

Overview - KS2 in D&T

The Junior department have 1 lesson per fortnight and follow a rolling four-year (A, B, C and D) program of study – this works out at approximately 20 sessions per year. Due to the groups being comprised of Years 3&4 or 5&6 it is necessary that the each of the years in the two-year program be able to run in either order so that no pupil is repeating content. Both years focus on core designing and making principals and should be delivered in such a way as to require deeper understanding and wider competence with groups of year 5&6 pupils that they have attained in Year 3&4.

Year A	Year B	Year C	Year D
Designing & Making, Workshop Safe Practice – Timber <ul style="list-style-type: none"> • 2021 – 2022 • 2025 - 2026 	Compliant Materials & their properties - Textiles <ul style="list-style-type: none"> • 2022 – 2023 • 2026 - 2027 	Iterative design Strategies – Biomimicry <ul style="list-style-type: none"> • 2023 – 2024 • 2027 - 2028 	Food Safety & Nutrition – Eat Well Guide <ul style="list-style-type: none"> • 2024 – 2025 • 2028 - 2029

Year:	Year groups:	SOW/Project:	Assessment areas				Learning objectives:
			Design	Make	Evaluate	Technical knowledge	
A	3-4	Multi-materials and workshop safety - Timbers and Polymers Blockheads	✓	✓			80 – 100% - Exceeding expected level 60 – 80% - At expected level 40 – 60% - Working towards expected level <40% - Below expected level <ul style="list-style-type: none"> ○ I can explain what a target market is and give examples. ○ I can sketch a range of design ideas. ○ I can annotate my design ideas to explain some features and good/bad things. ○ I can show some construction detail in my design ideas. ○ I can draw simple shapes using CAD. ○ I can work safely in the workshop. ○ I can join components to make a product. ○ I can apply some finishing techniques to a material. ○ I can work with a new material. ○ I can make a product with accuracy.
	5-6	Multi-materials and workshop safety - Timbers and Polymers Cam toys	✓	✓			<ul style="list-style-type: none"> ○ I can explain what a target market, give examples and say who I am aiming my product at. ○ I can sketch a range of design ideas in 2D and 3D. ○ I can annotate my design ideas to explain some features and good/bad things and say why I have done it. ○ I can show some construction detail in my design ideas that explains how a product could be made. ○ I can draw simple shapes using CAD with independence. ○ I can work safely in the workshop independently. ○ I can join components to make a product with accuracy. ○ I can apply finishing techniques effectively to a material. ○ I can work with at least two different materials. ○ I can make a product with accuracy with components that fit together.
B	3-4	Compliant materials – Textiles Cross-stitched card		✓	✓		<ul style="list-style-type: none"> ○ I can use a needle and thread safely. ○ I can produce cross stitched samples. ○ I can stitch in straight lines by hand. ○ I can stitch in curves by hand. ○ I can use different coloured threads to produce a design. ○ I can say what is good and bad about my product. ○ I can improve my stitching by saying what errors I have made. ○ I can say how to change my technique to improve it. ○ I can ask other people what they think of my product and reflect on their feedback. ○ I can change my designs as I work out what works/what doesn't work.
	5-6	Compliant materials – Textiles Hand puppet		✓	✓		<ul style="list-style-type: none"> ○ I can use a needle and thread safely independently. ○ I can produce neat hand stitching on fabric. ○ I can cut and stitch straight lines by hand. ○ I can cut and stitch curves by hand. ○ I can combine different shapes to produce a design. ○ I can say what is good and bad about my product. ○ I can improve my stitching by saying what errors I have made. ○ I can say how to change my technique to improve it. ○ I can ask other people what they think of my product and reflect on their feedback. ○ I can change my designs as I work out what works/what doesn't work.

