

## DT MEDIUM TERM PLAN (MTP) YEAR 4 2023-2024: Taught 2nd Half of each term

DT MTP Y4	Autumn 2: 5 LESSONS	Spring 2: 5 LESSONS	Summer 2: 5 LESSONS
	<p><b>Topic Title: Structure: Pavilions</b></p> <p><b>Key knowledge:</b></p> <ul style="list-style-type: none"> <li>To understand what a frame structure is.</li> <li>To know that a 'free-standing' structure is one that can stand on its own.</li> <li>To know that a pavilion is a decorative building or structure for leisure activities.</li> <li>To know that cladding can be applied to structures for different effects.</li> <li>To know that aesthetics are how a product looks.</li> </ul> <p><b>Key Skills:</b></p> <ul style="list-style-type: none"> <li>Design a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect.</li> <li>Build frame structures designed to support weight.</li> <li>Create a range of different shaped frame structures.</li> <li>Make a variety of free-standing frame structures of different shapes and sizes.</li> <li>Select appropriate materials to build a strong structure and for the cladding.</li> <li>Reinforce corners to strengthen a structure.</li> <li>Create a design in accordance with a plan.</li> <li>Learn to create different textural effects with materials.</li> </ul> <p><b>Key vocabulary:</b></p>	<p><b>Topic Title: Mechanical systems: making a slingshot car</b></p> <p><b>Key knowledge:</b></p> <ul style="list-style-type: none"> <li>To understand that all moving things have kinetic energy.</li> <li>To understand that kinetic energy is the energy that something (object/person) has by being in motion.</li> <li>To know that air resistance is the level of drag on an object as it is forced through the air.</li> <li>To understand that the shape of a moving object will affect how it moved due to air resistance.</li> </ul> <p><b>Key Skills:</b></p> <ul style="list-style-type: none"> <li>Design a shape that reduces air resistance.</li> <li>Draw a net to create a structure from.</li> <li>Choose shapes that increase or decrease speed as a result of air resistance.</li> <li>Personalise a design.</li> <li>Measure, mark, cut, and assemble with increasing accuracy.</li> <li>Make a model based on a chosen design.</li> <li>Evaluate the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance.</li> </ul> <p><b>Key vocabulary:</b> chassis, energy, kinetic, mechanism, air resistance, design, structure, graphics, research, model template</p>	<p><b>Topic Title: Cooking and nutrition: Adapting a recipe</b></p> <p><b>Key knowledge:</b></p> <ul style="list-style-type: none"> <li>To know that the amount of an ingredient in a recipe is known as the 'quantity'.</li> <li>To know that it is important to use oven gloves when removing hot food from an oven.</li> <li>To know the following cooking techniques: sieving, creaming, rubbing method, cooling.</li> <li>To understand the importance of budgeting while planning ingredients for biscuits.</li> </ul> <p><b>Key Skills:</b></p> <ul style="list-style-type: none"> <li>Design a biscuit within a given budget, drawing upon previous taste testing.</li> <li>Follow a baking recipe.</li> <li>Cook safely, following basic hygiene rules.</li> <li>Adapt a recipe.</li> <li>Evaluate a recipe, considering: taste, smell, texture and appearance.</li> <li>Describe the impact of the budget on the selection of ingredients.</li> <li>Evaluate and compare a range of products.</li> <li>Suggest modifications.</li> </ul> <p><b>Key vocabulary:</b> design criteria, texture, aesthetic, cross-contamination, processed, research, innovative, measure, diet, packaging</p>

