



Design Technology Medium Term Planning Year 6



Construction

Mechanisms

Sewing/ textiles

Cooking and nutrition

Woodwork

Topic	Knowledge	Children will be able to...	Prior Knowledge	Key Vocabulary
America	To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting,	Project objective: I can create a bridge which withholds a weight on top. Throughout the topic discuss the Engineer- Othmar Ammann who designed the George Washington Bridge and the Bayonne Bridge in New York City (Nationality- Swiss) - To explore the different types of bridges and how they are built. To consider the appearance — planning pros and cons for the design. Why do they make a particular style bridge? To come up with a range of ideas after collecting information from different sources. Use of pictures of different examples, research , different designers Explain how a particular design inspired them. - To design and plan a bridge To create a plan and prototype to secure understanding of model and how	Children can produce a detailed step by step plan. Children can explain how a product will appeal to a specific audience. Children can make a prototype before the final version. Children have completed	beam, joist, construction, dimension, girder, lathe, string, elastic, straws, strong cardboard, card, masking tape, glue, glue gun, primary colours, red, yellow, blue, secondary colours, green, purple, orange, shade, light, dark, white, black, appeal,

shaping, joining and finishing], accurately.

To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

to make figurine.

(Include annotations, plan, prototype)

To consider the advantages /disadvantages of different designs.

To produce a detailed, step by step plan including a design criteria.

(Audience, appearance, function, usability, Sketch. Annotations including colour, shape, size design, step by step plan, suggestion of alternative plan with positive features and drawbacks.)

- To make a bridge using junk modelling materials

To choose and use appropriate tools and resources effectively.

To measure and mark out accurately

Nearest mm

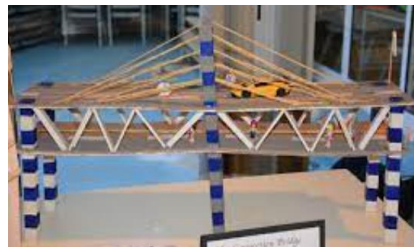
To cut materials with precision and refine the finish with appropriate tools.

Precise scissor cut after roughly cutting shape.

To show an understanding of the quality of materials in order to choose appropriate tools to cut and shape.

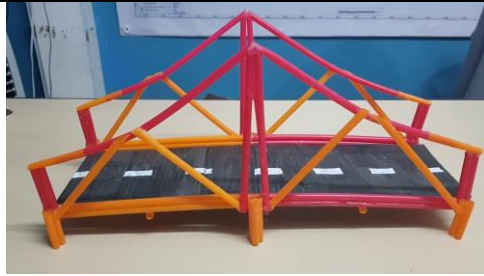
Different cutting implements for card compared to paper

Materials: String, elastic, straws, strong cardboard, card, masking tape
(an arched bridge, as suspension bridge or a bridge with trusses)



evaluations before about products they have made.

audience, product, evaluate, evaluation, positive, negative, improvements, difficulties, adaptations,



- To test the bridge for strength placing a heavy stone on them to see if it withholds weight

To evaluate my product using the design criteria.

Identifying any changes that have been made and why. How any challenges were overcome. Successes. Improvements to be made in the future.

WWII	To understand and apply the principles of a healthy and varied diet. To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	Project objective: I can follow a recipe to make an item of food which is edible. - To know why Woolton pie was eaten during WWII. To research ingredients for Woolton pie and find a suitable recipe. - To create and refine a recipe from their research. - To follow and produce a set of instructions and make the dish Woolton pie. To research and decide on a recipe that I would like to use, ingredients and equipment To produce a detailed, step by step plan including a design criteria. (Audience, appearance, function, usability, Sketch. Annotations including colour, shape, size design, step by step plan, suggestion of alternative plan with positive features and drawbacks.) To consider the seasonality of vegetables and the reasons behind use of these in the past. To use ratios to work out measures where required. To understand and use the different coloured chopping boards when I cook. To use a range of tools and equipment competently.	Children can describe how to be hygienic in the kitchen. Children can use a range of tools and equipment competently. Children can evaluate the appearance and taste against original criteria.	WWII, Woolton pie, ingredients, equipment, recipe, instructions, pastry, cook, weigh, chop, fry, mix, stir, peel, saute, mls, grams, claw, bridge, safe, clean, knife, peeler, ladle, evaluate, evaluation, criteria, improvements, positive, negative, change, adapt, improve, taste, texture, tongue, mouth, swallow, senses, appearance,
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To apply the rules for basic food hygiene and other safe practices (linking to knowledge of micro-organisms)

Always wash your hands thoroughly with soap and warm water before handling food

Clean all surfaces, utensils, chopping boards and cutlery with hot soapy water. Expiration dates and follow the food storage and cooking guidelines. food is cooked thoroughly before it is consumed

To measure accurately using weighing scales/ jugs (Grams, kilograms, ml and litres)

To write step by step instructions describing the process of making the dish.

