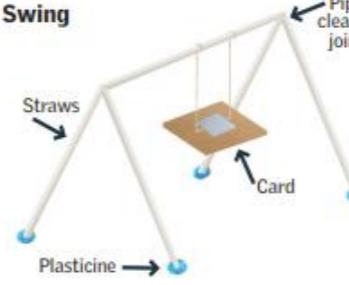
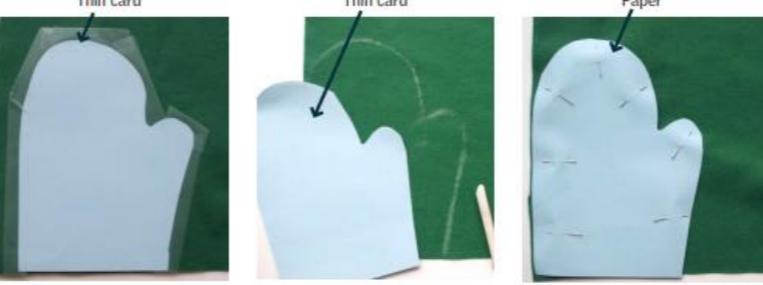
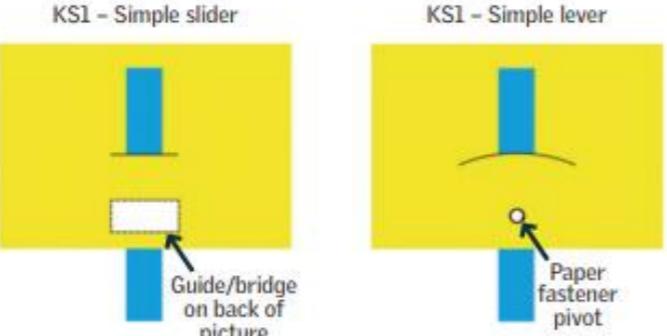
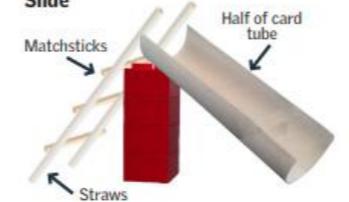
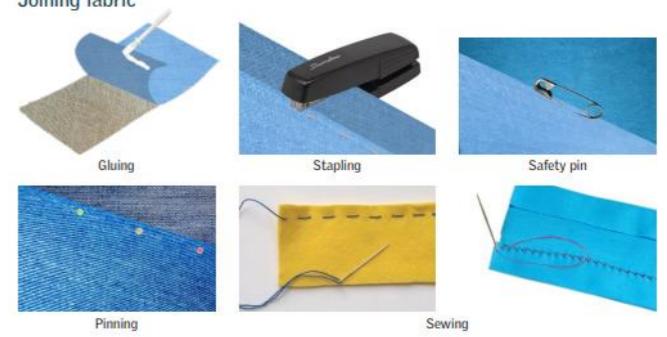
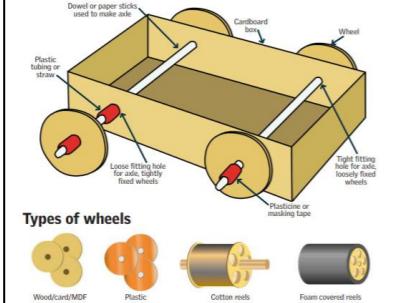
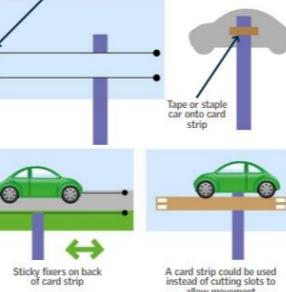
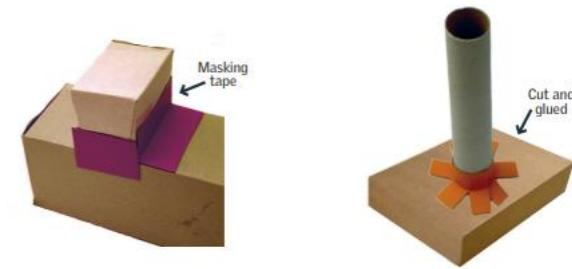
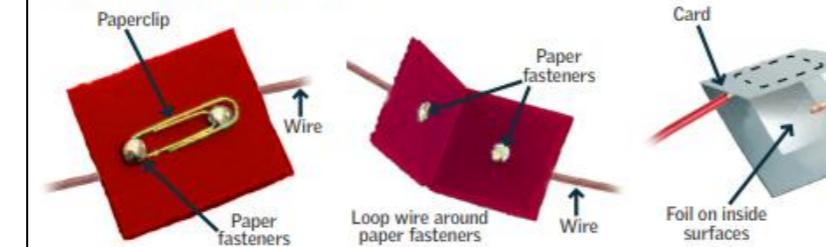
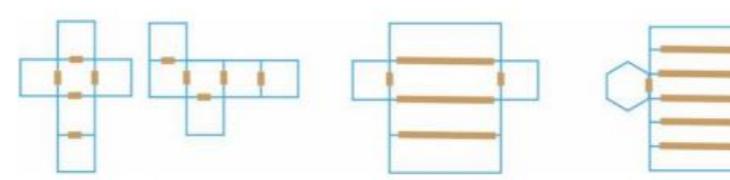
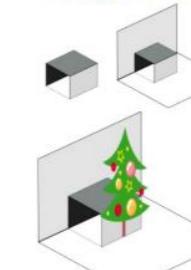
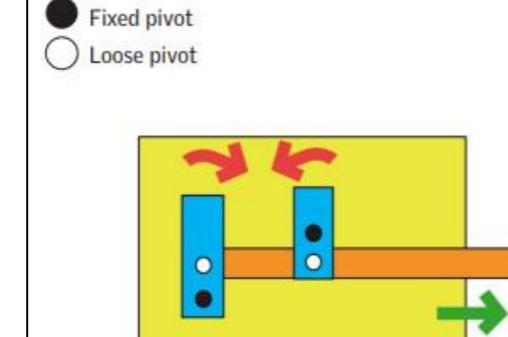
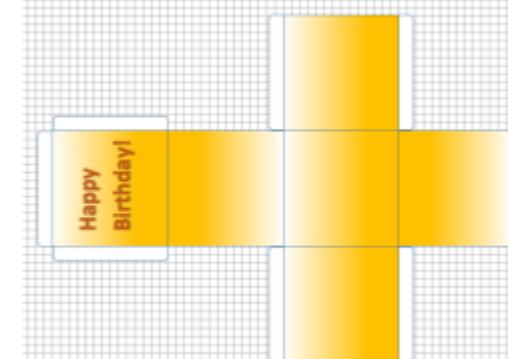
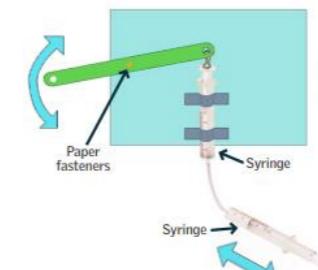
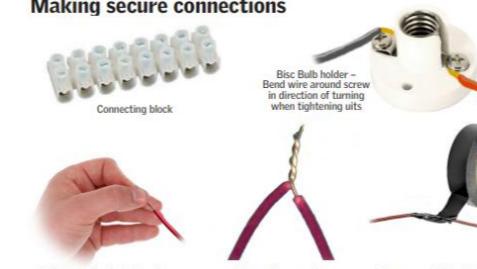
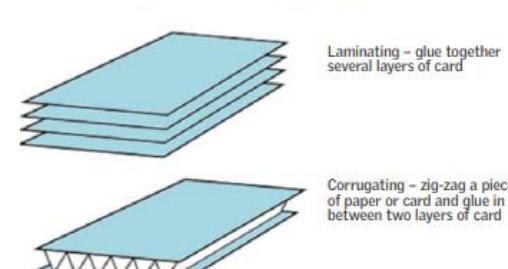


