



## Progression of Knowledge and Skills in D&T

### **School Intent**

At Thomas A' Becket Infant School it is our intent that our Design and Technology is an inspiring, and practical subject. It encourages children to use their creativity and imagination, to design and make models and products, learning and building on prior success and failure. We aim to, wherever possible, link work to other disciplines such as mathematics, science, computing, and art. Opportunities are given to reflect upon and evaluate the design process and the end product including its effectiveness for purpose.

### **EYFS – Expressive Arts and Design**

#### **Creating with Materials**

Safely use and explore a variety of materials, tools, and techniques, experimenting with colour, design, texture, form, and function. Share their creations, explaining the process they have used. Make use of props and materials when role playing characters in narrative and stories.

#### **National curriculum purpose of study**

Design and Technology is an inspiring, rigorous, and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing, and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising, and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth, and well-being of the nation.

#### **National curriculum aims to ensure that children:**

- 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.

#### **Impact**

Children's skills will be assessed and developed by the teacher during lessons and through reflection. Children's achievements will be celebrated through regular opportunities, for example during class art galleries, sharing assemblies and open evenings. Work will be displayed in the wider school and environment. Additionally, My World Books and Class Books will be used to illustrate the children's learning journey and to showcase their breadth of experiences in Design and Technology. Final products will be planned, created, and evaluated using the school's agreed progression in knowledge and skills.

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Key Concept	Reception	Year 1	Year 2
Design	<p><b>Vocabulary</b> design, plan</p> <ul style="list-style-type: none"> <li>• Use senses to explore a wide range of familiar products.</li> <li>• Take simple products apart and talk about their parts and how they work.</li> <li>• Talk about and/or use construction materials, pictures, and words to plan and design.</li> <li>• Talk about what has been made in simple terms.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and product, draw, label.</p> <ul style="list-style-type: none"> <li>• Use knowledge of existing products to support plans for similar products.</li> <li>• Describe, explore, and investigate products that have been disassembled.</li> <li>• Use construction kits, pictures, templates, mock-ups, and captions to plan and design.</li> <li>• Talk about and describe the tools and materials needed to complete the key tasks within a plan.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and disassemble, function, prototype, instructions, reasoning.</p> <ul style="list-style-type: none"> <li>• Use knowledge of a range of products to inform plans and designs.</li> <li>• Talk about and disassemble products and describe their function.</li> <li>• Use simple prototypes, labelled sketches and detailed instructions in plans and designs.</li> <li>• Talk in depth about ideas, plans and reasons for choices.</li> </ul>
Make	<p><b>Vocabulary</b> make, cut, tear, join, assemble, rip, tear, tools, stick, roll, scissors, safety.</p> <ul style="list-style-type: none"> <li>• Use senses to explore and talk about materials.</li> <li>• Use simple tools and materials with support.</li> <li>• Cut paper using scissors.</li> <li>• Join with tape or glue.</li> <li>• Roll paper and card to form a tube.</li> <li>• Apply simple finishes e.g. paint, PVA glue glaze.</li> <li>• Follow procedures for safety and hygiene.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and materials, sellotape, staple, edges, template, hole punch, curl.</p> <ul style="list-style-type: none"> <li>• Explore and talk about the characteristics of an increasing range of materials.</li> <li>• Select and use simple tools to cut and join a range of materials.</li> <li>• Use a straight edge to mark lines for cutting.</li> <li>• Join edge to edge using glue.</li> <li>• Curl paper.</li> <li>• Use a hole punch and stapler.</li> <li>• Select from a range a finish to improve the appearance of a product.</li> <li>• Follow procedures for safety and hygiene.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and attach, construct, measure.</p> <ul style="list-style-type: none"> <li>• Select materials and components according to known characteristics and functions.</li> <li>• Select and use an increasing range of tools to cut, shape and join materials and components.</li> <li>• Use a ruler to measure and mark lines for cutting.</li> <li>• Make and use gluing tabs.</li> <li>• Make simple paper models and templates.</li> <li>• Select an appropriate way to improve the appearance of a product.</li> <li>• Follow procedures for safety and hygiene.</li> </ul>

