

Key Stage 2 National Curriculum Objectives and Milestones

Year 3 Design & Technology

Objectives	Topics-ideas	Milestone 2
<p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].</p> <p>When designing and making, pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> 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 <input type="checkbox"/> <input type="checkbox"/> generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately <input type="checkbox"/> <input type="checkbox"/> 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 <p>Evaluate</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> investigate and analyse a range of existing products <input type="checkbox"/> <input type="checkbox"/> evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <input type="checkbox"/> <input type="checkbox"/> understand how key events and individuals in design and technology have helped shape the world <p>Technical knowledge</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	<p>Term 1 Chocolate recipes</p> <p>Term 2 Tudor Houses</p> <p>Term 3 Bridge with Meccano Construction Kit</p> <p>Salt Dough- amulets</p>	<p>To Master Practical Skills Food Chocolate Recipes</p> <p>Prepare ingredients hygienically using appropriate utensils.</p> <ul style="list-style-type: none"> • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). <p>Material Tudor House</p> <p>Cut materials accurately and safely by selecting appropriate tools.</p> <ul style="list-style-type: none"> • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Select appropriate joining techniques. <p>Construction Tudor Houses</p> <ul style="list-style-type: none"> • Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques. <p>Mechanics Bridge/Building/Towers</p> <ul style="list-style-type: none"> • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). <p>To design, make, evaluate and improve</p> <ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. <p>To take inspiration from design throughout history</p> <ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.

Key Stage 2 National Curriculum Objectives and Milestones

Year 4 Design & Technology

Objectives	Topics-ideas	Milestone 2
<p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].</p> <p>When designing and making, pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> 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 <input type="checkbox"/> <input type="checkbox"/> generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately <input type="checkbox"/> <input type="checkbox"/> 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 <p>Evaluate</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> investigate and analyse a range of existing products <input type="checkbox"/> <input type="checkbox"/> evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <input type="checkbox"/> <input type="checkbox"/> understand how key events and individuals in design and technology have helped shape the world <p>Technical knowledge</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	<p>Term 1 Bread Snacks</p> <p>Term 2 Pancakes</p> <p>Sewing Project-padded animals</p> <p>Ships-teach and tinker (different approaches)</p> <p>Term 3 Making Containers or Vases using coils</p>	<p>To Master Practical Skills Food Bread Snacks & Pancakes</p> <p>Prepare ingredients hygienically using appropriate utensils.</p> <ul style="list-style-type: none"> • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). <p>Textiles Making padded animals</p> <ul style="list-style-type: none"> • Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles. <p>Science (Electricity)</p> <ul style="list-style-type: none"> • Create series and parallel circuits <p>Materials</p> <p>Cut materials accurately and safely by selecting appropriate tools.</p> <ul style="list-style-type: none"> • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Select appropriate joining techniques. <p>Construction Tudor Houses</p> <ul style="list-style-type: none"> • Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques <p>To design, make, evaluate and improve</p> <ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs.