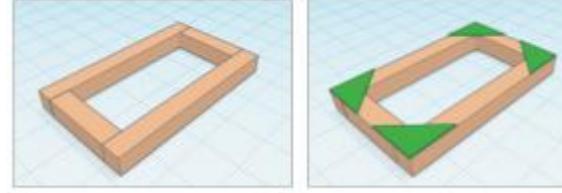
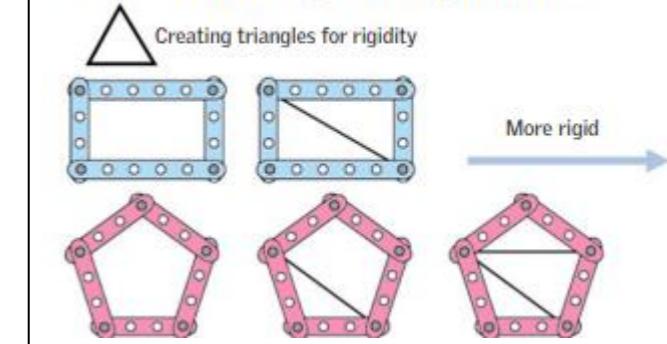
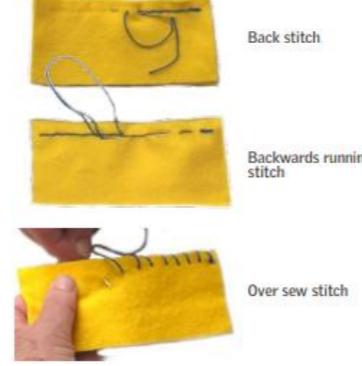
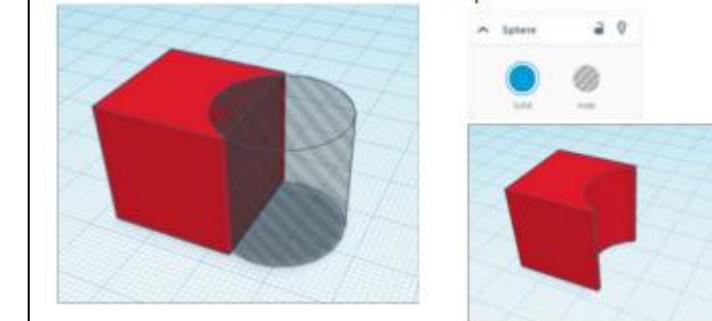
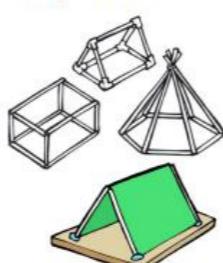
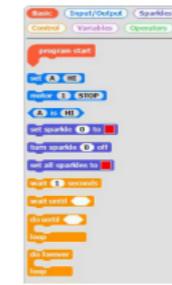
Curriculum  
 Design and Technology Long Term Scheme of Work

