

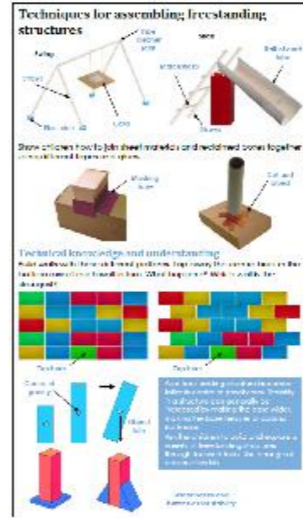
D&T is woven into our LMTW curriculum topics; this ensures children understand key concepts and knowledge around the design and evaluation process and have the opportunity to apply skills to different contexts; the topics also ensure the children can see links to the real world and to other curriculum subjects. We plan for enrichment days, visits and visitors so the children see the application of the D&T process in real life contexts. To ensure full coverage and progression for each year group, we have a two year rolling programme using the D&T Association 'Projects On A Page' (POAP) and have half-termly 'technology days'. This approach helps children to retain knowledge whilst practicing and developing practical skills.


Autumn Term		
	Autumn 1	Autumn 2
Nursery	<p>N1: Explore a range of materials and tools through continuous provision</p> <p>N2: Show a preference for a dominant hand Develop their own ideas and then decide which materials to use to express them</p>	<p>N1: Explore materials with different properties using all their senses to investigate them</p> <p>N2: Shape and join materials; combine and mix ingredients. Explore collections of materials with similar and/or different properties. Explore different materials freely to develop their ideas about how to use them and what to make</p>
Puffins R	<ul style="list-style-type: none"> Create collaboratively, sharing ideas, resources and skills To identify which materials would be the most suitable to make a large model 	<ul style="list-style-type: none"> Safely use and explore a variety of materials, tools and techniques Take an active role in designing and creating biscuits for the whole class
Puffins 1	<p style="text-align: center;">Autumn Term 2nd Half</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%; background-color: #ffff00; padding: 5px;"> <p>Aspect of D&T: Mechanisms Focus: Sliders & Levers A</p> <p>Designing</p> <ul style="list-style-type: none"> Generate ideas based on simple design criteria and their own experiences, explaining what they could make. Develop, model and communicate their ideas through drawings and mock-ups with card and paper. <p>Making</p> <ul style="list-style-type: none"> Plan by suggesting what to do next. Select and use tools, explaining their choices, to cut, shape and join paper and card. Use simple finishing techniques suitable for the product they are creating. <p>Evaluating</p> <ul style="list-style-type: none"> Explore a range of existing books and everyday products that use simple sliders and levers. Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> Explore and use sliders and levers. Understand that different mechanisms produce different types of movement. Know and use technical vocabulary relevant to the project. </div> <div style="width: 50%;"> </div> </div>	
Choughs 2	<p style="text-align: center;">Autumn Term 1st Half</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%; background-color: #90EE90; padding: 5px;"> <p>Aspect of D&T: Structures Focus: Freestanding Structures B</p> <p>Designing</p> <ul style="list-style-type: none"> Generate ideas based on simple design criteria and their own experiences, explaining what they could make. Develop, model and communicate their ideas through talking, mock-ups and drawings. <p>Making</p> <ul style="list-style-type: none"> Plan by suggesting what to do next. Select and use tools, skills and techniques, explaining their choices. Select new and reclaimed materials and construction kits to build their structures. Use simple finishing techniques suitable for the structure they are creating. <p>Evaluating</p> <ul style="list-style-type: none"> Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings. Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> Know how to make freestanding structures stronger, stiffer and more stable. Know and use technical vocabulary relevant to the project. </div> <div style="width: 50%;"> </div> </div>	

Spring Term

	Spring 1	Spring 2
Nursery	<p>N1: Build independently with a range of appropriate resources. Manipulate and play with different materials</p> <p>N2: Use a comfortable grip with good control</p> <p>Explore how things work. Join different materials and explore different textures</p>	<p>N1: Use their imagination as they consider what they can do with different materials</p> <p>N2: Choose the right resources to carry out their own plan</p> <p>Explore light sources</p>

