

Design and Technology Long Term Plan YEAR A

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 Te | | | |
|--------------|---|--|--|
| | Autumn 1 | Autumn 2 | |
| Nursery | N1: Explore a range of materials and tools through continuous provision | N1: Explore materials with different properties using all their s | |
| | N2: Show a preference for a dominant hand | N2: Shape and join materials; combine and mix ingredients. Ex | |
| | Develop their own ideas and then decide which materials to use to express them | or different properties. Explore different materials freely to de | |
| | | what to make | |
| Puffins | Create collaboratively, sharing ideas, resources and skills | Safely use and explore a variety of materials, tools and | |
| R | To identify which materials would be the most suitable to make a large model Take an active role in designing and creating | | |
| Puffins 1 | Autumn Term 2 nd Half | | |
| _ | Aspect of D&T: Mechanisms Focus: Sliders & Levers A | Teaching aids to demonstrate sliders and levers | |
| | Designing | | |
| | 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 call | rd and paper. | |
| | Making Plan by suggesting what to do next. | | |
| | Select and use tools, explaining their choices, to cut, shape and join paper and card. | Figure on single Carl And State Carl And Carl State Carl And Carl State Carl And Carl State Carl And Carl State Carl | |
| | Use simple finishing techniques suitable for the product they are creating. Evaluating | 👝 🛥 👕 | |
| | Evaluating Explore a range of existing books and everyday products that use simple sliders and let | Evers. | |
| | Evaluate their product by discussing how well it works in relation to the purpose and the | | |
| | Technical knowledge and understanding Explore and use sliders and levers. | 掌 筆 平 🕂 | |
| | Understand that different mechanisms produce different types of movement. | Makap tape Exhibit never up and see Levers can be used with or without a slot | |
| | Know and use technical vocabulary relevant to the project. | | |
| Choughs | Autumn Term 1 st Half | A cit site the cut stretch we do it is the conductor | |
| 2 | | Techniques for assembling freestanding structures | |
| | Aspect of D&T: Structures Focus: Freestanding Structures B | And | |
| | Designing | | |
| | Generate ideas based on simple design criteria and their own experiences, explaining what they could make. | The set of | |
| | Develop, model and communicate their ideas through talking, mock-ups and drawings. | and a state of the | |
| | Making Plan by suggesting what to do next. | | |
| | Select and use tools, skills and techniques, explaining their choices. | Technical increasing and understanding | |
| | Select new and reclaimed materials and construction kits to build their structures. | Mate and ease in the second period was improved by easers in the second basis on the function of the function of the second basis of the second basis for a descent of the second basis for a descent | |
| | Use simple finishing techniques suitable for the structure they are creating. Evaluating | | |
| | Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildi | ngs. | |
| | • Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the origin | al design | |
| | criteria. Technical knowledge and understanding | The second secon | |
| | Know how to make freestanding structures stronger, stiffer and more stable. | The full of a starburst pole is a discussion of the starburst pole is a discussion of the starburst pole is a discussion of the starburst pole is a starburst pole is | |
| | Know and use technical vocabulary relevant to the project. | | |
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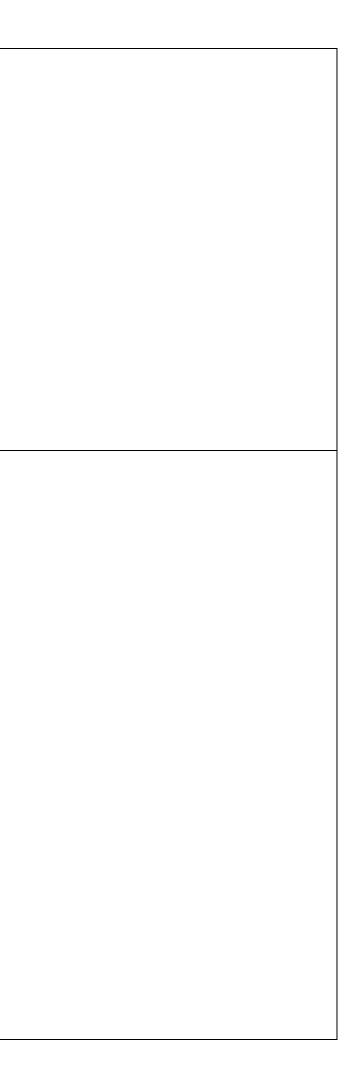
senses to investigate them

