

Design Technology Year 1/2

Key Threshold Concepts

- To design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.
- To draw on disciplines such as mathematics, science, engineering, computing and art.
- To take risks, becoming resourceful, innovative, enterprising and capable citizens.
- Through the evaluation of past and present design and technology, 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.

Key Skills

All DT units will follow the stages of: • Share design brief	• Explore existing products	• Evaluate existing products	• Design and generate ideas	• Make, including planning	Evaluate own ideas and products
Explore and Evaluate – Existing products	Design and Generating ideas	Making - Planning	Making – Practical skills and techniques	Evaluating Own ideas and products	
<ul style="list-style-type: none"> • Explore what products are and who or what they are for. • Explore how products work and how or where they might be used. • Explore what materials products are made from • Say what they like and dislike about products 	<ul style="list-style-type: none"> • State what products they are making and who they are for • Describe what their products are for • Say how their products will work • Say how they will make their products suitable for their intended users • Use simple design criteria to help develop their ideas • Generate ideas by drawing on their own experiences • Use knowledge of existing products to help come up with ideas • Model ideas by exploring materials, components and construction kits and by making templates and mockups • Use information and communication technology, where appropriate to develop and communicate ideas. 	<ul style="list-style-type: none"> • Plan by suggesting what to do next • Select from a range of tools and equipment, explaining their choices • Select from a range of materials and components according to their characteristics 	<ul style="list-style-type: none"> • Follow procedures for safety and hygiene • Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components • Measure, mark out, cut and shape materials and components • Assemble, join and combine materials and components • Use finishing techniques, including those from art and design 	<ul style="list-style-type: none"> • Talk about their design ideas • Make simple judgements about their products and ideas against design criteria • Suggest how their products could be improved 	

Design Vocabulary

planning, investigating, design, evaluate, make, user, purpose, ideas, product, names of tools and utensils

<u>Structures</u> <u>Freestanding Structures</u>	<u>Textiles</u>	<u>Mechanisms</u> <u>Levers and Linkages</u>	<u>Mechanisms</u> <u>Wheels and Axles</u>	<u>Food Technology</u>
<p>Design brief: Create a piece of playground equipment for a model adventure playground for EYFS small world <i>Material: construction materials and timber</i></p> <p>Design brief: Create window boxes / plant pots that can be displayed in school to make the environment more appealing <i>Material: timber</i></p>	<p>Design brief: Create hand puppet which can be used to retell a picture book from our class <i>Material: fabric and simple running stitch</i></p> <p>Design and print shopping bags <i>(not full unit – revisit explore and evaluate skills)</i> Print designs onto pre-bought Tote shopping bags for the Christmas Fair</p>	<p>Design brief: Create a non-fiction picture book which would help children understand the continents, oceans and animals <i>Materials: paper / fabric incorporating levers, flaps and wheels</i></p>	<p>Design brief: Create wheeled vehicle which can safely carry 2 passengers <i>Materials: timber /card</i></p>	<p>Make a vegetarian buffet / meal Design brief: Create a buffet / meal to encourage people to have 1 meat free day a week Make a picnic Design brief: Create a healthy picnic that would be suitable for a child on a visit to the seaside. <i>Invite parents to sample the picnic before their seaside visit to encourage healthy eating.</i></p>
Technical Knowledge	Technical Knowledge	Technical Knowledge	Technical Knowledge	Technical Knowledge
<ul style="list-style-type: none"> I can explore and evaluate existing freestanding structures I know about strengthening structures I know how freestanding structures can be made stronger, stiffer and more stable. I can create a freestanding structure using my knowledge and skills. 	<ul style="list-style-type: none"> I can use a range of textiles, tools and equipment to perform practical tasks. I can explore and evaluate existing textile products I understand how 3-D textile products are made, using joining, templates and finishing to create two identical shapes. I can cut, then join textiles using a running stitch, over sewing or glue. I can decorate using a range of items (buttons, sequins, beads, ribbons etc). 	<ul style="list-style-type: none"> I can investigate and analyse products with lever and linkage mechanisms. I can understand and use lever and linkages, and fixed and loose pivots. I can create a working product using knowledge of levers, linkages and pivots 	<ul style="list-style-type: none"> I can describe the working characteristics of materials and components I understand the movement of simple mechanisms such as wheels and axles I can describe how freestanding structures can be made stronger, stiffer and more stable I can create a working product using my knowledge of wheels and axles. 	<ul style="list-style-type: none"> I know that all food comes from plants or animals I know that food has to be farmed, grown elsewhere or caught I can prepare simple dishes safely I know how to peel, cut, grate, mix and mould foods (with supervision).
Wider Knowledge	Wider Knowledge	Wider Knowledge	Wider Knowledge	Wider Knowledge
<ul style="list-style-type: none"> I know some strong/stiff structures (i.e. climbing frame, tower) I know what materials are useful for strengthening or stiffening structures and why this is I know some simple facts about more than one structural engineer (i.e. Gustave Eiffel, Brunel) 	<ul style="list-style-type: none"> I know the names of simple fabric products (i.e. cushion, jumper, blanket) and where fabrics come from i.e. wool from a sheep) I know why simple fabrics are chosen based on their properties (i.e. wool is used for a blanket because it is soft and warm) I know the names of at least one designer of fabric products (i.e. Levi Strauss and denim jeans, William Morris - floral interior design patterns,) 	<ul style="list-style-type: none"> I know where sliders and levers are used in real life context 	<ul style="list-style-type: none"> I know simple commercial products that use wheels and axels to move I know the difference between pulling and pushing forces I know which materials are best used for particular components (i.e. rubber covered wheels might provide more grip than plastic wheels) 	<ul style="list-style-type: none"> I know where a range of fruit and vegetables come from. I know the principles of a varied diet. I can name and sort foods into the five food groups I know that everyone should eat at least five portions of fruit and vegetables every day
Vocabulary				
Structures	Textiles	Mechanisms	Mechanisms	Food
Cut, fold, join, fix, weak, strong Structure, base, underneath, thicker, thinner, corner, point, straight, curved, rectangle, cube, cuboid, cylinder, fold, join, fix structure, wall, tower, framework, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic	joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish, template, quality, suitable, features, dye, overstitch, design, fray, mock-up, seam pattern, mark out, join, decorate, running stitch, needle, fabric	Mechanism, lever, slider, slot, pivot, guide/bridge, masking tape, fastener, pull, push, down, straight, work,	<ul style="list-style-type: none"> Wheel, axel, fixed, free, design, make, cutting, joining, hacksaw, vice, dowel, body, cab, shaping 	Fruit, vegetables, soft, juicy, crunchy, sticky, smooth, sharp, crisp, sour hard, flesh, skin, seed pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, tasting, arranging

