

## Year 1 DT Long Term Plan

### Our Rationale

At Courthill Infant School, we believe that Design and Technology gives children the opportunity to develop skill, knowledge and understanding of designing and making functional products. We feel it is vital to nurture creativity and innovation through design and by exploring the designed world in which we live and work.

We develop the children's skills and knowledge in design, structures, mechanisms and use a range of materials including food. This is done by providing exciting activities linked to topics that encourage creativity and the opportunity to think about important issues.

In Foundation, children are encouraged to be creative and innovative using construction toys and develop joining skills and fine motor skills. They are encouraged to use these skills to solve problems.

In Key Stage One children follow the National Curriculum. They learn about becoming a designer and the process of design: plan, make and evaluate. The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

Specific curriculum input may include areas such as the events of the ...

We want our children leaving us knowing the 'big ideas' that:

<b>Knowledge and facts (NC)</b>	<u><b>Big idea 1: Design</b></u> <ul style="list-style-type: none"> <li>• design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>• generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> </ul>	<u><b>Big idea 2: skills and manufacture</b></u> <ul style="list-style-type: none"> <li>• select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>• select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> </ul> <u>Technical knowledge</u> <ul style="list-style-type: none"> <li>• build structures, exploring how they can be made stronger, stiffer and more stable</li> <li>• explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</li> </ul>	<u><b>Big idea 3: Evaluate</b></u> <ul style="list-style-type: none"> <li>• explore and evaluate a range of existing products</li> <li>• evaluate their ideas and products against design criteria</li> </ul>
-------------------------------------	---	--	---

### Progression of skills across the year group

Topics	<u>Spring 1: Under the Sea-moving pictures</u>	<u>Spring 2: Castles and Knights- structures</u>	<u>Ongoing: Cooking and nutrition</u>
<p>Big Idea 1: That design and technology is about the creation of a product to fulfil a need</p> <p>a) That design is about making choices</p> <p>b) That evaluation is about understanding the effectiveness of these choices</p>	<p>To know what a design is.</p> <p>To know that a product can be made for themselves.</p> <p>To know how to make a simple sketch design.</p> <p>To understand that there is a design criteria they must follow.</p> <p>To know how to write a list of the materials and equipment needed from a given list.</p> <p>To learn how to communicate and discuss their choices when designing.</p>	<p>To know what a design is.</p> <p>To know that a product can be made for themselves or a target user.</p> <p>To know how to make a simple sketch design and label the key features.</p> <p>To understand that there is a design criteria they must follow to ensure that their product is fit for the purpose.</p> <p>To write a list of the materials and equipment needed using prior knowledge.</p> <p>To know how to communicate and discuss their choices when designing giving verbal reasons for their choices.</p>	<p><u>Technical knowledge</u></p> <p>To know that a balanced diet, with lots of fruits and vegetables is important to be healthy. (Half a plate of vegetables, 5 a day)</p> <p>To know that food looks different in its raw to its cooked state or prepared/unprepared state (e.g. kiwi pineapple)</p> <p>Begin to understand that all food comes from plants or animals</p> <p>Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught</p> <p>Start to understand how to name and sort foods into the 5 groups in 'The Eat well Plate'.</p> <p>To know what a design is.</p> <p>To know that a product can be made for themselves or a target user.</p> <p>To know how to make a simple sketch design and label the key features.</p> <p>To understand that there is a design criteria they must follow to ensure that their product is fit for the purpose.</p>

			<p>To write a list of the materials and equipment needed using prior knowledge.</p> <p>To know how to communicate and discuss their choices when designing giving verbal reasons for their choices.</p>
<p><b>Big idea 2: That technical knowledge and skill is required in the manufacture of a product.</b></p>	<p>To know that paper can be cut to shape.</p> <p>To know how to draw an outline that can be then cut out.</p> <p>To learn that designs can be changed and adapted if needed.</p> <p>To learn how to use a split pin to make a pivot and lever.</p> <p>To learn how to make a slider.</p> <p>To know that there are different ways of joining paper together e.g. PVA glue, pritt stick, sellotape, masking tape, split pins</p>	<p>To know how to draw an outline that can be then cut out for a particular purpose.</p> <p>To know that designs can be changed and adapted if needed.</p> <p>To use previous experience of making a slider, pivot and lever to select the most effect technique for the purpose.</p> <p>To know that there are different ways of joining paper together e.g. PVA glue, pritt stick, sellotape, masking tape, split pins and begin to select the most effective technique.</p> <p>To learn how to safely hole punch.</p>	<p>To know how to follow basic hygiene rules when preparing food (e.g. hands washed, hair up, apron on, sleeves rolled up)</p> <p>To know how to measure ingredients using non-standard measurements (cups, spoons, etc.)</p> <p>To know how to mix, stir, cut, pour, shape and spread, sieve, slice, squeeze grate and peel.</p> <p>To know how to follow instructions / set steps of a recipe</p> <p>To learn how to prepare simple dishes safely and hygienically without using a heat source.</p>
<p><b>Big idea 3: Evaluation pf a product before and after</b></p>	<p><u>During:</u></p> <p>To learn how to evaluate what is working well and what isn't.</p> <p>To learn how to adjust their moving picture if needed (with support).</p> <p><u>After:</u></p> <p>To learn how to communicate and record what worked well and what didn't.</p> <p>To learn how to discuss how they could improve their moving picture next time.</p>	<p><u>During:</u></p> <p>To know how to evaluate what is working well and what isn't.</p> <p>To know how to adjust their simple structure if needed (independently).</p> <p><u>After:</u></p> <p>To know how to communicate and record what worked well and what didn't work well in relation to purpose (design criteria).</p> <p>To use their experience to be able to discuss how they could improve their product next time.</p>	<p><u>During:</u></p> <p>To know how to evaluate what is working well and what isn't.</p> <p>With help and advice change part of the design (technical skill or material) in response to a problem (in manufacture)</p> <p><u>After:</u></p> <p>To identify what they like about it and one thing to improve (taste, appearance)</p> <p>To learn how to discuss reasons for any changes to initial design, including why they were needed.</p> <p>To learn how to evaluate if the product meets the brief.</p>
<p><b>Context</b></p>	<p>Through every unit of work children will follow the three big ideas of, design, skill/manufacture and evaluation:</p> <p>Under the Sea- Moving Pictures with sliders, pivot</p> <p>Castles &amp; Knights – building a simple structure</p> <p>Cooking and Nutrition- On going</p>		