



Froxfield Primary School DT progression (2 year cycle)

	Class 1	Class 2	Class 3	Class 4
<u>Taking Inspiration</u>	Learn about an inventor or chef relevant to a DT topic.	Learn about an inventor or chef relevant to a DT topic.	Know an inventor, chef, engineer and manufacturer who have developed ground-breaking products	Combine elements of a design from a range of inspirational designers throughout history, giving reasons for choices.
<u>Designing</u>	<p>Begin to work within a range of contexts: imaginary, story-based, home, school, garden, playground, local community, industry and wider environment</p> <p>With support, explore existing products giving likes, dislikes Describe the product using simple vocabulary Talk about simple design for a product for self or peers Describe it in a simple sentence As a class, agree criteria to help develop design ideas from first-hand experience Communicate ideas by drawing and talking</p>	<p>Work within a range of contexts: imaginary, story-based, home, school, garden, playground</p> <p>Begin to explore existing products giving likes, dislikes Describe what the products are and where they might be used Explain product being designed and for self or others to use Describe how it will work In groups agree simple design criteria to help develop ideas Communicate ideas by drawing and talking</p>	<p>Begin to work confidently within a range of contexts: home, school, leisure, culture, enterprise, industry, local community, industry and wider environment</p> <p>Explore existing product (it's design & purpose) with the user of the product in mind. Give preferences. Investigate the design and materials chosen with existing products</p> <p>With support, collect information or ideas about the needs of the intended user of the product to be made Begin to use this to develop own design criteria and annotated drawings</p>	<p>Work confidently within a range of contexts: leisure, culture, enterprise, industry, local community, industry and wider environment</p> <p>Design and describe (with the user in mind) motivated by the service a product will offer. Indicate design features of product to appeal to intended user Gather information about the needs of the intended user through a survey or research on web-based resources Use this to develop their own design criteria identifying the needs and preferences of their 'market' Begin to Investigate simple costs of materials in existing products Make detailed plan, with annotated drawings and notes</p>
<u>Making</u> <u>See progression of skills per class</u>	<p>Model ideas by exploring materials, simple components like a slider and construction kits</p> <p>Teacher to use IT where appropriate to communicate and develop ideas as a class</p>	<p>Model ideas by exploring materials, components, and construction kits, making templates</p> <p>Teacher or groups to use IT where appropriate to communicate and develop ideas as a class</p>	<p>Use patterned pieces to help and consider availability of resources Where possible, products should have a high quality finish, using art skills where appropriate Measure and cut with some accuracy Use IT where appropriate to communicate and develop ideas in pairs</p>	<p>Make a simple prototypes to help inform final product design. Use pattern pieces where necessary Make design decisions based on resources, time and costs Ensure products have a high quality finish, using art skills where appropriate With support, use computer-aided designs to represent designs Use IT where appropriate to communicate and develop ideas in pairs or on own</p>
<u>Evaluating & Improving</u>	<p>With support, compare finished piece against class design criteria With support, suggest what you like and dislike, enjoyed.</p>	<p>Begin to compare finished product against design criteria Suggest & record what you like and might improve about the product. What did you find tricky or easy?</p>	<p>With growing independence. evaluate own design criteria as they make Then use their design criteria to evaluate the strengths and areas to develop in their final product. Record. Begin to evaluate skills used.</p>	<p>Explain the process with step-by-step plans as a guide to making Independently, set own design criteria as they design and make. Then use their design criteria to evaluate the strengths and areas to develop in their final product. Give a detailed evaluation of product based on purpose, effectiveness, construction and success</p>



