

**DESIGN TECHNOLOGY**

**INTENT**

Art, craft and design embody some of the highest forms of human creativity. A high-quality design and technology education should engage, inspire and challenge pupils, equipping them with the knowledge and skills to experiment, invent and create their own works of art, craft and design.

**Developing, planning and communicating Ideas**

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ol style="list-style-type: none"> <li>1. Name the tools they are using</li> <li>2. Select materials from a limited range</li> <li>3. Model ideas with kits, reclaimed materials</li> <li>4. Use pictures and words to convey what they want to design and make</li> <li>5. Discuss their work as it progresses</li> </ol>	<ol style="list-style-type: none"> <li>1. Select tools and materials from a limited range that will meet the design criteria</li> <li>2. Explore ideas by rearranging materials</li> <li>3. Use pictures and words to convey what they want to design and make and to record ideas as they are developed</li> <li>4. Discuss their work as it progresses, adding notes to drawings to help explanations</li> </ol>	<ol style="list-style-type: none"> <li>1. Investigate similar products to the one to be made to give starting points for a design</li> <li>2. Sketch products to help analyse and understand how products are made</li> <li>3. Plan a sequence of actions to make a product, deciding which tools and materials to use</li> </ol>	<ol style="list-style-type: none"> <li>1. Investigate and sketch products to help analyse and understand how products are made</li> <li>2. Plan a more complex sequence of actions to make a product, deciding which tools and materials to use</li> <li>3. Record the plan by drawing (labelled sketches) or writing</li> <li>4. Develop more than one prototype or adaptation of an initial design</li> <li>5. Add notes to drawings to help explanations</li> </ol>	<ol style="list-style-type: none"> <li>1. Investigate products/images to collect ideas, giving alternative options</li> <li>2. Develop one idea in depth, planning the sequence of work using a storyboard</li> <li>3. Record ideas using annotated cross-sectional diagrams</li> <li>4. Use models, kits and drawings to help formulate prototypes &amp; pattern pieces</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a computer to model ideas</li> <li>2. Develop one idea in depth, combining modelling and drawing to refine ideas</li> <li>3. Record ideas using annotated cross-sectional and exploded diagrams</li> <li>4. Draw plans which can be read/ followed by someone else</li> <li>5. Use models, kits and drawings to make prototypes &amp; pattern pieces</li> </ol>

**DESIGN TECHNOLOGY****Food**

<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
<ol style="list-style-type: none"><li>1. Name familiar foodproducts</li><li>2. Cut and chop a range ofingredients</li><li>3. Measure and weigh fooditems using spoons and cups</li><li>4. Work safely and hygienically</li></ol>	<ol style="list-style-type: none"><li>1. Name and group familiarfood products</li><li>2. Cut, peel, grate, chop arange of ingredients</li><li>3. Measure and weigh fooditems using spoons and cups</li><li>4. Work safely and hygienically</li></ol>	<ol style="list-style-type: none"><li>1. Analyse the taste, texture,smell and appearance of a range of foods</li><li>2. Follow instructions whenmaking food</li><li>3. Measure and weigh solidingredients using standard measures: g, kg</li><li>4. Work safely and hygienically</li></ol>	<ol style="list-style-type: none"><li>1. Analyse the taste, texture,smell and appearance of a range of foods</li><li>2. Follow a simple recipe</li><li>3. Join and combine a rangeof ingredients e.g. snack foods</li><li>4. Measure and weigh solid and liquid ingredients using standard measures: ml, l</li><li>5. Work safely and hygienically</li></ol>	<ol style="list-style-type: none"><li>1. Taste a range of ingredients,food items to develop a sensory food vocabulary for use when designing.</li><li>2. Weigh and measure using digital scales</li><li>3. Cut and shape ingredients using appropriate tools andequipment e.g. grating</li><li>4. Join and combine food ingredients appropriately e.g. beating, rubbing in</li><li>5. Work safely and hygienically</li></ol>	<ol style="list-style-type: none"><li>1. Prepare food products taking into account the properties of ingredientsand sensory characteristics, for a particular purpose</li><li>2. Cut and shape ingredients using appropriate tools and equipment e.g. grating</li><li>3. Work safely and hygienically</li></ol>

