

# **Barlows Primary School**

## **Design Technology Curriculum Content**

### **Key Stage 1 and 2**



**2017-2018**

# Barlows Primary School

## Curriculum Content -Year 1

### DESIGN TECHNOLOGY CURRICULUM

The content for Year 1 is detailed below:

Autumn Term	Spring Term	Summer Term
<b>Homes (Structures)</b>	<b>Moving Pictures (Mechanisms)</b>	<b>Eat More Fruit and Veg (Food)</b>
<b>Continuous Objectives (through each unit)</b>		
<b>Design</b>	<b>Make</b>	<b>Evaluate</b>
<ul style="list-style-type: none"> <li>Explore how to make structures stronger.</li> <li>Investigate different techniques for stiffening a variety of materials.</li> <li>Test different methods of enabling structures to remain stable.</li> <li>Join appropriately for different materials and situations e.g. glue, tape.</li> <li>Join fabrics by using running stitch, glue, staples, over sewing, tape</li> <li>Decorate fabrics with buttons, beads, sequins, braids, ribbons</li> </ul>	<ul style="list-style-type: none"> <li>Discuss their work as it progresses.</li> <li>Select materials from a limited range that will meet the design criteria.</li> <li>Select and name the tools needed to work the materials.</li> <li>Explain what they are making.</li> <li>Explain which materials they are using and why.</li> <li>Name the tools they are using.</li> <li>Describe what they need to do next.</li> </ul>	<ul style="list-style-type: none"> <li>Explore existing products and investigate how they have been made.</li> <li>Decide how existing products do/do not achieve their purpose.</li> <li>Talk about their design as they develop and identify good and bad points.</li> <li>Note changes made during the making process as annotation to plans/drawings.</li> <li>Say what they like and do not like about items they have made and attempt to say why.</li> <li>Discuss how closely their finished product meets their design criteria and how well it meets the needs of the user.</li> </ul>

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## Curriculum Content -Year 2

### DESIGN TECHNOLOGY CURRICULUM

The content for Year 2 is detailed below:

Autumn Term	Spring Term	Summer Term
<b>Hand Puppets (Textiles)</b>	<b>Vehicles (Mechanisms)</b>	<b>Pizza (Food)</b>
<ul style="list-style-type: none"> <li>Colour fabrics using a range of techniques e.g. fabric paints, printing, painting</li> <li>Cut out shapes which have been created by drawing round a template onto the fabric</li> <li>Join fabrics by using running stitch, glue, staples, over sewing, tape</li> <li>Decorate fabrics with buttons, beads, sequins, braids, ribbons</li> </ul>		
	<ul style="list-style-type: none"> <li>Join appropriately for different materials and situations e.g. glue, tape.</li> <li>Make vehicles with construction kits which contain free running wheels.</li> <li>Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels.</li> <li>Roll paper to create tubes.</li> <li>Attach wheels to a chassis using an axle.</li> <li>Mark out materials to be cut using a template.</li> <li>Use a glue gun with close supervision.</li> <li>Cut dowel using hacksaw and bench hook.</li> <li>Try out different axle fixings and their strengths and weaknesses.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Develop a food vocabulary using taste, smell, texture and feel</li> <li>Group familiar food products e.g. fruit and vegetables</li> <li>Explain where food comes from</li> <li>Cut, peel, grate, chop a range of ingredients</li> <li>Work safely and hygienically</li> <li>Understand the need for a variety of foods in a diet</li> <li>Measure and weigh food items, non statutory measures e.g. spoons and cups</li> </ul>
<b>Continuous Objectives (through each unit)</b>		
<b>Design</b>	<b>Make</b>	<b>Evaluate</b>
<ul style="list-style-type: none"> <li>Use pictures and words to convey what they want to design/make.</li> <li>Propose more than one idea for their product.</li> <li>Use kits/reclaimed materials to develop more than one idea.</li> <li>Model ideas with kits, reclaimed materials.</li> <li>Select appropriate technique explaining: First... Next... Last....</li> <li>Explore ideas by rearranging materials.</li> <li>Select pictures to help develop ideas.</li> <li>Use drawings to record ideas as they are developed.</li> <li>Add notes to drawings to help explanations.</li> <li>Describe their models and drawings of ideas and intentions.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Discuss their work as it progresses.</li> <li>Select materials from a limited range that will meet the design criteria.</li> <li>Select and name the tools needed to work the materials.</li> <li>Explain what they are making.</li> <li>Explain which materials they are using and why.</li> <li>Name the tools they are using.</li> <li>Describe what they need to do next.</li> </ul>	<ul style="list-style-type: none"> <li>Explore existing products and investigate how they have been made.</li> <li>Decide how existing products do/do not achieve their purpose.</li> <li>Talk about their design as they develop and identify good and bad points.</li> <li>Note changes made during the making process as annotation to plans/drawings.</li> <li>Say what they like and do not like about items they have made and attempt to say why.</li> <li>Discuss how closely their finished product meets their design criteria and how well it meets the needs of the user.</li> </ul>