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Construction Structures & Electrical Systems	Cycle A - Autumn 1 (London's Burning) Make a 2D house with hinge Cycle B - Autumn 1 (On the Move) Make a photo frame with a hinge	N/A See Mechanisms	Cycle A - Spring 2 (Irresistible Isles) Lighthouse with pulley y3 (with light y4) Cycle B - Autumn 2 (Deadly 60) Night light lamp box (y4 electrical Systems)	Cycle A - Autumn 1 (Ancient civilisation) Rollercoasters (not linked to topic)
	Explore constructing simple square and rectangular shapes using building equipment e.g. lego Select straws, card and joiners and with support assemble simple 2D shapes. Measure lengths using non-standard units Cut equal lengths of straw to build a rectangle (house) or card (photo-frame). Join securely with joiners. Attach with PVA glue. Decorate using paper and card With support, use equipment & tools safely		Skills built on from Year 1 Using a ruler, plan on squared paper the dimensions of the frame or light box front in cm's Plan & use ruler to measure accurately card lengths with some accuracy Saw safely, wearing goggles) using a handsaw, 1 to 1, with a neat finish Assemble the L shape (2 batons), glue with hot-glue gun to create a solid frame Measure and cut backing for frame or attach light box front to box. Cut and glue stand to back of frame so that it stands accurately / secure light box front to box. Build simple circuit with light and on/off (y4 only) Decorate, embellish frame / light box Evaluate frame against own set criteria With some help, select and use equipment & tools safely. Begin to explain why they have chosen some tools or equipment.	Skills built on from Year 3/4 Accurately assemble; join and combine different materials e.g cardboard sleeve to join, cylindrical upright to horizontal base, duct tape to join tubing and range of orientations Measure using rulers, plan and adjust final measurements, trial & error Use papier-mache, paints to secure and embellish Demonstrate resourcefulness when tackling practical tasks e.g apply previous knowledge to solve securing a 360 degree loop bend Reinforce & strengthen frame using triangulation, structures of 3, using hot-gun safely and with some independence Test final product and evaluate as a group against set criteria With independence, select and with some independence use tools & equipment safely Explain why they have chosen specific equipment and tools



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Mechanisms Sliders Wheels & Axles, Motorised Mechanisms Mechanical Systems / CAM	Cycle A - Summer 1 (Anchor's Away) Titanic Moving Picture Poster Cycle B - Summer 1 (Mountain Explorers) Sliding Mountaineer on Mountain poster	Cycle A - Spring 2 (To Infinity and Beyond) Mechanisms (wheel & axles) Moon Buggy Cycle B - Autumn 2 (I'll huff and I'll puff) Mechanisms (wheels & axles) Vehicle for carrying materials	Cycle B - Spring 2 (The Conqueror's Legacy) Wind-up Chariot	Cycle B - Summer 2 (Strength & Fortitude) Motorised Systems Fairground Rides Cycle A - Spring 1 (Survival of the Fittest) CAMS Moving character
	Explore sliders in a range of picture books and investigate how they work. Find examples on web. Cut using scissors safely. Attach slider to a character with PVA glue Using art skills, create a background. Insert securely a handle 'slider'. Cut line for slider to run along. Use slider to support story-telling	Skills built on from Year 1 (Structures) Explore the simple mechanisms of toy cars (axle, axle rod, wheel, chasis) With support, measure, mark out and cut dowling rod with a saw safely to create axle rods Securely join the axle holder to the chassis (shoe box) using glue Assemble the wheel and axle components so the wheels spin freely Test the movement of the wheels & axles to ensure it travels in a straight line Use finishing techniques to decorate the moon buggy effectively	Skills built on from Year 2 & Year 1 Explore wind-up mechanisms using elastic bands. Measure on a template the chassis, width and length to make a rectangular frame. Measure and saw the wooden batons accurately, safely. Use glue gin safely to join and attach chasis. With some help, accurately assemble & a attach axle holders securely, cut dowel for axel rod and attach wheels. With support, wrap elastic bands to create a wind-up mechanism.	Skills built on from Year 3/4 Explore how mechanical systems such as CAMS create movement by converting rotary to linear movement Offset CAMS on an axle and explore how this affects rotation / orientation Accurately measure to nearest mm, mark, saw dowel to ensure accurate alignment of handle device Use hand-drill safely to drill holes correctly to create a simple sequence of CAMS. Accurately assemble & refine by sanding, filling and adjusting with tools safely Evaluate in pairs against own criteria
Textiles 2D to 3D patterns		Cycle B - Summer 2 (Local Life) Hand puppets Cycle A - Summer 2 (Froxfield Fun!) Pond Animal Hand Puppet	Cycle A - Summer 2 (Raiders or Settlers) Money Pouches	Cycle B - Autumn 1 (Democracy Rules! / Ancient Greece) Mythical Monster Puppets
		Investigate pre-made hand puppets Use a pre-drawn template to mark and cut our fabric accurately Practise first then use a running stitch to join 2 pieces of material / puppet together Know that a needle has to be thread and it is tied on the end of the thread (with help) With support, assemble and stitch puppet together Use finishing techniques to embellish a hand-puppet including gluing on eyes and extra details like scale, tongue fin etc	Skills built on from year 2 Explore and research information of a range of purses and pouches from current and historical times from the Viking period. Explore vegetables & natural materials available at that time for dyeing fabric With support create a paper template by accurately drawing and cutting out Dye fabric for own money pouch Begin to accurately cut and assemble fabrics Learn to sew blanket stitch or over stitch to secure and join fabric together Fasten toggle accurately by sewing on to join securely Evaluate money pouch against peer set criteria	Skills built on from year 4 Using project research based on historical and mythical stories Create a pattern puppet with accurate dimensions Cut fabric using pattern. Pin and stitch together using stitch of choice. Alter and adjust as product takes shape. Add card for mouth to create rigidity and movement. Use skills to embellish. Add detail to puppet. Evaluate against own criteria and in terms of cost, purpose and success