<b>Construction</b>					
<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
<ol style="list-style-type: none"> <li>1. Make vehicles with construction kits which contain free running wheels</li> <li>2. Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels</li> <li>3. Join appropriately for different materials and situations e.g. glue, tape.</li> <li>4. Mark out materials to be cut using a template</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels</li> <li>2. Attach wheels to a chassis using an axle</li> <li>3. Mark out materials to be cut using a template</li> <li>4. Cut strip wood/dowel using hacksaw and bench hook</li> </ol>	<ol style="list-style-type: none"> <li>1. Create shell or frame structures, strengthen frames with diagonal struts</li> <li>2. Make structures more stable by giving them a wide base</li> <li>3. Prototype frame and shell structures</li> </ol>	<ol style="list-style-type: none"> <li>1. Incorporate a circuit with a bulb or buzzer into a model</li> <li>2. Create shell or frame structures, strengthen frames with diagonal struts</li> <li>3. Measure and mark square selection, strip and dowel accordingly to 1cm</li> <li>4. Use glue gun with close supervision (one to one)</li> </ol>	<ol style="list-style-type: none"> <li>1. Use bradawl to mark hole positions</li> <li>2. Use hand drill to drill tight and loose fit holes</li> <li>3. Cut strip wood, dowel, square section wood accurately to 1mm</li> <li>4. Join materials using appropriate methods</li> <li>5. Incorporate motor and a switch into a model</li> <li>6. Use glue gun with close supervision</li> </ol>	<ol style="list-style-type: none"> <li>1. Join materials using more complex methods</li> <li>2. Use a cam to make an up and down mechanism.</li> <li>3. Build frameworks using a range of materials e.g. wood, card, corrugated plastic to support mechanisms</li> </ol>

## DESIGN TECHNOLOGY

### Sheet materials

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ol style="list-style-type: none"> <li>1. Fold, tear and cut paper and card</li> <li>2. Roll paper to create tubes</li> <li>3. Cut along straight lines</li> <li>4. Curl paper</li> <li>5. Insert paper fasteners for card linkages</li> </ol>	<ol style="list-style-type: none"> <li>1. Roll and curl paper to make a design</li> <li>2. Cut along straight and curved lines</li> <li>3. Use hole punch</li> <li>4. Create hinges and simple pop ups</li> <li>5. Investigate strengthening sheet materials</li> </ol>	<ol style="list-style-type: none"> <li>1. Cut slots</li> <li>2. Use and explore complex pop ups</li> <li>3. Investigate joinings temporary, fixed and moving</li> <li>4. Create nets</li> </ol>	<ol style="list-style-type: none"> <li>1. Cut internal shapes</li> <li>2. Use lolly sticks/card to make levers and linkages</li> <li>3. Use linkages to make movement larger or more varied.</li> <li>4. Use and explore complex pop ups</li> <li>5. Create more complex nets</li> </ol>	<ol style="list-style-type: none"> <li>1. Cut accurately and safely to a marked line</li> <li>2. Use craft knife, cutting mat and safety ruler under one to one supervision if appropriate</li> <li>3. Choose an appropriate sheet material for the purpose</li> </ol>	<ol style="list-style-type: none"> <li>1. Join and combine materials with temporary, fixed or moving joinings</li> <li>2. Use craft knife, cutting mat and safety ruler under one to one supervision</li> <li>3. Choose an appropriate sheet material for the purpose</li> </ol>

### Evaluation

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ol style="list-style-type: none"> <li>1. Say what they like and don't like about items they have made and attempt to say why</li> <li>2. Talk about their designs as they develop and identify good and bad points</li> <li>3. Discuss how closely their finished products meet their</li> </ol>	<ol style="list-style-type: none"> <li>1. Say what they like and don't like about items they have made and attempt to say why</li> <li>2. Talk about changes made during the making process</li> <li>3. Discuss how closely their finished products meet their design criteria</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify the strengths and weaknesses of their design ideas</li> <li>2. Decide which design idea to develop</li> <li>3. Discuss how well the finished product meets the design criteria and possible improvements</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify the strengths and weaknesses of their design ideas</li> <li>2. Decide which design idea to develop</li> <li>3. Discuss how well the finished product meets the design criteria and possible improvements</li> </ol>	<ol style="list-style-type: none"> <li>1. Use the design criteria to inform their decisions about ways to proceed</li> <li>2. Justify their decisions about materials and methods of construction</li> <li>3. Reflect on their work using design criteria stating</li> </ol>	<ol style="list-style-type: none"> <li>1. Use the design criteria to inform their decisions about ways to proceed</li> <li>2. Justify their decisions about materials and methods of construction</li> <li>3. Reflect on their work using design criteria stating</li> </ol>

design criteria		4.	4. Understand how key events and individuals in design and technology have helped shape the world	how well the design fits the needs of the user	how well the design fits the needs of the user
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