

Malvern Primary School– Design & Technology Curriculum **taught discretely*



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Focus Questions	<p>Autumn 1 – Into The Woods</p> <p>Can I prepare a healthy snack for a Teddy Bear's Picnic? What seasonal/local ingredients could I use?</p>	<p>Autumn 2 – Shipmate, Navigate!</p> <p>Can I design and make a vessel that is able to float for 5 minutes and carry a 1kg weight across a body of water?</p>	<p>Autumn 1 – Ages Ago</p> <p>Can I design a piece of jewellery that would be aesthetically pleasing to my chosen audience?</p>	<p>Autumn 1 – Sound Collector</p> <p>Can I design, make and evaluate a set of ear defenders for my chosen audience considering purpose?</p>	<p><u>Autumn 2 – The Sky at Night</u></p> <p><u>Can I design, make and evaluate a main meal for a young child to support their growth and development?</u></p> <p><u>Can I source my ingredients locally?</u></p>	<p>Autumn 1 – We'll Meet Again</p> <p>Can we design life size shelters that are able to accommodate a person, withstand the weather for 1 week and protect a soft toy from the elements?</p>
	<p>Spring 1 – Chasing Space</p> <p>Can I create a moon buggy with wheels and axels that can be pushed and pulled?</p>	<p>Spring 1 – Splendid Structures</p> <p>Who can build the tallest tower that can support a 1kg weight?</p> <p>Spring 2- Big Brass Band</p> <p>Can I produce a musical instrument for a specific section of the orchestra?</p>	<p>Spring 2– There are Places I'll Remember</p> <p>Can I build a craft that is able to protect my passenger (egg) when dropped from 2m?</p>	<p>Spring 1 – Journey Through the Human Body</p> <p>Can I create a main meal considering the nutritional requirements of a chosen athlete?</p>	<p>Spring 2 – Cool Chemistry (Electrical Systems)</p> <p>Can I design a board game for a selected audience that is appropriate for my peers to play?</p> <p>Can I replicate my design using graphical modelling software, electrical components and compare the two designs?</p>	<p>Autumn 2 – Mayan Mystery</p> <p>Can I design and make a wearable mask from recycled/found/upcycled materials that is aesthetically pleasing to my chosen audience and able to hide my identity?</p>
	<p>Summer 1 – Memory Makers</p> <p>Can I create a memory box to protect and contain a precious object?</p>	<p><u>Summer 1 – Critique Creatures</u></p> <p><u>Can I design a healthy pizza which includes a range of naturally sourced / local ingredients?</u></p>	<p><u>Summer 2 – Ancient Greek Legacy</u></p> <p><u>Can I design a sandwich that can be preserved in the lunchbox of a miner? Can I consider the best way to preserve the sandwich and the longevity of the ingredients?</u></p>	<p>Summer 1 – A Norman Conquest</p> <p>Can I design and make a bridge that is able to support a 500g weight, allow a toy vehicle to cross, cover a distance of 50cm and stand independently for 1 day?</p>	<p>Summer 2 – Fantastic Beasts</p> <p>Can I investigate, design, make and evaluate a Bug Hotel for use within the school grounds?</p>	<p>Summer 2 – Back to the Future</p> <p>Can I design and make a two course savoury meal to serve a family of 4 on a limited budget? (£5)</p> <p>Can we source our ingredients locally?</p>

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Research	<p>Explore and evaluate healthy and unhealthy items from a picnic basket.</p> <p>Know and understand the principle of a wheel and axle and identify vehicles from a selection that use this mechanism.</p> <p>Investigate a variety of ready-made boxes. Explore ways of joining nets including gluing, taping and stapling.</p>	<p>Explore and evaluate a variety of floating vessels paying close attention to design features, shape and buoyancy.</p> <p>Research different towers from around the world and consider their structure. How were they built? Who was the architect?</p> <p>Research healthy fruits that are enjoyed by my class mates. What are their preferences? How can I make my product appealing?</p>	<p>Investigate and analyse a variety of handmade jewellery and discuss preferences. Consider how items were made.</p> <p>Research different ways that couriers protect their packages from damage.</p> <p>Research ingredients that have a long preservation life and will not spoil quickly in high temperatures.</p>	<p>Investigate and analyse a variety of ear defenders and sound proofing products, Research similarities and differences.</p> <p>Research the differing nutritional needs of a variety of athletes and identify foods suitable for purpose.</p> <p>Research bridges from around the world and use ICT to investigate gears, pulleys, cams, levers and linkages.