Explore collections of materials with similar and/ develop their ideas about how to use them and

d techniques for the whole class



| Select and use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy. Explain their choice of materials according to functional properties and aesthetic qualities. | | | | | | | | | | |
|---|--|---|---|---|--|--|--------------------|--|--|--|
| Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas. Order the main stages of making. Select and use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy. Explain their choice of materials according to functional properties and aesthetic qualities. Explain their choice of materials according to functional properties and aesthetic qualities. Test and evaluate a range of existing shell structures including the materials, components and techniques that have been used. Test and evaluate their own products against design criteria and the intended user and purpose. Test and evaluate their own products against design criteria and the intended user and purpose. Newelop and use knowledge of how to construct strong, stiff shell structures. Develop and use knowledge of not to trop or evaluate and the intended user and purpose. Know and use technical vocabulary relevant to the project. Autumn Term 1st Half Agret of D&T: Structures focus: Frame Structures Develop a single design specification to guide the development of their ideas and products, taking account of constraints including the sequences of the evaluate a range of existing products, using surveys, interviews, questionnaires and web-based resources. Develop a single design specification to guide the development of their ideas and products, taking account of constraints including the materials to the measure. Competently select from and use appropriate tosis to accurately measure, mark out, cut, shape and join construction materials to make their webrate their webrate active their development and purpose, identifyingstrengths and areas for development, and carrying out appropriate tests. Develop a single design apporite tests. | •••• | | | | | | | - | | 4 |
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| | S Autumn To Aspect of I Designing • Carry out to • Develop a time, resour • Generate, Making • Formulate • Competen make frame • Use finishi Evaluating • Critically e developmen | &T: Structures esearch into user needs simple design specificat es and cost. develop and model inno a clear plan, including a ly select from and use a vorks. Ig and decorative techn and evaluate a range o raluate their products ag , and carrying out appro- | and existing product on to guide the deve vative ideas, through step-by-step list of w opropriate tools to ad ques suitable for the existing frame struct ainst their design sp priate tests. | ts, using surveys, inte elopment of their idea n discussion, prototyp what needs to be done ccurately measure, m e product they are des ctures. | as and products, taking bes and annotated ske he and lists of resource nark out, cut, shape ar signing and making. | g account of con etches. es to be used. nd join construct | istraints includir | ng Joining that | Transition of the second secon | ag straws |
| | S Autumn To Aspect of I Designing • Carry out i • Develop a time, resour • Generate, Making • Formulate • Competen make frame • Use finishi Evaluating • Investigate • Critically e developmen • Research | &T: Structures esearch into user needs simple design specificat es and cost. develop and model inno a clear plan, including a ly select from and use a vorks. Ig and decorative techn and evaluate a range o raluate their products ag , and carrying out appro ey events and individua | and existing product on to guide the deve vative ideas, through step-by-step list of w opropriate tools to ad ques suitable for the existing frame struct ainst their design sp priate tests. s relevant to frame st | ts, using surveys, inte elopment of their idea n discussion, prototyp what needs to be done ccurately measure, m e product they are des ctures. | as and products, taking bes and annotated ske he and lists of resource nark out, cut, shape ar signing and making. | g account of con etches. es to be used. nd join construct | istraints includir | ng Joining that | Transition of the second secon | ag straws |

