






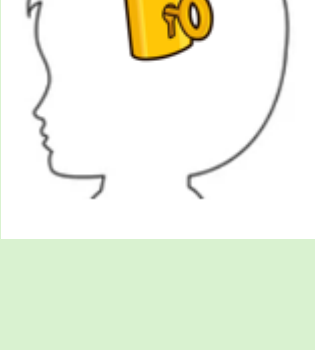


# Lyppard Lock-Ins Design Technology



Lyppard Lock-ins represent the key disciplinary knowledge and substantive skills which we target for retrieval and assessment purposes. They are drawn from the full progression documents provided in the Design Technology knowledge organisers. In addition to the lock-ins, all pupils are also working on designing, making and evaluating which also build progressively.

<b>EYFS</b>	<p>The Early Years Foundation Stage Statutory Framework states, 'The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.'</p> <p>The Early Learning Goals on which the National Curriculum for Design Technology builds are 'Creating with materials'- 'Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.' and 'Share their creations, explaining the process they have used.'</p>		
<b>Year 1</b> 	<b>Unit 1- Food Technology- preparing raw ingredients</b> <b>What do we want pupils to know?</b> <ul style="list-style-type: none"> <li>To know that I have to wash my hands and keep work surfaces clean when preparing foods</li> <li>To know that everyone should eat at least 5 portions of fruit and vegetables a day</li> </ul>	<b>Unit 2- Mechanisms- sliders and levers</b> <b>What do we want pupils to know?</b> <ul style="list-style-type: none"> <li>To understand that mechanisms produce different types of movement</li> </ul>	<b>Unit 3- Textiles- using templates and various joining techniques</b> <b>What do we want pupils to know?</b> <ul style="list-style-type: none"> <li>To know what equipment is needed to sew material together</li> </ul>
	<b>Unit 1</b> <b>What do we want pupils to know how to do?</b> <ul style="list-style-type: none"> <li>To use knives to cut/ slice food (with help)</li> <li>To use equipment to peel, grate and juice foods safely</li> </ul>	<b>Unit 2</b> <b>What do we want pupils to know how to do?</b> <ul style="list-style-type: none"> <li>To cut materials using scissors</li> <li>To join paper and card using glue, paper, fasteners and masking tape</li> </ul>	<b>Unit 3</b> <b>What do we want pupils to know how to do?</b> <ul style="list-style-type: none"> <li>To sew material together effectively at the seams.</li> <li>To thread and use a needle safely</li> </ul>
	<b>Key Vocabulary:</b> <ul style="list-style-type: none"> <li>Fruit</li> <li>Vegetables</li> <li>Seed</li> <li>Slicing</li> </ul>	<b>Key Vocabulary:</b> <ul style="list-style-type: none"> <li>slider</li> <li>lever</li> <li>pivot</li> <li>slot</li> </ul>	<b>Key Vocabulary:</b> <ul style="list-style-type: none"> <li>fabric</li> <li>template</li> <li>running stitch</li> <li>thread</li> <li>needle</li> </ul>
	<b>Linked learning:</b> EYFS- making easter nests	<b>Linked learning:</b> EYFS- Split pins and moving parts	<b>Linked learning:</b> EYFS- minibeads
<b>Year 2</b> 	<b>Unit 1- Food Technology- preparing fruit and vegetables</b> <b>What do we want pupils to know?</b> <ul style="list-style-type: none"> <li>To know how to prepare food safely and hygienically</li> <li>To know the food groups that healthy foods belong to</li> </ul>	<b>Unit 2- Mechanisms- wheels and axels</b> <b>What do we want pupils to know?</b> <ul style="list-style-type: none"> <li>A mechanism is a device used to create movement in a product</li> <li>To know the difference between fixed and free moving axels</li> </ul>	<b>Unit 3- Structures – Freestanding structures</b> <b>What do we want pupils to know?</b> <ul style="list-style-type: none"> <li>To understand how structures can be made stiffer, stronger and more stable</li> </ul>