Puffins R	<p>Explore using construction kits with moving parts eg hinges. Explore Makedo tools and cardboard.</p> <ul style="list-style-type: none"> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function 	<p>Join two pieces of card with a split pin or 'Makedo' nail to make a hinge or joint</p> <ul style="list-style-type: none"> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function Share their creations, explaining the processes they have used
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Puffin1	<p align="center">Spring 2nd Half</p> <div style="border: 1px solid black; padding: 10px; background-color: #e0ffe0;"> <p>Aspect of D&T: Structures Focus: Freestanding Structures A</p> <p>Designing</p> <ul style="list-style-type: none"> Generate ideas based on simple design criteria and their own experiences, explaining what they could make. Develop, model and communicate their ideas through talking, mock-ups and drawings. <p>Making</p> <ul style="list-style-type: none"> Plan by suggesting what to do next. Select and use tools, skills and techniques, explaining their choices. Select new and reclaimed materials and construction kits to build their structures. Use simple finishing techniques suitable for the structure they are creating. <p>Evaluating</p> <ul style="list-style-type: none"> Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings. Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> Know how to make freestanding structures stronger, stiffer and more stable. Know and use technical vocabulary relevant to the project. </div> <div style="text-align: right; margin-top: 10px;">  <p>Techniques for assembling freestanding structures</p> <p>Diagrams showing various construction techniques like using split pins, Makedo nails, and cardboard joints to create stable structures.</p> </div>	
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Choughs 2	<p align="center">Spring 2nd Half</p> <div style="border: 1px solid black; padding: 10px; background-color: #fff9c4;"> <p>Aspect of D&T: Food Focus: Preparing Fruit and Vegetables C</p> <p>Designing</p> <ul style="list-style-type: none"> Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. Communicate these ideas through talk and drawings. <p>Making</p> <ul style="list-style-type: none"> Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. <p>Evaluating</p> <ul style="list-style-type: none"> Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. Evaluate ideas and finished products against design criteria, including intended user and purpose. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of <i>The Eatwell Guide</i>. Know and use technical and sensory vocabulary relevant to the project. </div> <div style="text-align: right; margin-top: 10px;">  <p>Teaching aids to demonstrate food processing skills</p> <p>Visual aids showing steps like peeling, cutting, grating, and blending. Includes a table for 'Food Processing Equipment' and a 'Hygiene - some key pointers' section.</p> <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>Utensil</th> <th>Food</th> <th>Effect</th> <th>Mouth feel</th> </tr> </thead> <tbody> <tr> <td>Peeler</td> <td>Apple</td> <td>Unpeeled apple</td> <td>Crunchy</td> </tr> <tr> <td>Knife</td> <td>Carrot</td> <td>Thin strips</td> <td>Crispy hard</td> </tr> </tbody> </table> <p>Hygiene - some key pointers</p> <ul style="list-style-type: none"> Jewellery is removed Nails is filed back Sleeves are rolled up Aprons are on Hands are washed Cuts are covered with blue waterproof dressing <p>Further information from www.food4schools.org.uk</p> </div>		Utensil	Food	Effect	Mouth feel	Peeler	Apple	Unpeeled apple	Crunchy	Knife	Carrot	Thin strips	Crispy hard
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Choughs
3
Choughs
4

Spring 2nd Half

Aspect of D&T: Food **Focus:** Healthy and Varied Diet A

Designing

- Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose.
- Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.

Making

- Plan the main stages of a recipe, listing ingredients, utensils and equipment.
- Select and use appropriate utensils and equipment to prepare and combine ingredients.
- Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.

Evaluating

- Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs.
- Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.

Technical knowledge and understanding

- Know how to use appropriate equipment and utensils to prepare and combine food.
- Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.
- Know and use relevant technical and sensory vocabulary appropriately.



Investigating and Evaluating Activities
 Children can analyse existing products related to their project using sensory evaluations and record their results in a table. Explain that tasting is not the same as eating. Provide kitchen towels so children can spill out food they do like. Provide water to cleanse palette between tasting products.

Analysing existing products						
Product	Appearance	Smell	Flavour/Taste	Texture	Dislike	Like
1					☹️	😊
2					☹️	😊
3					☹️	😊
4					☹️	😊
5					☹️	😊

Razorbills
5
Razorbills
6

Spring 1st Half

Aspect of D&T: Textiles **Focus:** Combining Different Fabric Shapes

Designing

- Generate innovative ideas by carrying out research including surveys, interviews and questionnaires.
- Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design.
- Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification.