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## Curriculum Content -Year 3

### DESIGN TECHNOLOGY CURRICULUM

The content for Year 3 is detailed below:

<u>Autumn Term</u>	<u>Spring Term</u>	<u>Summer Term</u>
<b>Loose Change/ Money Containers (Textiles, Structures)</b>	<b>Moving Monsters- Levers &amp; Linkages (Mechanisms)</b>	<b>Dips (Food)</b>
<b>Continuous Objectives (through each unit)</b>		
<b>Design</b>	<b>Make</b>	<b>Evaluate</b>
<ul style="list-style-type: none"> <li>Develop vocabulary for tools materials and their properties.</li> <li>Understand seam allowance.</li> <li>Join fabrics using running stitch, over sewing, blanket stitch.</li> <li>Prototype a product using J cloths.</li> <li>Use prototype to make pattern.</li> <li>Explore strengthening and stiffening of fabrics.</li> <li>Explore fastenings (inventors?) and recreate some.</li> <li>Sew on buttons and make loops.</li> <li>Use appropriate decoration techniques.</li> <li>Create shell or frame structures.</li> <li>Strengthen frames with diagonal struts.</li> <li>Make structures more stable by giving them a wide base.</li> <li>Measure and mark square section, strip and dowel accurately to 1cm.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare pattern pieces as templates for their design.</li> <li>Cut slots.</li> <li>Cut internal shapes.</li> <li>Select from a range of tools for cutting shaping joining and finishing.</li> <li>Use tools with accuracy.</li> <li>Select from techniques for different parts of the process.</li> <li>Select from materials according to their functional properties.</li> <li>Plan the stages of the making process.</li> <li>Use appropriate finishing techniques</li> </ul>	<ul style="list-style-type: none"> <li>Investigate similar products to the one to be made to give starting points for a design.</li> <li>Draw/sketch products to help analyse and understand how products are made.</li> <li>Research needs of user.</li> <li>Identify the strengths and weaknesses of their design ideas in relation to purpose/user.</li> <li>Decide which design idea to develop.</li> <li>Consider and explain how the finished product could be improved.</li> <li>Discuss how well the finished product meets the design criteria of the user.</li> <li>Investigate key events and individuals in Design and Technology.</li> </ul>

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## Curriculum Content -Year 4

### DESIGN TECHNOLOGY CURRICULUM

The content for Year 4 is detailed below:

