



Design and Technology Learning Map



Year	Autumn	Spring	Summer
Nursery	<p>Owl baby sock puppets using range of collage materials. Experiments with blocks, colours and marks. Bake a birthday cake. Explore food from other cultures Make own Diva lamp from clay. Make presents for Spot using junk modelling Understands that they can use lines to enclose a space, and then begin to use these shapes to represent objects.</p>	<p>Build a bridge and Three Little Pig's houses Beginning to construct, stacking blocks vertically, horizontally, making enclosures, and creating spaces. Realises tools can be used for a purpose. Design and build houses for pigs. Design and create bridge from 3 billy goats. Joins construction pieces together to build and balance. Realise tools can be used for a purpose.</p>	<p>Constructs with a purpose in mind, using a variety of resources. Create space rockets, rocket packs and vehicles out of junk modelling Constructs with a purpose in mind, using a variety of resources. Boats and trains. Evaluate constructions.</p>
Reception	<p>Using junk modelling to create their own models of their homes and Mini me replicas Create lava lamp exploring which resources work best and why. Links with science.</p>	<p>Using big and small construction to enhance their creativity and imagination. Design and create own superhero capes and finger puppets. Combining fabrics for a specific purpose. Looking at garden vegetables linking to literacy cut up different vegetables safely.</p>	<p>Building transport using crates and blocks – linked to outdoor provision and resources. How to make things stable and strong. Design and create animal habitats which materials are best for specific purposes. Design, create and evaluate a floating boat. Choosing appropriate materials.</p>
Year 1	<p>Making a puppet DT1/1.2b select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics DT1/1.4a build structures, exploring how they can be made stronger, stiffer and more stable DT1/1.3b evaluate their ideas and products against design criteria</p>	<p>Fruit salad DT1/2.1a use the basic principles of a healthy and varied diet to prepare dishes Cutting, washing.</p>	<p>Bridge - Kapow DT1/1.4a build structures, exploring how they can be made stronger, stiffer and more stable DT1/1.3b evaluate their ideas and products against design criteria Design and make DT1/1.4b explore and use mechanisms, in their products. DT1/1.1a design purposeful, functional, appealing products for themselves and other users based on design criteria DT1/1.3b evaluate their ideas and products against design criteria Plan design and evaluate a bridge.</p>
Year 2	<p>Block print patch/applique dragon machine – link to cultures DT1/1.2b select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics DT1/1.3b evaluate their ideas and products against design criteria Practical skills</p>	<p>Make train Using CAMs <i>to make person/smoke from the train</i>. DT1/1.4b explore and use mechanisms, in their products. Links to the Polar Express - making nets/cutting. Mechanisms: Wheels and axles, making a moving train. Pivots, levers and linkages.</p>	<p>Make a healthy wrap - Kapow DT1/2.1a use the basic principles of a healthy and varied diet to prepare dishes DT1/2.1b understand where food comes from. Deciding ingredients and preparing.</p>
Year 3	<p>Make a Cushion DT2/1.2b select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Making own templates, hand stitching and embellishing Design, make and evaluate a cushion</p>	<p>Eating Seasonally - Kapow DT2/2.1c understand the source, seasonality and characteristics of a broad range of ingredients (<i>Know how to prepare a meal by collecting ingredients</i>) Deciding ingredients, weighing and preparing.</p>	<p>Making a Ferris wheel -Kapow DT2/1.4b understand and use mechanical systems in their products - Kapow looking at recycled materials DT2/1.4a apply their understanding of how to strengthen, stiffen and reinforce more complex structures DT2/1.1b <i>generate, develop, model and communicate their ideas through discussion, annotated sketches.</i></p>
Year 4	<p>Make a themed tapestry - link to literacy DT2/1.2a select from and use a wider range of tools and equipment to perform practical tasks accurately DT2/1.4a apply their understanding of how to strengthen, stiffen and reinforce more complex structures hand stitching, design, research and evaluate the template. Different types of fabric and stiffeners - computer aided design.</p>	<p>Torches or Static Electricity - Kapow DT2/1.4d apply their understanding of computing to programme, monitor and control their products. DT2/1.4c understand and use electrical systems in their products DT2/1.1b <i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i></p>	<p>Cooking different breads DT2/2.1c become competent in a range of cooking techniques - linked to evacuation.</p>