	<b>Unit 1</b> <b>What do we want pupils to know how to do?</b> <ul style="list-style-type: none"> <li>To use equipment to peel, slice and grate safely</li> </ul>	<b>Unit 2</b> <b>What do we want pupils to know how to do?</b> <ul style="list-style-type: none"> <li>To attach wheels to a chassis using an axel</li> <li>To use a range of materials to create models with wheels and axels</li> </ul>	<b>Unit 3</b> <b>What do we want pupils to know how to do?</b> <ul style="list-style-type: none"> <li>To investigate ways to strengthen materials by folding, joining or rolling</li> </ul>
	<b>Key Vocabulary:</b> <ul style="list-style-type: none"> <li>diet</li> </ul>	<b>Key Vocabulary:</b> <ul style="list-style-type: none"> <li>axel</li> <li>chassis</li> <li>fixed axel</li> <li>free moving axel</li> <li>mechanism</li> <li>axel holder</li> </ul>	<b>Key Vocabulary:</b> <ul style="list-style-type: none"> <li>structure</li> </ul>
	<b>Linked learning:</b> Year 1- making wraps - slicing food (with help) - grating	<b>Linked learning:</b> Year 1- sliders and levers -mechanisms produce a movement	<b>Linked learning:</b> EYFS- junk modelling
<b>Year 3</b> 	<b>Unit 1- Food Technology</b> <b>What do we want pupils to know?</b> <ul style="list-style-type: none"> <li>Know how to use a range of techniques to prepare ingredients e.g. peeling, chopping, grating, slicing, mixing, spreading, kneading and baking</li> <li>That to be active and healthy food needs to provide energy for the body</li> </ul>	<b>Unit 2- Mechanisms</b> <b>What do we want pupils to know?</b> <ul style="list-style-type: none"> <li>Levers and linkages are devices that are used to create movement in a product</li> <li>A paper faster that joins card strips together is a loose pivot</li> <li>A paper faster that joins card to the backing card is a fixed pivot</li> <li>In a lever and linkage mechanism the input movement is where the user pushes or pulls a card strip. The output movement is where one or more parts of the picture move.</li> </ul>	<b>Unit 3- Textiles- 2D shape to 3D product</b> <b>What do we want pupils to know?</b> <ul style="list-style-type: none"> <li>To know different types of stitches and understand their functionality and aesthetics</li> </ul>
	<b>Unit 1</b> <b>What do we want pupils to know how to do?</b> <ul style="list-style-type: none"> <li>To measure out ingredients using scales</li> </ul>	<b>Unit 2</b> <b>What do we want pupils to know how to do?</b> <ul style="list-style-type: none"> <li></li> </ul>	<b>Unit 3</b> <b>What do we want pupils to know how to do?</b> <ul style="list-style-type: none"> <li>To select fabrics and fastening according to their aesthetic and functional qualities</li> <li>To understand the need for seams and seam allowances</li> </ul>
	<b>Key Vocabulary:</b> <ul style="list-style-type: none"> <li>grams</li> <li>kilograms</li> </ul>	<b>Key Vocabulary:</b> <ul style="list-style-type: none"> <li>lever</li> <li>linkage</li> <li>guide/bridge</li> </ul>	<b>Key Vocabulary:</b> <ul style="list-style-type: none"> <li>seam allowance</li> <li>tacking</li> <li>back stitch</li> <li>running stitch</li> <li>blanket stitch</li> </ul>
	<b>Linked learning:</b> Year 2- smoothies - food groups	<b>Linked learning:</b> Year 1- levers and linkages -sliders, levers and pivots	<b>Linked learning:</b> Year 1- textiles- sew at the seams using a running stitch

