



St Mark's C of E Primary School: Medium Term Planning

Design and Technology: Cycle B Autumn Term

LKS2

Unit Focus: Structures: Castles ([Kapow Primary – Design and Technology – Y3 – Structures](#))

NC Objectives:

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities
- Investigate and analyse a range of existing products
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures

	Learning Objective What is being learned rather than what is being done	Resources Any links to resources.	End-point knowledge What knowledge should children have gained by the end of the lesson? This will be the focus of retrieval activities and monitoring.
1	LO: To identify the common features of a castle.	Practical resources: Whiteboards, whiteboard pens, pencils, paper, rulers, 2D shapes Other resources: Kapow Presentation: Features of a Castle	Vocabulary: castle, key features, strong, stiff, stable, 3D, 2D, flags, battlements, towers, turrets, gatehouse, moat, inner and outer curtain walls, drawbridge - I know what castles are and what they are used for: - I know some key features of a castle: flags, battlements, towers, turrets, gatehouse, moat, inner and outer curtain walls, and drawbridge. - I can identify some of the 3D shapes that make up the structure. - I can explain why a castle needs to be strong and stable.
2	To design a castle using a design specification.	Practical resources: Examples of A4 and A3 nets (pre-assembled), castle design template sheet, 3D shapes	Vocabulary: design, design specification, 3D, 2D, castle, shape, key features, simple, complex

			<ul style="list-style-type: none"> - I can identify which structural design would be simpler/more complex to construct, and explain why. - I can add my own ideas to a design specification. - I can draw and label a castle design.
3	To explore and construct 3D nets.	<p>Practical resources: Printed nets, scissors, glues sticks, rulers</p> <p>Other resources: Kapow Pupil Video: Nets and Structures</p>	<p>Vocabulary: Net, 3D, shape, castle, structure, cut, fold, score, accuracy, cuboid, cube, prism, pyramid, cylinder, cone</p> <ul style="list-style-type: none"> - I know that a net is what a 3D shape would look like if it were opened out flat - I can construct a range of 3D geometric shapes using a net by: <ul style="list-style-type: none"> - Cutting along the bold lines - Folding along the dotted lines - Keeping tabs the correct size - Making crisp folded edges - Construction the net using glue
4	To construct a castle with a stable base.	<p>Practical resources: 3D shapes made from last lesson or nets, junk modelling materials (tubes etc), masking tape, blue tack, glue, scissors, A3 card</p>	<p>Vocabulary: castle, construct, stable, assemble, 3D shapes, net, base, stable, join</p> <ul style="list-style-type: none"> - I can construct my castle to meet the requirements of my brief by: <ul style="list-style-type: none"> - making neat 3D shapes using nets - stacking shapes and recyclable materials to make the structures of my castle - creating a castle base to secure my structures to
5	To add facades and smaller details to my structure.	<p>Practical resources: Coloured card, coloured pencils, pencils, string, examples of patterns printed (brick work etc), scissors, glue, tape</p>	<p>Vocabulary: Façade,</p> <ul style="list-style-type: none"> - I know that a façade is the outside faces of the building - I can add facades and other decorative features to my castle - I can use my design to ensure my structure meets the design specification
6	To evaluate my castle	<p>Other resources: Optional: Kapow Evaluation sheet</p> <p><i>As part of the evaluation, children should have opportunities to test the stability of the structure that they have made.</i></p>	<p>Vocabulary: Evaluate, product, design specification</p> <ul style="list-style-type: none"> - I can compare my finished product to my design, explaining if and why they have changed - I can evaluate my castle against the design specification - I can say something that I found hard - I can say something that I have learned - I can say something that I would do differently - I know that evaluations are important to improve products