



Riverside Primary School and Nursery
Key Learning and Vocabulary - Unit-by-unit
DESIGN & TECHNOLOGY

YEAR 1		
Unit 1 Structures - Pencil Pot	Unit 2 Textile - puppets	Unit 3 Fruit and vegetables
Key Learning	Key Learning	Key Learning
To make a stable structure	To explore different ways of joining fabrics,	To identify if a food is a root or vegetable
To use cutting and joining techniques	To develop skills of cutting, glueing and stapling.	To identify where plants grow and which parts we eat
To design and assemble a pencil pot	To design and make puppet using a template	To chop and slice fruit and vegetables safely to make a smoothie
To evaluate their pencil pot	To join fabrics together accurately and decorate	To taste and compare fruit and vegetables and combinations
Vocabulary	Vocabulary	Vocabulary
Windmill, axle, client, design, template, strong, stable, structure, design criteria, evaluate	Puppet, join, glue, staple, cut, decorate, model, safety pin, design, template,	Fruit, vegetable, seed, root, smoothie, flavour,, design, peel, slice, chop,



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YEAR 2		
Unit 1 - Structures Baby Bear's chair	Unit 2 - Mechanisms: Fairground wheel	Unit 3 - Mechanisms: Making a moving picture
Key Learning	Key Learning	Key Learning
To identify natural and man made structures.	To know the features of a Ferris wheel include the wheel, frame, a base, an axle and an axle holder.	To know that mechanisms are a collection of moving parts that work together as a machine to produce movement.
To understand and explain 'stability' in a structure.	To design and label a wheel	To understand what a linkage and lever are.
To build a strong and stiff structure	To build a stable structure with a rotating wheel	To create working linkages that produce the desired input and output motions.
To design, build and evaluate a chair for a client against design criteria.	To test and adapt their design	To design monsters suitable for children, which satisfy most of the design criteria.
	To evaluate their design against design criteria.	To build and evaluate their design against the design criteria.
Vocabulary	Vocabulary	Vocabulary
Design criteria, natural, structure, shape, man-made, properties, stable, model, test	Design, wheel, axle holder, design criteria, Ferris wheel, axle, frame, mechanism	Axle, input, mechanical, pivot, design criteria, linkage, output, lever, wheel



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YEAR 3		
Unit 1 - Constructing a castle	Unit 2 - Food, eating seasonally	Unit 3 - Textiles: Egyptian collars
Key Learning	Key Learning	Key Learning
To know the following features of a castle, flags, towers, battlements, turrets, curtain walls, moat, drawbridge, gatehouse - and their purpose	To know when and where fruits and vegetables are grown	To use the cross stitch sewing technique and to know how to applique
To recognise how multiple shapes (2D/3D shapes) are combined to form a strong and stable structure (of a castle)	To explore seasonality of fruits and vegetables	To design and make an Egyptian collar based on a theme.
To design a castle with key features which satisfy a given purpose	To know the relationship of colours of fruits and vegetables and their additional health benefits	Develop skills in cutting, stitching and shaping fabric.
To construct 3D nets to make towers and turrets and secure onto a base	To create healthy and nutritious food using seasonal ingredients	To evaluate their design.
Vocabulary	Vocabulary	Vocabulary
2D shapes, 3D shapes, design criteria, evaluate, facade, feature, net, recyclable, scoring, stable, strong, structure, tab, weak	Climate, exported, imported, nationality, nutrients, recipe, seasonal food, seasons, ingredients, food hygiene	Applique, cross stitch, running stitch, template, fabric, thread, cotton, embellish, water resistant, breathable



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YEAR 4		
Electrical systems - Torches	Mechanical systems: Slingshot car	Structure - Pavilions
Key Learning	Key Learning	Key Learning
To use appropriate equipment to cut and attach materials.	To know what kinetic energy is and that all moving things have it.	To understand what frame and free standing structures are.
To design a torch, considering the target audience and create both design and success criteria focussing on features of individual design ideas.	To design and make a model of an object that reduces air resistance.	To know that a pavilion is a decorative building or structure for leisure activities.
To know what an electrical conductor and insulator is.	To understand and can explain what air resistance is and how the shape of an object affects the way it moves.	To explore the different aesthetics of a structure including how cladding, light shadow and patterns are used for different effects.
To explain the key elements of a circuit and how it works (including what a battery does).	To measure, mark, cut and assemble using a variety of tools to suit a plan.	To create structures of different sizes using a variety of textural effects and materials.
To test and evaluate electrical products and the success of the final product.	To test and evaluate how successful my final product is based on speed and accuracy of workmanship.	To design, plan, build and evaluate a stable structure.
Vocabulary	Vocabulary	Vocabulary
Battery, buzzer, circuit, series, circuit, component, design criteria, target audience, aesthetics, bulb, conductor, insulator, LED, properties, assemble.	Chassis, kinetic, air resistance, structure, research, energy, mechanism, design, graphics, model, template.	3D shapes, design criteria, natural, cladding, innovative, reinforce, structure.



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YEAR 5		
Unit 1 - Electrical Systems: Doodlers	Unit 2 - Mechanical Systems- Pop up book	Unit 3 - Cooking & Nutrition- Developing a recipe
Key Learning	Key Learning	Key Learning
To know what a series circuit is	To design a pop up book	To be able to understand how ingredients are reared and processed.
To understand that a motor converts electrical energy into mechanical energy	To follow their own design brief to make their pop up book	To be able to adapt to design a recipe and evaluate nutritional information
To identify motors in products	To know how to use layers and spacers to cover the working of mechanisms	To design a product label.
To explain how a product is constructed	To be able to create a high quality product suitable for a target user.	To be able to practise food preparation skills and follow and make an adapted recipe.
To use knowledge to develop own product		
Vocabulary	Vocabulary	Vocabulary
Circuit Component Configuration Current DIY Stable Product analysis Axles Rotate Peddle	Criteria Lever Mechanism Spacer Reinforce Motion Pivot Input/output Sliders Structure	Processed Ethical Balance Reared Cross contamination Welfare Consume purchase



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YEAR 6		
Unit 1 - Structures: Playgrounds	Unit 2- Electrical Systems: Steady Hand Game	Unit 3 - Textiles: Bags
Key Learning	Key Learning	Key Learning
To design a playground with a variety of structures.	To research and analyse a range of children's toys	To explore how pattern pieces are used to design and make fabric items
To build a range of structures.	To design a steady hand game	To use pattern piece templates to shape, cut and stitch fabric
To improve and add detail to structures.	To construct a stable base	To design a bag and create the prototype pattern pieces
To create a surrounding landscape.	To assemble electronics and complete their electronic game	To create a prototype bag from a design sketch
		To add features to a bag
Vocabulary	Vocabulary	Vocabulary
Apparatus, cladding, design criteria, equipment, landscape features, playground	Assemble, battery, battery pack, benefit, bulb, bulb holder, buzzer, circuit, circuit symbol, component, conductor	Innovate, pattern piece, seam allowance