To create and refine recipes.

Ingredients, cooking time, methods, temperatures

- To evaluate the taste, texture and appearance.

To evaluate my product using the design criteria.

Identifying any changes that have been made and why. How any challenges were overcome. Successes. Improvements to be made in the future.

Describe the taste, texture, appearance and smell.



The Royal Family and Parliament	To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. To evaluate their	Project objective: I can create a working fairground ride. Throughout the topic discuss the Architect Sir Christopher Wren (Nationality-English) - To research a range of rotational fairground rides. To explore different ways of using electrical circuits and switches to make a rotary motion. To come up with a range of ideas after collecting information from different sources. Use of pictures of different examples, research , different designers Explain how a particular design inspired them. - To decide and plan a fairground ride using cross section diagram design with annotations. To create a plan and prototype to secure understanding of model and how to make figurine. (Include annotations, plan, prototype) To consider the advantages /disadvantages of different designs. To produce a detailed, step by step plan including a design criteria. (Audience, appearance, function, usability, Sketch. Annotations including colour, shape, size design, step by step plan, suggestion of alternative plan with positive features and drawbacks.)	Children can produce a detailed step by step plan. Children can explain how a product will appeal to a specific audience. Children can make a prototype before the final version. Children have completed evaluations before about	tape measure, sandpaper, nuts , bolts, hammer, nails, plywood, screwdriver, saw clamp, vice, safety glasses, belt, pivot, pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output
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ideas and products against their own design criteria and consider the views of others to improve their work.

- To create a structure for a fairground ride using wooden parts as a small group. To use a belt and pulley system to transfer movement from one axle to another to aid the rotary motion.

To explore different ways of using electrical circuits and switches to make a rotary motion.

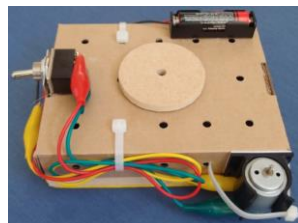
To use a belt and pulley system to transfer movement from one axle to another.

To select the most appropriate techniques for a given task.

To choose and use appropriate tools and resources effectively.

To measure and mark out accurately (Nearest mm)

To assemble, combine and join materials and components accurately



<https://www.its-group.co.uk/blog/2018/12/07/ks2-merry-go-round.html> -

products they have made.

		Instructions to create ● To evaluate the product against a set of criteria. To evaluate my product using the design criteria. Identifying any changes that have been made and why. How any challenges were overcome. Successes. Improvements to be made in the future.		
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Topic	Knowledge	Children will be able to...	Prior Knowledge	Key Vocabulary
Shang Dynasty	To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and	Project objective: I can create a kite which flies in the wind. - To explore the 8 different types of kites and the materials they are made from To come up with a range of ideas after collecting information from different sources. Use of pictures of different examples, research , different designers Explain how a particular design inspired them.  - To design a kite based on a design criteria using computer aided design (CAD) To create a plan and prototype to secure understanding of model and how to make figurine. (Include annotations, plan, prototype) To consider the advantages /disadvantages of different designs. To produce a detailed, step by step plan including a design criteria. (Audience, appearance, function, usability, Sketch. Annotations including colour, shape, size design, step by step plan, suggestion of alternative plan	Children will have previous experience of sewing. Children will know how to sew a running stitch. Children will be able to design a product with annotations. Children will be able to evaluate a product against set criteria.	prototype, sewing, plan, annotate, needles, thread, cotton, back stitch, whip stitch, running stitch, appeal, audience, product, evaluate, evaluation, positive, adapt, review, design, change, negative, improvements, difficulties, adaptations

finishing], accurately.

To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

with positive features and drawbacks.)

- To use a variety of stitches to join different fabrics to create a kite.

To measure, mark, cut and shape accurately (Nearest mm)

To sew and join different fabrics using a variety of stitches which have become smaller, neater and more consistent.

To become more confident at selecting own fabrics and stitches to achieve a desired effect.

To choose and use a stitch from a range of stitches to suit my design.
(Running stitch, blanket stitch, back stitch, invisible stitch)

To choose the correct needle for different sewing techniques

To create a product which includes a seam allowance.

To consider the qualities of the materials I use to create suitable tactile and visual effects for decoration.

To persevere and adapt my work when my original ideas do not work.

- To evaluate the kite against a set of given criteria considering audience, effectiveness and quality.

To evaluate my product using the design criteria.

Identifying any changes that have been made and why. How any challenges were overcome. Successes. Improvements to be made in the future.