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Food Technology	<p>Cycle A - Spring 2 (All Change please) Fruit Smoothie</p> <p>Cycle B - Spring 1 (God Save the Queen) Royal sandwich</p>	<p>Cycle A - Autumn 2 (Healthy Humans) Healthy Dips</p> <p>Cycle B - Spring 1 (Let's Check out China) Noodle Dishes</p>	<p>Cycle A - Autumn 2 (Fasten your seatbelts) Brazilian Pasties</p> <p>Cycle B - Summer 1 (Bella Italia) Make your own Pizza</p>	<p>Cycle A - Summer 2 (Mayan Magic) Tortillas</p> <p>Cycle B - Spring 2 (United we stand!) Bake Off</p>
	<p>Investigate sensory characteristics of taste – sweet, sour, sharp, smooth by tasting a selection of bought smoothies. Give likes / dislikes for each one. Explore a range of fruits by tasting and use to inform design criteria with preferences Peel and chop fruit with yogurt, apple juice. Observe how to use a food mixer. Taste and evaluate different smoothies, giving likes / dislikes.</p>	<p>Skills built on from year 2 Investigate sensory characteristics of bought savoury Name & sort dip ingredients link to EATWELL plate (Science link) Use equipment to safely cut, peel and grate ingredients for savoury dip, considering texture. Measure ingredients using teaspoon, ½ tsp, tablespoon, ½ tablespoon. Prepare a simple dip using equipment safely and hygienically (no heat source) Evaluate dips against a simple success criteria agreed as a class</p>	<p>Skills built on from year 2 & 3 Explore & research food ingredients in the wider world (Brazil and Italy), e.g. banana, pineapple and chocolate Prepare & assemble a savoury dish (pasty/ pizza) using the following baking skills: With help/some independence, accurately measure / weigh ingredients using scales. Rolling pastry with a rolling pin, cutting shapes accurately with cutters, chopping, folding and mixing ingredients to fill the pasty, add flavouring Observe how to safely use an oven Chop ingredients safely and use utensils hygienically Evaluate pasty against criteria set per group</p>	<p>Skills built on from year 4 Explore & research food ingredients in the wider world (Mexico) e.g black beans, peppers, sour crème, chirizo, salsa verde , avocado Evaluate tortilla breads and fillings (pre-bought) Measure and combine ingredients to kneed and make own tortilla wraps Make simple side like guacamole or salsa verde Accurately weigh and measure ingredients, cost of some ingredients. Prepare & assemble filling for savoury tortilla using the following skills: chopping, slicing,peeling, mashing folding and mixing ingredients to fill the tortilla Chop ingredients safely and use utensils Hygienically combine and mix in tortilla Observe and with supervision using frying pan safely to fry tortilla Evaluate tortilla fillings against criteria set per group</p>