Making

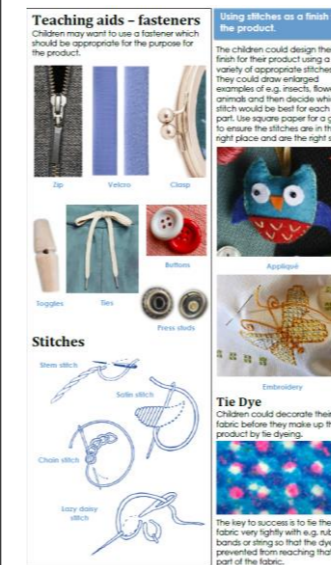
- Produce detailed lists of equipment and fabrics relevant to their tasks.
- Formulate step-by-step plans and, if appropriate, allocate tasks within a team.
- Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.

Evaluating

- Investigate and analyse textile products linked to their final product.
- Compare the final product to the original design specification.
- Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.
- Consider the views of others to improve their work.


Technical knowledge and understanding

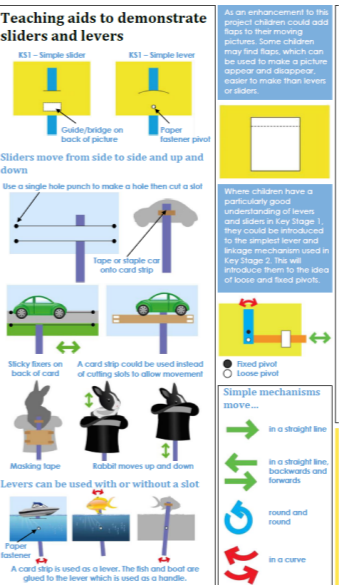
- A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics.
- Fabrics can be strengthened, stiffened and reinforced where appropriate.



Summer Term

	Summer 1	Summer 2
Nursery	<p>N1: Explore being creative with a wide range of materials</p> <p>N2: Develop their own ideas and then decide which materials to use to express them</p>	<p>N1: Make simple models which express their feelings; start to develop pretend play, pretending that one object represents another.</p> <p>N2: Make imaginative and complex 'small worlds' with blocks and construction kits Explore different materials freely, in order to develop their ideas about how to use them and what to make</p>
Puffins R		<p>Explore a range of fabrics and materials and experiment with joining them</p> <ul style="list-style-type: none"> To identify textures of materials to compare and contrast To be able to talk about what they see and then use this to inspire a make of their own To understand some of the processes involved in designing and making a particular item

Puffins 1	<p>Summer 1st Half</p> <p>Aspect of D&T: Food Focus: Preparing Fruit and Vegetables A</p> <p>Designing</p> <ul style="list-style-type: none"> Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. Communicate these ideas through talk and drawings. <p>Making</p> <ul style="list-style-type: none"> Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. <p>Evaluating</p> <ul style="list-style-type: none"> Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. Evaluate ideas and finished products against design criteria, including intended user and purpose. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of <i>The Eatwell Guide</i>. Know and use technical and sensory vocabulary relevant to the project. 	<p>Teaching aids to demonstrate food processing skills</p>  <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Utensil</th> <th>Food</th> <th>Effect</th> <th>Mouth feel</th> </tr> </thead> <tbody> <tr> <td>Juicer</td> <td>Orange</td> <td>Orange juice</td> <td>Liquid</td> </tr> <tr> <td>Peeler</td> <td>Apple</td> <td>Unpeeled apple</td> <td>Chunchy</td> </tr> <tr> <td>Knife</td> <td>Carrot</td> <td>Thin rings</td> <td>Crispy hard</td> </tr> </tbody> </table> <p>Hygiene - some key pointers</p> <ul style="list-style-type: none"> Jewellery is removed Hair is tied back Sleeves are rolled up Aprons are on Hands are washed Cloth are covered with blue waterproof dressing <p>Further information from www.foodfactlife.org.uk</p>	Utensil	Food	Effect	Mouth feel	Juicer	Orange	Orange juice	Liquid	Peeler	Apple	Unpeeled apple	Chunchy	Knife	Carrot	Thin rings	Crispy hard	
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Choughs 2	<p>Summer 2nd Half</p> <p>Aspect of D&T: Mechanisms Focus: Sliders and Levers (B)</p> <p>Designing</p> <ul style="list-style-type: none"> Generate ideas based on simple design criteria and their own experiences, explaining what they could make. Develop, model and communicate their ideas through drawings and mock-ups with card and paper. <p>Making</p> <ul style="list-style-type: none"> Plan by suggesting what to do next. Select and use tools, explaining their choices, to cut, shape and join paper and card. Use simple finishing techniques suitable for the product they are creating. <p>Evaluating</p> <ul style="list-style-type: none"> Explore a range of existing books and everyday products that use simple sliders and levers. Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> Explore and use sliders and levers. Understand that different mechanisms produce different types of movement. Know and use technical vocabulary relevant to the project. 	<p>Teaching aids to demonstrate sliders and levers</p>  <p>As an enhancement to the project children could add tape to their moving pictures. Some children may find this, which can be used to make a picture appear and disappear, useful to make their levers or sliders.</p> <p>When children have a particularly good understanding of levers and sliders in Key Stage 1 they could be introduced to the spring lever and linkage mechanism used in Key Stage 2. This will introduce them to the idea of loose and fixed pivots.</p> <p>Sticky bases on back of card A card strip could be used instead of cutting slots to allow movement</p> <p>Fixed pivot (O) loose pivot</p> <p>Simple mechanisms move...</p> <ul style="list-style-type: none"> In a straight line In a straight line backwards and forwards round and round in a curve <p>Levers can be used with or without a slot</p> <p>From: <i>Botanizer</i></p> <p>A card strip is used on a lever. The fish and boat are glued to the lever which is used as a handle.</p>	
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Choughs
3
Choughs
4