</p>	<p>Investigate and analyse materials and shapes that would be best suited to the purpose of air travel (taking into account what children know about the space race). Investigate different method of propulsion.</p> <p>Research the nutritional values of a healthy and varied diet and consider how to utilise this in my pizza design.</p> <p>Research different board games paying particular attention to ease of use and practicality for their age group.</p>	<p>Investigate and analyse the properties of a variety of materials available and consider their suitability for purpose. Investigate the design of a variety of structures and use this information to make decisions about their own design.</p> <p>Research the design of masks from around the world and consider the appropriateness of the different designs.</p> <p>Use the internet to research the affordability of ingredients in local supermarkets and use this information to make decisions about where to shop.</p>
Design	<p>Design and discuss a purposeful and appealing snack that can be enjoyed at a teddy bear's picnic.</p> <p>Design via mock-ups and model building a functional vehicle based on my design criteria.</p> <p>Design via templates, drawing and trial and error a purposeful and functional container for a precious object.</p>	<p>Design a purposeful and functional vessel based on research and design criteria. Use mock-ups, drawing and talking to communicate my ideas.</p> <p>Design a purposeful and functional tower based on design criteria. Communicate ideas via model building, talking, trial and error and mock-ups.</p> <p>Design an appealing product for a chosen audience using talking, drawing and ICT to communicate ideas.</p>	<p>Use research and computer aided design to create an aesthetically appealing product aimed at a particular group. Communicate ideas using computer aided design.</p> <p>Use research to design an innovative package that is fit for purpose. Generate and communicate ideas through prototypes, discussion and annotated sketches.</p> <p>Use research to design a functional product that is fit for purpose and aimed at a particular individual or groups. Communicate ideas through exploded cross sectional diagrams.</p>	<p>Use research to create a functional product that is fit for purpose. Communicate ideas through talking, pitching and annotated sketches.</p> <p>Use research to create a functional and appealing sandwich using cross sectional and exploded diagrams to communicate ideas.</p> <p>Use research to create an innovative bridge that is fit for purpose. Communicate ideas through talking, prototypes and annotated sketches.</p>	<p>Use research to design and make an innovative craft capable of air travel. Communicate ideas through talking, prototypes and annotated sketches.</p> <p>Use research to design and make an appealing and functional product that is fit for the purpose of a healthy diet. Communicate ideas through annotated sketches.</p> <p>Use research to design and make a functional and appealing board game that is fit for the purpose of a set age group. Communicate ideas via discussion and computer aided design.</p>	<p>Use research to design and make a functional shelter that is fit for purpose. Generate ideas through talking, exploded cross sectional diagram and annotated sketches.</p> <p>Use research to design an appealing mask that is functional and fit for the purpose of hiding identity. Communicate ideas via annotated sketches and pattern pieces</p> <p>Use research to design and make an affordable family meal that is innovative and fit for purpose and aimed at a particular group. Generate ideas via small group discussion and annotated sketches.</p>
Make	<p>In small groups with adult support, select from and use a range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing.</p> <p>With support and modelling, select from and use a wide range of materials and components including construction materials, textiles and ingredients according to their characteristics.</p>	<p>With increasing levels of independence, select from and use a range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing showing increasing levels of control, although may not be accurate.</p> <p>With greater levels of independence, select from and use a wide range of materials and components including construction materials, textiles and ingredients according to their characteristics.</p>	<p>Select from and increasingly wide range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing with increasing levels of accuracy and with support from an adult when required.</p> <p>Select from and use a wider range of materials and components including construction materials, textiles and ingredients. Begin to make decisions based on functional properties and aesthetic qualities.