Autumn Term	Spring Term	Summer Term
<b>Torches/Alarms (Electricity &amp; Control)</b> <ul style="list-style-type: none"> <li>• Develop vocabulary related to the project.</li> <li>• Incorporate a circuit into a model.</li> <li>• Use electrical systems such as switches bulbs and buzzers.</li> <li>• Use ICT to control products.</li> <li>• </li> </ul>	<b>Energy Saving Games (Structures)</b> <ul style="list-style-type: none"> <li>• Develop vocabulary related to the project.</li> <li>• Create shell or frame structures.</li> <li>• Strengthen frames with diagonal struts.</li> <li>• Make structures more stable by giving them a wide base.</li> <li>• Measure and mark square section, strip and dowel accurately to 1cm.</li> </ul>	<b>Seasonal Foods (Food)</b> <ul style="list-style-type: none"> <li>• Develop sensory vocabulary/knowledge using, smell, taste, texture and feel.</li> <li>• Analyse the taste, texture, smell and appearance of a range of foods (predominantly savoury).</li> <li>• Follow instructions/recipes.</li> <li>• Make healthy eating choices - use the Eatwell plate.</li> <li>• Join and combine a range of ingredients.</li> <li>• Explore seasonality of vegetables and fruit.</li> <li>• Find out which fruit and vegetables are grown in countries/continents studied in Geography.</li> <li>• Develop understanding of how meat/fish are reared/caught</li> </ul>
<b>Continuous Objectives (through each unit)</b>		
<b>Design</b> <ul style="list-style-type: none"> <li>• Develop more than one design or adaptation of an initial design.</li> <li>• Plan a sequence of actions to make a product.</li> <li>• Record the plan by drawing using annotated sketches.</li> <li>• Begin to use cross-sectional and exploded diagrams.</li> <li>• Use prototypes to develop and share ideas.</li> <li>• Think ahead about the order of their work and decide upon tools and materials.</li> <li>• Propose realistic suggestions as to how they can achieve their design ideas.</li> <li>• Consider aesthetic qualities of materials chosen.</li> <li>• Use CAD where appropriate.</li> </ul>	<b>Make</b> <ul style="list-style-type: none"> <li>• Prepare pattern pieces as templates for their design.</li> <li>• Cut slots.</li> <li>• Cut internal shapes.</li> <li>• Select from a range of tools for cutting shaping joining and finishing.</li> <li>• Use tools with accuracy.</li> <li>• Select from techniques for different parts of the process.</li> <li>• Select from materials according to their functional properties.</li> <li>• Plan the stages of the making process.</li> <li>• Use appropriate finishing techniques</li> </ul>	<b>Evaluate</b> <ul style="list-style-type: none"> <li>• Investigate similar products to the one to be made to give starting points for a design.</li> <li>• Draw/sketch products to help analyse and understand how products are made.</li> <li>• Research needs of user.</li> <li>• Identify the strengths and weaknesses of their design ideas in relation to purpose/user.</li> <li>• Decide which design idea to develop.</li> <li>• Consider and explain how the finished product could be improved.</li> <li>• Discuss how well the finished product meets the design criteria of the user.</li> <li>• Investigate key events and individuals in Design and Technology.</li> </ul>

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## Curriculum Content -Year 5

### DESIGN TECHNOLOGY CURRICULUM

The content for Year 5 is detailed below:

Autumn Term	Spring Term	Summer Term
<b>Moving Toys (Mechanisms, Control, Electricity)</b>	<b>Fashion and Textiles (Textiles)</b>	<b>Bread(Food)</b>
<b>Continuous Objectives (through each unit)</b>		
<b>Design</b>	<b>Make</b>	<b>Evaluate</b>
<ul style="list-style-type: none"> <li>• List tools needed before starting the activity.</li> <li>• Plan the sequence of work e.g. using a storyboard.</li> <li>• Record ideas using annotated diagrams.</li> <li>• Use models, kits and drawings to help formulate design ideas.</li> <li>• Combine modelling and drawing to refine ideas.</li> <li>• Devise step by step plans which can be read / followed by someone else.</li> <li>• Use exploded diagrams and cross-sectional diagrams to communicate ideas.</li> <li>• Sketch and model alternative ideas.</li> <li>• Decide which design idea to develop</li> </ul>	<ul style="list-style-type: none"> <li>• Make prototypes.</li> <li>• Develop one idea in depth.</li> <li>• Use researched information to inform decisions.</li> <li>• Produce detailed lists of ingredients / components / materials and tools.</li> <li>• Use a computer to model ideas.</li> <li>• Select from and use a wide range of tools.</li> <li>• Cut accurately and safely to a marked line.</li> <li>• Select from and use a wide range of materials.</li> <li>• Use appropriate finishing techniques for the project.</li> <li>• Refine their product - review and rework/improve</li> </ul>	<ul style="list-style-type: none"> <li>• Research and evaluate existing products (including book and web based research).</li> <li>• Consider user and purpose.</li> <li>• Identify the strengths and weaknesses of their design ideas.</li> <li>• Give a report using correct technical vocabulary.</li> <li>• Consider and explain how the finished product could be improved related to design criteria.</li> <li>• Discuss how well the finished product meets the design criteria of the user. Test on the user!</li> <li>• Understand how key people have influenced design.</li> </ul>

