





Design Technology Curriculum Overview 2019/2020

<p>Nursery</p>	<p>On going—modelling & construction, using different textures</p> <p>Clay Diva's , fruit kebabs</p>	<p>Constructions of rockets</p> <p>3 little pigs constructed houses</p>	<p>Making biscuits</p> <p>Hot air balloons</p>
<p>Reception</p>	<p>On going—modelling & construction, using different textures</p> <p>Clay Diva's, made bread</p>	<p>Chinese noodles & dragon</p> <p>Made fossils</p>	<p>Smoothies</p> <p>Newspaper plant pots</p> <p>Butterfly kites</p>
<p>Year 1</p>	<p>Pulleys & Levers</p> <p>Pop-up toy box</p> <div data-bbox="524 927 987 1225" style="background-color: #fff9c4; padding: 5px;"> <p>Mechanisms Sliders and levers Key learning</p> <ul style="list-style-type: none"> Generating, modelling and communicating ideas. Planning making, selecting tools and using finishing techniques. Exploring books and products; evaluating own product against original criteria. Exploring sliders and levers; understanding types of movement; technical vocabulary. </div>	<p>tbc</p>	<p>Fruit Kebabs</p> <div data-bbox="1442 855 1944 1198" style="background-color: #ffe0b2; padding: 5px;"> <p>Food Preparing fruit and vegetables Key learning</p> <ul style="list-style-type: none"> Designing appealing products for a user; investigating fruit and vegetables and generating ideas; communicating through talk and drawings. Selecting a range of fruits and vegetables; using simple utensils and equipment. Tasting and evaluating user's preference; evaluating ideas and finished products against original criteria. Understand where ingredients come from and the basis of a healthy and varied diet. </div>

<p>Year 3</p>	<p>Design & create</p> <p>Healthy plate of food, including</p> <p>All food groups</p> <div data-bbox="504 427 976 818" style="border: 1px solid black; padding: 5px;"> <p>Food</p> <p>Healthy and varied diet</p> <p>Key learning</p> <ul style="list-style-type: none"> • Generate ideas and develop design criteria for an appealing product for a user and purpose. • Plan the main stages of a recipe, listing ingredients, utensils and equipment. • Select from a range of ingredients to make appropriate food products. • Carry out and record evaluations of a variety of ingredients and products. • Know a range of appropriate ingredients, and whether they are grown, reared or caught.  </div>	<p>Design & evaluate</p> <p>Sandwich snacks</p>	<p>Design a new cereal & packaging.</p> <p>Design and make a picture frame</p> <div data-bbox="1444 347 1939 671" style="border: 1px solid black; padding: 5px;"> <p>Structures</p> <p>Shell structures</p> <p>Key learning</p> <ul style="list-style-type: none"> • Generate and develop realistic ideas and design criteria collaboratively and through analysis of existing products. • Order the stages of making; selecting tools and using with some accuracy. • Investigate and evaluate shell structures, and construct strong, stiff shell structures. • Test and evaluate own products against design criteria and intended user and purpose.  </div>
<p>Year 4</p>	<p>Roman Chariots</p> <p>Sewing christmas stockings</p>	<p>Rivers- model showing a river system</p>	<p>Sewing—purses</p>

<p>Year 5</p>	<p>Design and make a slum (cityscapes)</p> <div data-bbox="504 284 985 699" style="border: 1px solid black; padding: 5px;"> <p>Structures Frame structures Key learning</p> <ul style="list-style-type: none"> • Research user needs and existing products and develop and model innovative ideas into a design specification. • Formulate a plan with a step-by-step list of tasks and resources. • Use tools to accurately measure, mark out, cut, shape and join materials to make frameworks. • Use finishing techniques suitable for the product and critically evaluate their products against a range of criteria. • Research key events and individuals relevant to frame structures.  </div>	<p>Titanic</p> <p>Design a ship</p> <p>(Research one room within the ship to focus project)</p>	<p>The Great Tomato Experiment (mechanical movement and momentum)</p> <div data-bbox="1444 363 1937 774" style="border: 1px solid black; padding: 5px;"> <p>Mechanical Systems Pulleys or gears Key learning</p> <ul style="list-style-type: none"> • Generate ideas through research and develop and communicate a simple design specification. • Select use a range of tools and equipment to make products that that are accurately assembled and well finished within the constraints of time, resources and cost. • Compare the final product to the original design specification and test the quality of the design, manufacture and functionality with the user. • Investigate famous manufacturing and engineering companies relevant to the project.  </div>
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Year 6

World war two

Evacuee cases/Design and create an Anderson shelter

Structures Frame structures

Key learning

- Research user needs and existing products and develop and model innovative ideas into a design specification.
- Formulate a plan with a step-by-step list of tasks and resources.
- Use tools to accurately measure, mark out, cut, shape and join materials to make frameworks.
- Use finishing techniques suitable for the product and critically evaluate their products against a range of criteria.
- Research key events and individuals relevant to frame structures.



Electrical Systems More complex switches and circuits

Key learning

- Develop a design specification for a functional product that responds automatically to changes in the environment.
- Formulate a step-by-step plan to making, listing tools, equipment, materials and components.
- Use a computer control program to enable an electrical product to work automatically in response to changes in the environment.
- Test and evaluate the system to demonstrate its effectiveness for the intended user and purpose.
- Know and use technical vocabulary relevant to the project.



Resources

[Alarming vehicles](#)

This encourages pupils to develop understanding of electrical systems through protecting vehicles using electrical alarms.

- [Developing handmade switches](#)
Presentations and a poster showing techniques for constructing switches.

[Designing and making alarm circuits using inputs with computer control](#)

A PowerPoint presentation which introduces a range of switches and sensors and using computer control when designing and making alarms.



Sew a cushion learning about different stitches complete with buttons and button holes. Include a printed design.

Textiles Combining different fabric shapes

Key learning

- Generate and communicate innovative ideas through research.
- Produce detailed lists of equipment and fabrics and formulate step-by-step plans for making.
- Investigate and analyse textile products linked to their final product and compare the final product to the original design specification.
- Know that a 3-D textile product can be made from a combination of pattern pieces, fabric shapes and different fabrics and that fabrics can be strengthened, stiffened and reinforced.