Phase 2 - Core and Extended	2023/24	2024/25	2025/26
Autumn	<b>Free Standing Structures</b>  <p><b>Swing</b>    Straws    Card    Plasticine    Pipe cleaner joint</p>	<b>Textiles</b>  <p>Thin card    Use clear sticky tape to position pattern on fabric. Cut around the pattern.    Thin card    Use soft chalk pastel or soft white crayon to draw around the pattern prior to cutting out.    Paper    Use pins to secure the pattern on the fabric. Cut around the pattern.</p>	<b>Mechanisms – Wheels and Axels</b> 
Spring	<b>Mechanisms – Slides and Levers</b>  <p>KS1 – Simple slider    KS1 – Simple lever    Guide/bridge on back of picture    Paper fastener pivot</p>	<b>Free Standing Structures</b>  <p>Slide    Matchsticks    Straws    Half of card tube</p>	<b>Textiles</b>  <p>Joining fabric    Gluing    Stapling    Safety pin    Pinning    Sewing</p>
Summer	<b>Mechanisms – Wheels and Axels</b>  <p>Dowels or paper sticks used to make axle    Cardboard box    Wheel    Plastic tubing or straw    Loose fitting hole for axle, firmly fixed wheels    Tight fitting hole for axle, loosely fixed wheels    Masking tape or masking tape    Types of wheels    Wood/card/MDF    Plastic    Cotton reels    Foam covered reels</p>	<b>Mechanisms – Slides and Levers</b>  <p>Use a single hole punch to make a hole then cut a slot    Sticky fixers on back of card strip    Tape or staple car onto card strip    A card strip could be used instead of cutting slots to allow movement</p>	<b>Free Standing Structures</b>  <p>Masking tape    Cut and glued</p>