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## Curriculum Content -Year 6

### DESIGN TECHNOLOGY CURRICULUM

The content for Year 6 is detailed below:

Autumn Term	Spring Term	Summer Term
<b>Bridges (Structures, Computer Design)</b>	<b>Fairgrounds (Mechanisms, Control, Electricity)</b>	<b>Burger (including Vegetarian) (Food)</b>
<ul style="list-style-type: none"> <li>• Use the correct terminology for tools materials and processes.</li> <li>• Use bradawl to mark hole positions.</li> <li>• Use hand drill to drill tight and loose fit holes.</li> <li>• Cut strip wood, dowel, square section wood accurately to 1mm.</li> <li>• Join materials using appropriate methods.</li> <li>• Build frameworks to support mechanisms.</li> <li>• Stiffen and reinforce complex structures</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a technical vocabulary appropriate to the project.</li> <li>• Use mechanical systems such as cams, pulleys and gears.</li> <li>• Use electrical systems such as motors.</li> <li>• Program, monitor and control using ICT.</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare food products taking into account the properties of ingredients and sensory characteristics.</li> <li>• Weigh and measure using scales.</li> <li>• Select and prepare foods for a particular purpose.</li> <li>• Work safely and hygienically.</li> <li>• Show awareness of a healthy diet (using the eatwell plate).</li> <li>• Use a range of cooking techniques.</li> <li>• Know where and how ingredients are grown and processed.</li> <li>• Consider influence of chefs e.g. Jamie Oliver and school meals, Hugh Fearnley-Whittingstall and sustainable fishing etc.</li> <li>• </li> </ul>
<b>Continuous Objectives (through each unit)</b>		
<b>Design</b>	<b>Make</b>	<b>Evaluate</b>
<ul style="list-style-type: none"> <li>• List tools needed before starting the activity.</li> <li>• Plan the sequence of work e.g. using a storyboard.</li> <li>• Record ideas using annotated diagrams.</li> <li>• Use models, kits and drawings to help formulate design ideas.</li> <li>• Combine modelling and drawing to refine ideas.</li> <li>• Devise step by step plans which can be read / followed by someone else.</li> <li>• Use exploded diagrams and cross-sectional diagrams to communicate ideas.</li> <li>• Sketch and model alternative ideas.</li> <li>• Decide which design idea to develop</li> </ul>	<ul style="list-style-type: none"> <li>• Make prototypes.</li> <li>• Develop one idea in depth.</li> <li>• Use researched information to inform decisions.</li> <li>• Produce detailed lists of ingredients / components / materials and tools.</li> <li>• Use a computer to model ideas.</li> <li>• Select from and use a wide range of tools.</li> <li>• Cut accurately and safely to a marked line.</li> <li>• Select from and use a wide range of materials.</li> <li>• Use appropriate finishing techniques for the project.</li> </ul>	<ul style="list-style-type: none"> <li>• Research and evaluate existing products (including book and web based research).</li> <li>• Consider user and purpose.</li> <li>• Identify the strengths and weaknesses of their design ideas.</li> <li>• Give a report using correct technical vocabulary.</li> <li>• Consider and explain how the finished product could be improved related to design criteria.</li> <li>• Discuss how well the finished product meets the design criteria of the user. Test on the user!</li> <li>• Understand how key people have influenced design.</li> </ul>