Summer 2nd Half

Aspect of D&T: Mechanical Systems **Focus:** Levers and Linkages

Designing

- Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user.
- Use annotated sketches and prototypes to develop, model and communicate ideas.

Making

- Order the main stages of making.
- Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.
- Select from and use finishing techniques suitable for the product they are creating.

Evaluating

- Investigate and analyse books and, where available, other products with lever and linkage mechanisms.
- Evaluate their own products and ideas against criteria and user needs, as they design and make.

Technical knowledge and understanding

- Understand and use lever and linkage mechanisms.
- Distinguish between fixed and loose pivots.
- Know and use technical vocabulary relevant to the project.

Teaching aids to demonstrate levers and linkages

Pop-up mechanisms can be added to children's moving pictures as an enhancement. However, to build on work with simple levers and linkages in KS1 it is important to focus children's learning during this project on levers and linkages.

Lever and linkage mechanisms usually produce oscillating or reciprocating movement.

- Lever** – in a straight line
- Reciprocating** – backwards and forwards in a straight line e.g. a slider
- Rolling** – round and round e.g. a wheel, coin, pulley, gear wheel
- Oscillating** – backwards and forwards in an arc e.g. a door

When you push the card strip (input movement), the two levers move (output movement).

Razorbills
5
Razorbills
6

Summer 2nd Half

Aspect of D&T: Food **Focus:** Celebrating Culture and Seasonality C

Designing

- Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.
- Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose.
- Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas.

Making

- Write a step-by-step recipe, including a list of ingredients, equipment and utensils
- Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.
- Make, decorate and present the food product appropriately for the intended user and purpose.

Evaluating

- Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams.
- Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.
- Understand how key chefs have influenced eating habits to promote varied and healthy diets.

Technical knowledge and understanding

- Know how to use utensils and equipment including heat sources to prepare and cook food.
- Understand about seasonality in relation to food products and the source of different food products.
- Know and use relevant technical and sensory vocabulary.

Possible products

Possible techniques that children could use

Sensory evaluation

When carrying out sensory evaluations of products and/or separate ingredients, begin with a whole class activity then use group work to develop ideas.

Example of a recording table:

Type of different/seasonal food product	Appearance	Smell	Texture	Taste
Sensory notes	Sollenhigh	Fresh-baked	Crumby	Sweet

Children can also use simple ranking and rating tables as well as star diagrams. Use packaging and/or the internet to find out about the nutritional content of the food products and the ingredients. Link this to the principles of a healthy and varied diet. Some plants grown in the school grounds can also be evaluated and considered as potential ingredients for products the children will later design, make and evaluate. The benefits/difficulties of selecting seasonal, organic and/or locally sourced ingredients can be discussed here.