	aesthetic, cladding, design criteria, evaluation, frame structure, function, inspiration, pavilion, reinforce, stable, structure, target audience, target customer, texture, theme.			
Lesson 1	<p><b>Lesson objective (s):</b></p> <p>To create a range of different shaped frame structures.</p> <p><b>Brief outline of main tasks:</b></p> <p>Using toothpicks and sweets, pupils explore different frame structures to test which are the most stable.</p>	<p><b>Lesson objective (s):</b></p> <p>To build a car chassis.</p> <p><b>Brief outline of main tasks:</b></p> <p>Using a range of materials, children follow instructions to make the chassis of their car and the slingshot launch mechanism, learning that their slingshot cars work by storing kinetic energy in the elastic band before in launches.</p>	<p><b>Lesson objective (s):</b></p> <p>To follow a baking recipe.</p> <p><b>Brief outline of main tasks:</b></p> <p>After sampling and evaluating a range of biscuits, children bake a simple biscuit recipe.</p>	
Lesson 2	<p><b>Lesson objective (s):</b></p> <p>To design a structure.</p> <p><b>Brief outline of main tasks:</b></p> <p>Using their knowledge from lesson1, the children design their pavilion structures.</p>	<p><b>Lesson objective (s):</b></p> <p>To design a shape that reduces air resistance.</p> <p><b>Brief outline of main tasks:</b></p> <p>Understanding that the shape of a car body can wither increase or decrease the speed it travels, children design car bodies to cover their chassis from lesson 1.</p>	<p><b>Lesson objective (s):</b></p> <p>To make and test a prototype.</p> <p><b>Brief outline of main tasks:</b></p> <p>Children work in groups to make the biscuit recipe from Lesson 1, adding different ingredients to their dough to discover which tastes best when baked.</p>	

Lesson 3	<p><b>Lesson objective (s):</b></p> <p>To build a frame structure.</p> <p><b>Brief outline of main tasks:</b></p> <p>Using their designs and a range of materials, children will build a strong frame structure for their pavilion.</p>	<p><b>Lesson objective (s):</b></p> <p>To make a model based on a chosen design.</p> <p><b>Brief outline of main tasks:</b></p> <p>Children make the nets for their car bodies based on their designs, adding the graphics and tabs that will attach to the chassis.</p>	<p><b>Lesson objective (s):</b></p> <p>To design a biscuit to a given budget.</p> <p><b>Brief outline of main tasks:</b></p> <p>Working to a budget which includes imaginary costs, children decide which ingredients they will spend the rest of their budget on for their biscuits.</p>	
Lesson 4	<p><b>Lesson objective (s):</b></p> <p>To add cladding to a frame structure.</p> <p><b>Brief outline of main tasks:</b></p> <p>Experimenting with different decorative techniques, pupils use paper and other materials to clad their pavilions.</p>	<p><b>Lesson objective (s):</b></p> <p>To assemble and test my completed product.</p> <p><b>Brief outline of main tasks:</b></p> <p>After attaching the nets that they made in lesson 3, children carry out time trials and other competitions to test and compare their cars.</p>	<p><b>Lesson objective (s):</b></p> <p>To make a biscuit that meets a given design brief.</p> <p><b>Brief outline of main tasks:</b></p> <p>It's the 'Bake Off' – after making a batch of their final adapted biscuit design and packaging, a panel of judges taste and review each group's</p>	

			creations.	
Lesson 5	<p><b>Lesson objective (s):</b> <b>ASSESSMENT</b></p> <p>To explain what I know about building a pavilion.</p> <p><b>Brief outline of main tasks:</b></p> <p>Children will work independently to answer questions relating to the areas taught this half term.</p> <p>Assessment to be used to record progress.</p>	<p><b>Lesson objective (s):</b> <b>ASSESSMENT</b></p> <p>To explain what I know about making a slingshot car.</p> <p><b>Brief outline of main tasks:</b></p> <p>Children will work independently to answer questions relating to the areas taught this half term.</p>	<p><b>Lesson objective (s):</b> <b>ASSESSMENT</b></p> <p>To explain what I know about baking.</p> <p><b>Brief outline of main tasks:</b></p> <p>Children will work independently to answer questions relating to the areas taught this half term.</p>	
Seasonal projects	<b>AUTUMN 2 – CHRISTMAS CRAFT – YARN DECORATIONS</b>			

	<p><b>Lesson objective (s):</b></p> <p>To create a yarn-wrapped Christmas decoration.</p> <p><b>Brief outline of main tasks:</b></p> <p>Children will use yarn to create a Christmas decoration.</p>			
Stand-alone lessons		<p>Textiles – Fastenings (Lesson 1)</p> <p><b>Lesson objective (s):</b></p> <p>To identify and evaluate different types of fastenings.</p> <p><b>Brief outline of main tasks:</b></p> <p>Children explore different fastenings around them and consider their advantages and disadvantages.</p>		