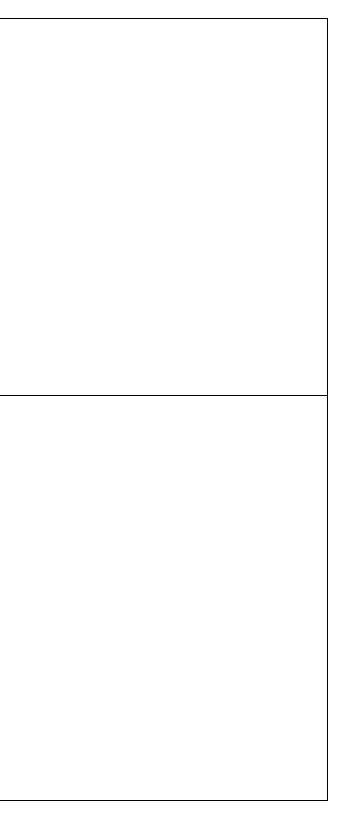


| Spring Tern | | |
|-------------------------|--|--|
| | Spring 1 | Spring 2 |
| Nursery | N1: Build independently with a range of appropriate resources. Manipulate and play with different materials N2: Use a comfortable grip with good control Explore how things work. Join different materials and explore different textures | N1: Use their imagination as they consider what they can do N2: Choose the right resources to carry out their own plan Explore light sources |
| Puffins R Puffin1 | Explore using construction kits with moving parts eg hinges. Explore Makedo tools and cardboard. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function Spring 2nd Half | Join two pieces of card with a split pin or 'Makedo' nail to m Safely use and explore a variety of materials, tools and te colour, design, texture, form and function Share their creations, explaining the processes they have used |
| | Aspect of D&T: Structures Focus: Freestanding Structures A Designing Generate ideas based on simple design criteria and their own experiences, explaining w Develop, model and communicate their ideas through talking, mock-ups and drawings. Making 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. Evaluating Evaluate their product by discussing how well it works in relation to the purpose, the use design criteria. Technical knowledge and understanding Know how to make freestanding structures stronger, stiffer and more stable. Know and use technical vocabulary relevant to the project. | e.g. everyday products and buildings. |
| Choughs 2 | Spring 2 nd Half Aspect of D&T: Food Focus: Preparing Fruit and Vegetables C 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 vegetate Communicate these ideas through talk and drawings. Making 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, to product. Evaluating • Taste and evaluate a range of fruit and vegetables to determine the intended user's preference to the example of the products against design criteria, including intended user and p | /. Image: Sector of the sect |

with different materials

ake a hinge or joint echniques, experimenting with

| Choughs 3 | Spring 2 nd 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 inclutexture and aroma for an appealing product for a particular user and purpose. Use annotated sketches and appropriate information and communication technology, such as web 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 charae Evaluating Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations usingraphs. Evaluate the ongoing work and the final product with reference to the design criteria and the views 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 caught. | -based recipes, to develop acteristics. Age e.g. tables and simple of others. $\frac{1}{1000} \frac{1}{1000} \frac{1}{10000} \frac{1}{1000} \frac{1}$ | d they do |
| Razorbills 5 Razorbills 6 | caught. • Know and use relevant technical and sensory vocabulary appropriately. Spring 1 st 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. | <complex-block></complex-block> | |



| Summer Te | | - |
|--------------|--|---|
| | Summer 1 | Summer 2 |
| Nursery | N1: Explore being creative with a wide range of materials N2: Develop their own ideas and then decide which materials to use to express them | N1: Make simple models which express their feelings; start one object represents another. N2: Make imaginative and complex 'small worlds' with bloc Explore different materials freely, in order to develop their make |
| Puffins R | | Explore a range of fabrics and materials and experiment with join To identify textures of materials to compare and contras To be able to talk about what they see and then use this To understand some of the processes involved in design |
| Puffins | Summer 1 st Half | |
| | Aspect of D&T: Food Focus: Preparing Fruit and Vegetables A Designing • 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. Making • 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 chose product. Evaluating • 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. Technical knowledge and understanding • 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. | <section-header></section-header> |
| Choughs 2 | Summer 2 nd Half Aspect of D&T: Mechanisms Focus: Sliders and Leavers (B) Designing • Generate ideas based on simple design criteria and their own experiences, explaining wh • Develop, model and communicate their ideas through drawings and mock-ups with card at Making • 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. Evaluating • Explore a range of existing books and everyday products that use simple sliders and lever iteria. • Dure law out use sliders and levers. • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to the project. | ITS. |