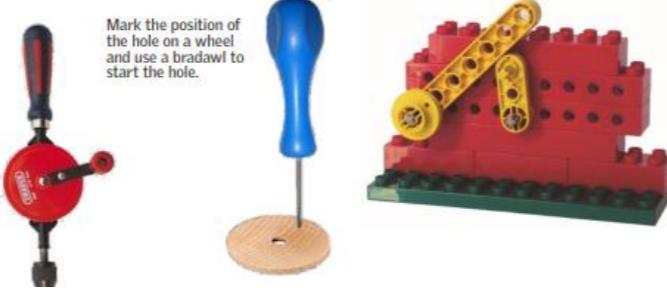
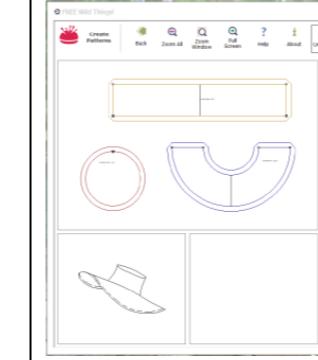
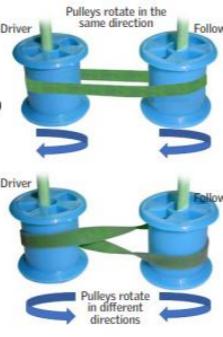
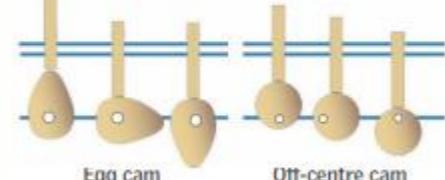
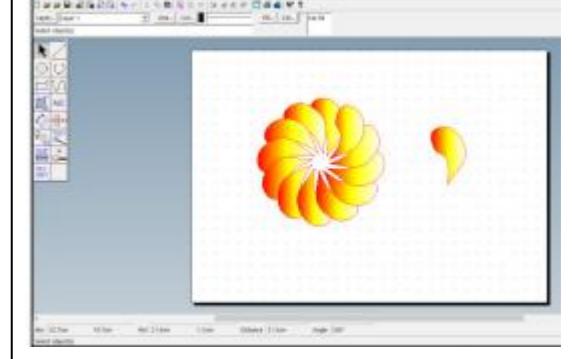
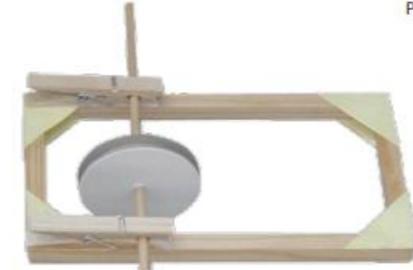
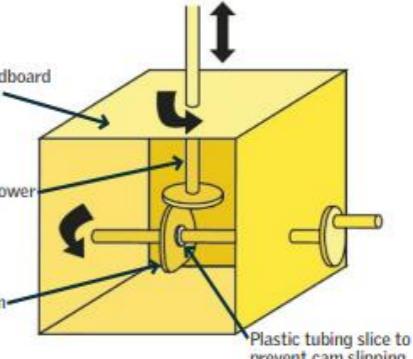
Curriculum  
Design and Technology Long Term Scheme of Work

Phase 3 - Core and Extended	2023/24	2024/25	2025/26
Autumn	<p><b>Electrical – Simple Circuits and Switches</b></p> <p><b>Handmade switches</b></p>  <p>Paperclip Wire Paper fasteners Loop wire around paper fasteners Card Foil on inside surfaces</p>	<p><b>Shell Structures</b></p>  <p>Nets for cubes Cuboid net Hexagonal prism net</p>	<p><b>Mechanisms – Levers and Linkages</b></p> <p>Making a pop-up from a small section of a recycled box:</p> 
Spring	<p><b>Mechanisms – Levers and Linkages</b></p>  <p>● Fixed pivot ○ Loose pivot</p>	<p><b>Shell Structures - CAD</b></p> 	<p><b>Mechanisms - Pneumatics</b></p> <p><b>Using syringes</b></p> 
Summer	<p><b>Mechanisms – Pneumatics</b></p> <p><b>Teaching aids to demonstrate pneumatic systems</b></p> <p>Squeeze the bottle (input movement) to inflate the balloon (output movement) and raise the toy.</p>  <p>Balloon Plastic tubing Use tape or elastic bands to make a seal Squeezie bottle</p>	<p><b>Electrical – Simple Circuits and Switches</b></p> <p><b>Making secure connections</b></p>  <p>Connecting block BNC Bulb holder Bend wire around screw in direction of turning when tightening nuts Twist strands of wire together Wrap ends around Tape over with insulating tape</p>	<p><b>Shell Structures</b></p> <p>Stiffening and strengthening sheet materials:</p>  <p>Laminating – glue together several layers of card Corrugating – zиг-zаг a piece of paper or card and glue in between two layers of card</p>

