lessons and complete all assessment as outlined in this **Work rate calendar**.

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Assessment				
Supervised assessment		Summative exams are to be supervised by the student's official exam supervisor.		
Non-supervised assessment		Students must sign declaration of academic integrity.		
Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	30 Sept – 4 Oct	Unit 2: Efficient Dynamics	<b>Introduction to Efficient dynamics</b> Introduction to unit, design thinking and house keeping. Prior Learning: Criteria for success, needs and opportunities and communicating for design. Mind Mapping – your experiences & brainstorming - cars	<b>Class Activities</b> Intro - Preferred futures Mind mapping – experiences with cars
2	7 Oct – 11 Oct		Monday 7 October — King's Birthday Holiday <b>Assessment handed out and explained</b> <b>Project setup</b> Project management Plan Setup Design Folio	<b>Class Activities</b> Folio Setup Project planning in folio
3	14 Oct – 18 Oct		Monday 14 October – Wednesday 16 October — School camp: Years 9–10 <b>(Part A) Investigate design factors</b> Design factors <b>Emerging Technologies</b> - in the car industry. Biomimicry, production, materials, other technologies/trends, alternate energy, electric/solar power.	<b>Class Activities</b> Mind mapping - design factors, in folio Research – design factors Emerging technology & trends, alternate power Biomimicry, materials
4	21 Oct – 25 Oct		<b>Preferred futures</b> <b>Preferred futures:</b> engineering principles - Structure, propulsion, braking, wheels, alternate energies, materials, design strategies. <b>Design Brief</b> <b>Design Brief: purpose, aims and criteria for success</b>	<b>Class Activities</b> Preferred futures, in folio Engineering principles Design Brief in folio <b>SA2 Checkpoint1</b> Submit evidence of research (Part A)
5	28 Oct – 1 Nov		<b>(Part B) Generate Ideas</b> Mood/Inspiration Board Generation of Ideas in sketch form with annotations and description 3 x rough sketches with design thinking annotations, Final sketch with annotations of key features.	<b>Class Activities</b> Moodboard Rough sketches & annotations Final sketch & annotations
6	4 Nov – 8 Nov		<b>(Part C) Produce - Prototype</b> Generation of design solution (Physical or Digital),	<b>Class Activities</b> <b>SA2 Draft</b> <b>Due Mon 4<sup>th</sup> Nov</b> Produce Prototype
7	11 Nov – 15 Nov		<b>(Part D) Evaluation and recommendations</b> Evaluation of design process and final design to criteria. Apply feedback	
8	18 Nov – 22 Nov		Friday 22 November — Aquatic carnival: Prep – Year 11 Friday 22 November — Final day: Years 10–11 <b>Submit Final Folio</b> Completion and Submission of final design folio	<b>SA2 Final</b> <b>Due Mon 18<sup>th</sup> Nov</b>

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