rt to develop pretend play, pretending that

ocks and construction kits ir ideas about how to use them and what to

oining them

ast iis to inspire a make of their own gning and making a particular item



| oughs | Summer 2 nd Half | |
|------------|--|--|
| 3 oughs | | Teaching aids to demonstrate Rop-up mechanisms can be |
| 4 | Aspect of D&T: Mechanical Systems Focus: Levers and Linkages | levers and linkages pictures as an enhancement. fixed pivot However, lo build on work with simple levers and sliders in |
| | Designing | C31, if is important to locus children's learning during this project on levers and |
| | Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. | Making g pop-op han g and section of a recycled back |
| | 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. | 1. Cut o slove off a multi box. 2. Give two sides to the paper. |
| | • Evaluate their own products and ideas against criteria and user needs, as they design and make. | 1 State a percent on page up on the state. |
| | Technical knowledge and understanding | reciproceting movement |
| | Understand and use lever and linkage mechanisms. Distinguish between fixed and loose pivots. | Reciprocating - backwards and forwards in a shaight |
| | Know and use technical vocabulary relevant to the project. | Rece, a skder Kotay-round and round ap. a wheel. |
| | | Collision - C |
| | | When you push the card ship (input movement), the two levers move (output movement). |
| | Summer 2 nd Half | |
| | | |
| | Aspect of D&T: Food Focus: Celebrating Culture and Seasonality C | vossible products |
| | | |
| | 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. | Recuts Sovery scores Sovery multins Possible techniques that children could use |
| | • Use words, annotated sketches and information and communication technology as appropriate to develop and communicate | -ossible techniques that children could use |
| | ideas. Making | |
| | Write a step-by-step recipe, including a list of ingredients, equipment and utensils | Making to combine Exclusion in to mix Executing a bread bet and films of the set down of the set o |
| | Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. | ingredents # tot and flow # dough making veat- multins as scones based product ensorv evaluation |
| | Make, decorate and present the food product appropriately for the intended user and purpose. Evaluating | ensory evaluation her camping out sensory evaluations of products and/or separate gredients, begin with a whole class activity then use group work to evelop ideas. |
| | Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. | ample of a recording table: Type of Appennice Smill Texture Tarte |
| | tables/graphs/charts such as star diagrams. | cultural/reasonal face product Seesary scare Gelden/hough Presh/baked Orunbly Dheesy |
| | | |
| | • Evaluate the final product with reference back to the design brief and design specification, taking into account the views of | hildren can also use simple ranking and rating tables as well as star |
| | • Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. | agrams. ie packaging and/or the internet to find out about the nutritional ontent of the food products and the inarredients. Link this to the principles |
| | 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 | agrows. is pockaging and/or the internet to find out about the nutritional intert of the flood products and the ingredients. Link this to the principles (a healthy not varied def. (b) and the principle of the evolution of an obe be evoluted and insidered as potential ingredient for products the children will be reign, make and evolutes. The benefit/difficulties of selecting second. |
| | 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. | agrams. is packaging and/or the internet to find out about the nutritional intern of the food products and the ingredients. Link this to the principles (a healty and varied diet.) Sible plants grown in the school grounds can also be evaluated and smiddered as potential ingredients for products the children will later |
| | 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 | agrows. is pockaging and/or the internet to find out about the nutritional intert of the flood products and the ingredients. Link this to the principles (a healthy not varied def. (b) and the principle of the evolution of an obe be evoluted and insidered as potential ingredient for products the children will be reign, make and evolutes. The benefit/difficulties of selecting second. |