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Evaluate	<p><b>Vocabulary</b> change, adapt.</p> <ul style="list-style-type: none"> <li>• Use the senses to explore a wide range of familiar products.</li> <li>• Talk about familiar products and what they do.</li> <li>• Talk about what has been made and the steps taken to achieve the outcome.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and evaluate, strengths, weaknesses, improve, features.</p> <ul style="list-style-type: none"> <li>• Talk about and describe key features of a range of products.</li> <li>• Explore and evaluate a range of existing products.</li> <li>• Begin to evaluate the success of the product in terms of function and aesthetics criteria.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and improve, design criteria, designer, inventor, manufacturer, develop.</p> <ul style="list-style-type: none"> <li>• Investigate and compare a range of similar existing products.</li> <li>• Compare and contrast the similarities and differences of products with the same function.</li> <li>• Evaluate ideas and products against design criteria; and suggest ways in which products can be improved.</li> <li>• Gain an understanding of the way in which the work of famous inventors, designers, engineers, chefs, manufactures have impacted on the development of product design and function.</li> </ul>
Structures	<p><b>Vocabulary</b> structure, strong, sturdy, secure, construction.</p> <ul style="list-style-type: none"> <li>• Explore and investigate a range of simple, large scale construction materials e.g., cardboard boxes.</li> <li>• Explore building, bridges and towers using large and small scale construction materials e.g., Duplo, cardboard boxes. Our place in space</li> <li>• Make simple 2D structures using straws.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and stable, engineer, hinge, base, joint.</p> <ul style="list-style-type: none"> <li>• Construct a range of simple structures using construction kits.</li> <li>• Make a structure more stable by widening the base.</li> <li>• Make a square frame from strip wood using triangular card joints.</li> <li>• Make a simple card hinge.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and net, frame, bracing strut, triangular, rectangular base.</p> <ul style="list-style-type: none"> <li>• Deconstruct and assemble the net of basic 3D shapes.</li> <li>• Strengthen 2D frames by adding diagonal bracing struts.</li> <li>• Make a rectangular frame from strip wood.</li> <li>• Use materials to make simple joints, glue, tape and paper clips.</li> </ul>
Mechanisms and Axels, Pulleys, Gears	<p><b>Vocabulary</b> flap, loose parts.</p> <ul style="list-style-type: none"> <li>• Explore and talk about how to make a flap using paper and card.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and slider, lever, reconstruct, chassis, axel, wheel, reel, dowel.</p>	<p><b>Vocabulary</b> All prior vocab and pneumatic, pulley, air pressure.</p>

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	<ul style="list-style-type: none"> <li>• Create a vehicle using different loose parts.</li> </ul>	<ul style="list-style-type: none"> <li>• Deconstruct a simple slider and describe how it works.</li> <li>• Construct a simple slider independently.</li> <li>• Make a lever by joining card strips with paper fasteners.</li> <li>• Deconstruct and reconstruct boxes accurately.</li> <li>• Attach wheels to a chassis using an axle e.g., cotton reels and dowels.</li> <li>• Use pencils or tubes as rollers to move an object across the floor.</li> </ul>	<ul style="list-style-type: none"> <li>• Deconstruct a range of sliders and describe how they work.</li> <li>• Construct increasing complex sliders.</li> <li>• Join levers to make linkages to create moving parts.</li> <li>• Construct a simple pneumatic system with one moving part.</li> <li>• With support attach a fixed axle to a chassis and add wheels ensuring that they can move freely.</li> <li>• Construct a simple pulley using rope over a horizontal bar to raise an object off the ground.</li> </ul>
Textiles	<p><b>Vocabulary</b> As before and fabric.</p> <ul style="list-style-type: none"> <li>• Cut and stick fabrics.</li> <li>• Apply simple finishing techniques e.g., fabric, crayons, gluing on feathers etc.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and characteristics, thread, sew, technique.</p> <ul style="list-style-type: none"> <li>• Talk about and begin to select textiles-based on characteristics of an increasing range of materials.</li> <li>• Use a simple template.</li> <li>• Join fabrics using glue, staples, and thread.</li> <li>• Apply an increasing range of finishing techniques e.g., painting and printing.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and running stitch, bond web.</p> <ul style="list-style-type: none"> <li>• Talk about the similarities and differences between textiles based on the characteristics of an increasing range of materials.</li> <li>• Use a simple pattern with increasing accuracy.</li> <li>• Cut and join fabrics using running stitch, buttons, and bond web.</li> <li>• Decorate fabric by applying beads and sequins.</li> </ul>

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<p>Food Technology</p>	<p><b>Vocabulary</b> taste, weigh, mix, cutter, whisk, hygiene, food groups.</p> <ul style="list-style-type: none"> <li>• Sort fruit and vegetables by taste, shape, size, colour, texture, and simple food groups.</li> <li>• Talk about the changes that take place when food is shaped and mixed. –the big blue</li> <li>• Use basic tools to cut, shape and mix e.g., cutters and whisks.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and classify, heated, cooled, measure, weigh.</p> <ul style="list-style-type: none"> <li>• Sort and classify food into simple groups based on where good comes from e.g., plant, animal, factory.</li> <li>• Talk about what happens when food is heated and cooled.</li> <li>• Measure and weigh accurately using cups and spoons.</li> <li>• Work safely and hygienically.</li> </ul>	<p><b>Vocabulary</b> All prior vocab and every day and occasional food, locally grown, standard units.</p> <ul style="list-style-type: none"> <li>• Sort and classify an increasing range of food according to specific food groups e.g. vegetable, fruit, meat, fish.</li> <li>• Group food into every day and occasional.</li> <li>• Discuss locally grown food.</li> <li>• Talk about what needs to be done to work safely and hygienically.</li> <li>• Measure and weigh using standard units and scales.</li> </ul>
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