C	3-4	Iterative design – Biomimicry Bag design	✓		✓	<ul style="list-style-type: none"> ○ I can use inspiration from nature to inspire my ideas. ○ I can identify key features of my design ideas and annotate them to explain them. ○ I can use colour effectively to enhance my design ideas. ○ I can use sketch modelling to create simple 3D shapes. ○ I can work well as a design team member to produce collaborative ideas. ○ I can say what is good and bad about a product. ○ I can clearly explain how I would improve my product if I were to make it again. ○ I can discuss with my team how we have managed the design task and how we could work more effectively. ○ I can evaluate existing products and say what is good and bad about them. ○ I can use research into existing products to inspire and influence my designs. 	
	5-6		✓		✓	<ul style="list-style-type: none"> ○ I can use inspiration from nature to inspire my ideas and show clear links to how they function. ○ I can identify key features of my design ideas and annotate them to explain and justify them, ○ I can use colour and shading effectively to enhance my design ideas. ○ I can use sketch modelling to create 3D shapes. ○ I can work well as a design team member to produce collaborative ideas. ○ I can say what is good and bad about a product. ○ I can clearly explain how I would improve my product if I were to make it again. ○ I can discuss with my team how we have managed the design task and how we could work more effectively. ○ I can evaluate existing products and say what is good and bad about them to improve my own ideas. ○ I can use research into existing products to inspire and influence my designs. 	
	3-4	Systems and Control - Circuits, levers and linkages and mechanisms Linkages project Circuits Gears			✓	✓	<ul style="list-style-type: none"> ○ I can make simple circuits with components such as bulbs, batteries and switches. ○ I can state what components purpose is when used in circuits. ○ I can use components in different ways to make series and parallel circuits. ○ I can make simple mechanisms that use levers and linkages independently and state what they do. ○ I can create simple mechanisms that use gears and state what they do. ○ I can make changes to circuits to improve them. ○ I can explain how I would improve my circuits and structures if I were to make it again. ○ I can discuss with my team how we have managed the structures task and what could have been better. ○ I can evaluate methods of strengthening structures to decide on the best method with some support. ○ I can identify what I developed skills in and what I still need to develop.
	5-6	Tallest building (Evaluating assessment only)			✓	✓	<ul style="list-style-type: none"> ○ I can make circuits with components such as bulbs, batteries, buzzers, resistors and switches. ○ I can explain what components purpose is when used in circuits. ○ I can use components in different ways to make complex series and parallel circuits. ○ I can make mechanisms that use levers and linkages independently and explain what they do. ○ I can create mechanisms that use gears and explain what they do. ○ I can make changes to circuits to make them work more effectively. ○ I can clearly explain how I would improve my circuits and structures if I were to make it again. ○ I can discuss with my team how we have managed the structures task and how we could improve it. ○ I can evaluate methods of strengthening structures to decide on the best method. ○ I can identify what I developed skills in and what I still need to develop to progress.
D	3-4	Food Safety & Nutrition – Eat Well Guide Fruit salad Salad/sandwiches Cous-cous salad		✓		<ul style="list-style-type: none"> ○ I can identify the different sections of the eat well guide. ○ I can cut and prepare fruit and vegetables safely. ○ I can wash equipment safely and hygienically, ○ I can follow safety rules in the kitchen. ○ I can weight fruit and vegetables. ○ I can identify which foods we have less of. ○ I can identify hygiene and safety rules. ○ I can identify aspects of food groups within the eat well guide. ○ I can state a reason for each section of the eat well plate. ○ I can explain how each section helps the body work. 	
	5-6			✓		<ul style="list-style-type: none"> ○ I can identify and explain the different sections of the eat well guide. ○ I can cut and prepare fruit and vegetables safely independently. ○ I can wash equipment safely and hygienically, ○ I can follow safety rules in the kitchen independently. ○ I can weight fruit and vegetables accurately. ○ I can identify which foods we have less of and explain why, ○ I can identify hygiene and safety rules. ○ I can explain aspects of food groups within the eat well guide. ○ I can explain a reason for each section of the eat well plate. ○ I can explain why each section helps the body work. 	