



### Curriculum Design for DT

#### DT Intent

Our Design and Technology curriculum offers children the chance to use creative thinking and design. The curriculum has a defined purpose and tangible outcomes. Skills are taught progressively through an annual cycle of three Design Technology elements: mechanisms and mechanical structures, food and nutrition and textiles (linked to Art & Design). These ensure that all children are able to develop their designing, making, evaluating and technical skills; these are progressive (disciplinary knowledge) and are vital skills for children to develop in our rapidly changing world. The elements have been adapted to weave into our Golden Thread, Forest School. The children use natural materials when designing and making and can complete large scale products working as an individual, group or whole class.

#### DT Implementation

DT follows the National Curriculum; objectives are delivered through half termly question based topics. Enrichment opportunities are planned to engage children into their learning before working through a topic-based approach. Disciplinary knowledge ensures skills specific to DT are taught each and every year and are based in the aims of the national curriculum. The curriculum makes use of prior knowledge and provides clear references on how learning will be used in future topics. Where appropriate, at the end of the topic a high-quality 'outcome' is shared with parents and/or the school community. Children will enjoy school trips, welcome visitors and have new experiences (using a hand saw)- all of which works to enrich their experience within DT.

#### DT Impact

Children will know more, remember more and understand more about DT. This is evidenced through impact reviews where pupils recall and share their learning. Children are to retain prior-learning and explicitly make connections between what they have previously learned and what they are currently learning.

## Progression of Knowledge

|                         | <b>Year 1</b>  | <b>Year 2</b> | <b>Year 3</b>  |
|-------------------------|--|---------------|--|
| <b>Enquiry approach</b> | <p>Children work through a consistent process of: design, make and evaluate. There is an expectation that children will use their prior learning and build upon this as they journey through Broomhill. Children will reach an end point where their understanding of DT has been strengthened and deepened through this purposefully mapped out curriculum.</p>   |               | <p>Pupils will use the skills taught in EYFS and KS1 to explore more technical enquiries at KS2.</p> |
| <b>End point</b>        | <p><b>By the end of Key Stage 1, children will:</b></p> <p><b>Mechanisms and mechanical systems/structures</b></p> <ul style="list-style-type: none"> <li>✓ Have an understanding of levers, pivots, wheels and axis.</li> <li>✓ Be able to attach mechanisms to simple components.</li> <li>✓ Be able to cut a slot</li> <li>✓ Be able to join materials</li> </ul> <p><b>Cooking and Nutrition</b></p> <ul style="list-style-type: none"> <li>✓ Know about healthy food and what makes up a balanced diet</li> <li>✓ Have an awareness of food hygiene</li> <li>✓ Know that food is seasonal</li> </ul> <p><b>Textiles</b></p> <ul style="list-style-type: none"> <li>✓ Use basic running stitch and over stitch</li> <li>✓ Cut with scissors with reasonable accuracy</li> <li>✓ Consider design criteria</li> </ul> <p><b>Children will be able to evaluate their own products against a design criteria</b></p> |               |  |

## Disciplinary Knowledge

| Design |   | Make |   | Evaluate |  | Technical Skills |   |
|--------|---|------|---|----------|--|------------------|---|
| EYFS   | <ul style="list-style-type: none"> <li>✓ Design models for a purpose.</li> <li>✓ Communicate ideas through talking.</li> </ul>  | EYFS | <ul style="list-style-type: none"> <li>✓ Refines previous knowledge on joining materials and artistic effects - cold glue guns, paper clips, split pins, &amp; hole punch with treasury tags.</li> <li>✓ Understanding and making shapes of places and objects that they know.</li> </ul> | EYFS     | <ul style="list-style-type: none"> <li>✓ Can express their ideas and feelings about their experiences.</li> <li>✓ Offering explanations for why things their creation is successful or not.</li> </ul> | EYFS             | <ul style="list-style-type: none"> <li>✓ Join materials with a purpose in mind.</li> <li>✓ Make suitable choices of what to use when joining materials.</li> <li>✓ Cutting food using correct tools and techniques.</li> </ul>                                      |
| KS1    | <ul style="list-style-type: none"> <li>✓ Design purposeful, functional and appealing products based on simple criteria. Communicate ideas through talking, drawing and prototypes.</li> <li>✓ Use principles of healthy diet to design dishes.</li> </ul> | KS1  | <ul style="list-style-type: none"> <li>✓ Select the correct from tools and equipment for practical tasks.</li> <li>✓ Select the correct materials and components according to their characteristics.</li> <li>✓ Use principles of healthy diet to make dishes</li> </ul>                  | KS1      | <ul style="list-style-type: none"> <li>✓ Explore and evaluate existing products</li> <li>✓ Evaluate their own products against design criteria.</li> </ul>   | KS1              | <ul style="list-style-type: none"> <li>✓ Explore their own structures for how they can be made stronger, stiffer and more stable.</li> <li>✓ Explore mechanisms, such as levers, sliders, wheels and axles.</li> <li>✓ Understand where food comes from.</li> </ul> |

| Design |  | Make |  | Evaluate |  | Technical Skills |   |
|--------|--|------|--|----------|--|------------------|---|
| Y3     | <ul style="list-style-type: none"> <li>✓ Generate ideas for design by collecting some information.</li> <li>✓ Create criteria for the design to be fit for purpose</li> <li>✓ Understand the importance of kitchen safety and hygiene</li> </ul> | Y3   | <ul style="list-style-type: none"> <li>✓ Use tools with increasing precision.</li> <li>✓ Measure food stuffs accurately using scales.</li> </ul> | Y3       | <ul style="list-style-type: none"> <li>✓ Identify problems to their design and consider ways of solving it.</li> </ul> | Y3               | <ul style="list-style-type: none"> <li>✓ Understand simple electrical circuits to include buzzers and motors</li> </ul> |