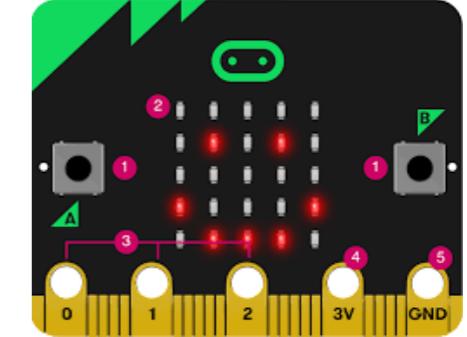
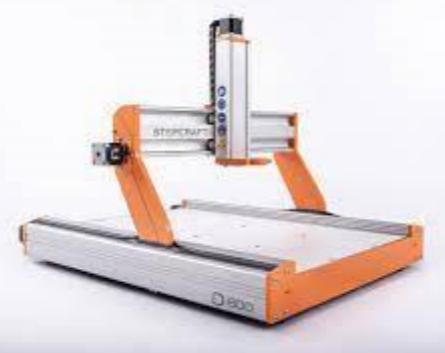
Curriculum  
Design and Technology Long Term Scheme of Work

Phase 4 - Core and Extended	2023/24	2024/25	2025/26
Autumn	<b>Electrical – Simple Programming and Control</b> 	<b>Frame Structures - CAD</b> 	<b>Frame Structures</b> <b>Understanding triangulation</b> 
Spring	<b>Textiles - 2D Shape to 3D Product</b> 	<b>Electrical – Simple Programming and Control</b> 	<b>Frame Structures - CAD</b>  <p>By combining solids (positive) and holes (negative), you can create more complex shapes.</p>
Summer	<b>Frame Structures</b> <b>Using straws</b> 	<b>Textiles - 2D Shape to 3D Product</b> <b>Cutting out techniques</b> 	<b>Electrical – Simple Programming and Control</b> 

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Design and Technology Long Term Scheme of Work

Phase 5 - Core and Extended	2023/24	2024/25	2025/26
Autumn	<p><b>Mechanisms – Cams</b></p> <p><b>Making teaching aids to demonstrate cams</b></p>  <p>Mark the position of the hole on a wheel and use a bradawl to start the hole.</p>	<p><b>Textiles – CAD</b></p> 	<p><b>Textiles – Combining Different Fabric Shapes</b></p>  <p>Toggles      Ties      Buttons</p>  <p>Press studs</p>
Spring	<p><b>Mechanisms – Pulleys or Gears</b></p> 	<p><b>Mechanisms – Cams</b></p> <p><b>Types of cams</b></p>  <p>Egg cam      Off-centre cam</p>	<p><b>Textiles – CAD</b></p> 
Summer	<p><b>Textiles – Combining Different Fabric Shapes</b></p>  <p>Zip      Velcro      Clasp</p>	<p><b>Mechanisms – Pulleys or Gears</b></p> 	<p><b>Mechanisms – Cams</b></p> 

Curriculum  
Design and Technology Long Term Scheme of Work

Phase 5AC - Core and Extended	2023/24	2024/25	2025/26
Autumn	<b>Digital World – Programmable Applications</b> 	<b>Digital World – Programmable Applications</b> 	<b>Digital World – Programmable Applications</b> 
Spring	<b>Textiles</b> 	<b>Textiles</b> 	<b>Textiles</b> 
Summer	<b>Technical Knowledge – Programmable Applications</b> 	<b>Technical Knowledge – Programmable Applications</b> 	<b>Technical Knowledge – Programmable Applications</b> 