</p>	<p>Select from and increasingly wide range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing with increasing levels of accuracy independently.</p> <p>Select from and use a wider range of materials and components including construction materials, textiles and ingredients. Begin to give clear verbal explanations about decisions based on functional properties and aesthetic qualities.</p>	<p>Select from and increasingly wide range of tools and equipment (applied in a more complex manner) to perform practical tasks such as cutting, shaping, joining and finishing with accuracy independently.</p> <p>Select from and use a wider range of materials and components including construction materials, textiles and ingredients. Begin to give clear verbal and written explanations about decisions based on functional properties and aesthetic qualities.</p>	<p>Choose precisely from an increasingly wide range of tools and equipment (applied in a more complex manner) to perform practical tasks such as cutting, shaping, joining and finishing with accuracy independently.</p> <p>Select from and use a wider range of materials and components including construction materials, textiles and ingredients. Verbalise, give written accounts and debate their independent decisions taking into consideration functional properties and aesthetic qualities.</p>

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Evaluate	<p>Compare and evaluate their products in comparison to a range of existing products.</p> <p>State verbally what aspects I like about my designs and discuss what I might do differently in the future.</p>	<p>Compare and evaluate their products in comparison to a range of existing products.</p> <p>State verbally and in written form what I like about my design based on the design criteria.</p> <p>Discuss what I might change based on the design criteria.</p> <p>Appraise the products of my peers and provide constructive feedback.</p>	<p>Evaluate my ideas and products against my own design criteria and make simple changes to my product if possible.</p>	<p>Evaluate my ideas and products against my own design criteria and listen to the views of others when considering how to improve my work.</p>	<p>Evaluate my ideas and products against my own design criteria and make improvements to my products taking on board the opinions of others.</p>	<p>Evaluate my own ideas and products (and those of my peers) against design criteria in the planning stages. Make improvements to my products taking on board the opinions of others and begin to understand the cycle of evaluating, designing, planning and making.</p>
Food Vocabulary	<p>Cut, slice, ingredients, peeling, squeezing, tasting, core, seeds, pips, flesh, soft, juicy, crunchy, healthy, sweet, sticky, smooth, sharp, crisp, hard, cutting board, knife, peeler, skewer, banana, strawberry, orange, apple, arranging, choosing, diet</p>	<p>Sour, bitter, sweet, salty, investigating, preference, appealing, pineapple, mango, peach, melon, pear, raspberry, grape, papaya,</p>	<p>Allergy, beat, carbohydrate, combine, dairy, fat, fold, preserve, gluten, mix, nutrients/nutrition, pour, protein, stir, utensil, vitamins, whisk, edible</p>	<p>Intolerance, source, suitability, nutritional value, energy, calories, glucose, aroma, texture</p>	<p>Knead, roll out, rub in, shape, sprinkle, kitchen aid, rolling pin, grate, healthy varied diet,</p>	<p>Affordability, economy, budget, ration, conserve,</p>
Vocabulary	<p>Fabric, mark out, decorate, axles, chassis, body cab, fixed, free moving, vehicle axle holder, wheels, evaluate, suitable, test, weak, assemble, construction, cutting, equipment, finishing, joining, materials, function, model, develop, purpose</p>	<p>Triangle, tripod, underneath, supporting, tower, thicker, thinner, surface, structure, metal, plastic, point, template, stability, stiffen, strengthen, components, mechanism, mock up, shaping, textiles, tool, prototype, appeal, characteristics, design criteria</p>	<p>Design specification, aesthetic qualities, reinforce, fit for purpose, functional, authentic, structure, frame, strengthen, corrugating, assemble, compartment, prototype, mock up</p>	<p>Adhesive, scoring, reinforcement, triangulation, temporary, inclined plane, load, movable, wedge, force, fixed, lever, pulley</p>	<p>Propulsion, glide, distance, vertical, horizontal, battery, battery holder, bulb, bulb holder, conductor, connection, control, switch, crocodile clip, fault, insulator, parallel circuit, series, circuit diagram, oscillating</p>	<p>Manipulate, applique, pinking shear, fabric, hem, seam, stitch, adding, textile, linen, fur, muslin, form, shaped, mould, papier mache,</p>