<p><b>Year 4</b></p> 	<p><b>Unit 1- Food Technology</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>To know that food is grown, reared and caught</li> <li>To know that a healthy diet is made up from a balance of food groups (eat well plate)</li> </ul>	<p><b>Unit 2- Electrical Systems</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>To know how to make switches using various classroom materials</li> <li>To know how to find a fault in a simple circuit and correct it</li> </ul>	<p><b>Unit 3- textiles</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>That recognise decorative techniques such as applique, cross stitch and pinking.</li> </ul>	<p><b>Unit 4- structures- shell structures</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>To know how to construct strong, stiff shell structures</li> <li>To develop and use knowledge of nets</li> </ul>
	<p><b>Unit 1</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>Plan the stages of a recipe listing utensils, ingredients and equipment</li> <li>Select and use appropriate equipment/ utensils to combine ingredients including chopping boards, weighing scales, graters, measuring jugs, baking trays.</li> </ul>	<p><b>Unit 2</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>To construct an electrical circuit using bulbs and switches.</li> </ul>	<p><b>Unit 3</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>To develop applique designs</li> <li>To use cross stitch as a decorative feature</li> <li>To measure and cut a template with increasing accuracy</li> </ul>	<p><b>Unit 4</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>To use computed aided design in their product</li> <li>To investigate ways of stiffening and strengthening structures</li> <li>To use tools to score</li> </ul>
	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>Seasonal</li> <li>Texture</li> <li>Aroma</li> </ul>	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>series</li> <li>circuit</li> <li>insulator</li> <li>conductor</li> </ul>	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>Applique</li> <li>Cross stitch</li> </ul>	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>Shell structure</li> <li>Three dimensional</li> <li>Scoring</li> <li>Tabs</li> <li>Corrugating</li> <li>Ribbing</li> <li>laminating</li> </ul>
	<p><b>Linked learning:</b></p> <p>Year 3- healthy muffins</p>	<p><b>Linked learning:</b></p> <p>N/A.</p>	<p><b>Linked learning:</b></p> <p>Year 3- Roman bags- Back stitch, running stitch, blanket stitch</p>	<p><b>Linked learning:</b></p> <p>Year 2- freestanding structures</p>
<p><b>Year 5</b></p> 	<p><b>Unit 1- Food technology</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>Particular dishes are associated with different cultures and places</li> <li>Some ingredients are easier to grow in some parts of the world than others and are often found in dishes where they originate e.g. olives</li> <li>Some ingredients are more available at certain times of the year than others</li> </ul>	<p><b>Unit 2- mechanisms</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>Understand that mechanical systems have an input, process and output and how pulleys can be used to speed up, slow down or change the direction of movement</li> <li>To know that a frame structure can be reinforced and strengthened with triangular shapes at the corners</li> </ul>	<p><b>Unit 3- structures</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>To know how to strengthen, stiffen and reinforce 3D frameworks</li> </ul>	
	<p><b>Unit 1</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>Make, decorate and present the food product appropriately for the intended user</li> <li>Carry out evaluation using star diagrams</li> </ul>	<p><b>Unit 2</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>To build a wooden pulley system</li> <li>Create a chassis that will hold a motor</li> <li>Attach a battery with wires to a motor</li> </ul>	<p><b>Unit 3</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>To create a structure using a jinx frame and triangulation</li> <li>To use tools competently to measure, mark out, cut, shape and join materials to make frameworks.</li> </ul>	
	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>Star diagram</li> <li>Seasonality</li> </ul>	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>Pulley</li> <li>Drive belt</li> <li>Motor</li> <li>Circuit</li> <li>Mechanical system</li> </ul>	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>Frame structure</li> <li>Jinx frame</li> <li>Triangulation</li> <li>Stability</li> </ul>	
	<p><b>Linked learning:</b></p> <p>Year 4- savoury scones</p>	<p><b>Linked learning:</b></p> <p>Year 2- Mechanisms-attaching wheels to a chasis</p>	<p><b>Linked learning:</b></p> <p>Year 4- shell structures- reinforcing/ strengthening structures Year 2- free standing structures</p>	
<p><b>Year 6</b></p> 	<p><b>Unit 1- Food technology</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>Kneading is pulling and squeezing dough to make it smooth.</li> <li>Dough is a mixture of flour, yeast and water before it is cooked.</li> </ul>	<p><b>Unit 2- electrical systems</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>To apply an understanding of computing to program, monitor and control</li> </ul>	<p><b>Unit 3- textiles</b></p> <p><b>What do we want pupils to know?</b></p> <ul style="list-style-type: none"> <li>A 3D product can be made from a combination of pattern pieces</li> <li>Fabrics can be strengthened, stiffened and reinforced where appropriate</li> </ul>	
	<p><b>Unit 1</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>Make, decorate and present the food product for the intended purpose and user</li> </ul>	<p><b>Unit 2</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>Select and assemble materials connecting electrical components to make a reliable, functional product</li> </ul>	<p><b>Unit 3</b></p> <p><b>What do we want pupils to know how to do?</b></p> <ul style="list-style-type: none"> <li>To develop ideas using prototypes and CAD</li> <li>To know how to test final products critically</li> <li>To use a sewing machine ( with adult support)</li> </ul>	
	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>Yeast</li> <li>Savoury</li> <li>knead</li> </ul>	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>Series</li> <li>Parallel</li> <li>Components</li> <li>Control</li> <li>Input</li> <li>Output</li> </ul>	<p><b>Key Vocabulary:</b></p> <ul style="list-style-type: none"> <li>Embroidery</li> <li>CAD</li> <li>CAM</li> </ul>	
	<p><b>Linked learning:</b></p> <p>Year 5- Greek Taverna</p>	<p><b>Linked learning:</b></p> <p>Year 4- Electrical systems – light up book covers</p>	<p><b>Linked learning:</b></p> <p>Year 4- textiles- applique and cross stitch Year 5- textiles- fasteners Year 3- Roman bags</p>	