Year 5	Fabric dying across the ages into a simple bag – dying materials tie dying/white spirits/bleach natural dyes – modern dying DT2/1.2b select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities DT2/1.2a select from and use a wider range of tools and equipment to perform practical tasks accurately Materials - natural vs man-made - cutting, finish, - focus on practical skills tasks .	Bird Houses DT2/1.4a apply their understanding of how to strengthen, stiffen and reinforce more complex structures DT2/1.1b generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces.	What could be healthier? Kapow DT2/2.1c understand the source, seasonality and characteristics of a broad range of ingredients Know how to prepare a meal by collecting ingredients. Links with SMSC.
Year 6	Elec sys – Steady hand game -Kapow DT2/1.4c understand and use electrical systems in their products – working to a budget, research, design and build a scale model – linking to all areas of the curriculum including light/ electricity.	Come dine with me - Kapow DT2/2.1a understand and apply the principles of a healthy and varied diet DT2/2.1b cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet DT2/2.1c become competent in a range of cooking techniques	Comp Prog – using CAD – Navigating the World -Kapow DT2/1.1b generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design DT2/1.4d apply their understanding of computing to programme, monitor and control their products.
Year	Autumn – Content: Food	Spring – Content: Textiles	Summer – Content: Resistant Materials
Year 7 Skills	Basic knife skills. Bridge and claw method. Cuts. Use of basic kitchen equipment weighing and measuring basics. Rubbing in method/melting method. Portion control.	Hand stitch – threading a needle. Machine stitch – different stitches and threading a machine. Decoration – fabric pens/paints, sewing beads and buttons. Template construction and cutting. Project – Willy Wonka inspired cushion.	Designing – Drawing skills. CAD/CAM Building confidence. Hand tools and work shop equipment. Working independently. Cutting Sanding surface finishing Shaping
Knowledge	Hygiene and safety rules. Names of kitchen equipment. Safe use of sharp knives and cooker. Simple planning of dishes.	Design-Make-Evaluation. Health and safety in the Textiles studio and with equipment. Fabric, fibres and Yarns. (Understand how they are made prior learning homework then expand a class.	Health and Safety. Materials and processes. Health and Safety in the workshop. Woods Sustainable issues. Woods, metal and plastics. CAD/CAM Joining materials Manipulating materials.
Year 8 Skills	Bread making skills. Confident use of sharp knives and basic kitchen equipment. Confident use of the cooker. Safe use of small electrical equipment.	Further development – hand stitch and machine stitch (decorative stitches) Decorating – fabric pens / paints and dyes, image transfer. Finishing – high quality standard. Project – Day of the dead inspired keyring.	Workshop equipment. Combining materials Gluing Service finishing Cutting, shaping Hand shaping tools.
Knowledge	Use of yeast in cookery. Functions of ingredients. Adapting recipes by changing ingredients. Cultural differences of foods/dishes. Food hygiene – coloured chopping boards. Prevention of cross contamination.	Design – Make – Evaluation Yarns, Fibres and fabrics – Expanding Knowledge CAD/CAM – embroidery machine. E – Textiles Fabric dyes – experiments and recording of findings.	Research techniques. Research and analysis methods. Environmental issues. Finishing techniques. Veneers.
Year 9 Skills	Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet. Demonstrate and consolidate food safety and hygiene Enhanced practical skills and efficient use of kitchen equipment Shaping of dough Chilled desserts – layering of fillings	Develop design ideas through experimental drawing of Seascapes. Use of different media to produce range of sketches that can transfer to screen and Styrofoam print. Explore the transfer of images using transfer glue and other mediums. Further develop range of hand stitch techniques and use of free hand machine stitch. Work to improve CAD/CAM skills to stitch into samples.	Annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools. Select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties Working with wood

		<p>Explore various ways of dyeing materials- natural dyeing techniques, cold/hot water dyeing and tie dye.</p> <p>Explore ways in which to manipulate a variety of fabrics.</p> <p>Layer materials, transferred images, screen/Styrofoam print, hand and machine stitch to produce a mixed media, rustic feel to finished Seascape inspired sample booklet.</p> <p>Evaluation.</p>	<p>Combining materials</p> <p>Environmental concerns</p> <p>Storage box, Wood joints, Glues.</p> <p>Combining materials</p> <p>Consider function of products</p> <p>Manufacturing processes.</p> <p>Housings.</p> <p>Wood Joints</p>
Knowledge	<p>Understand and apply the principles of nutrition and health</p> <p>Become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]</p> <p>Understand the source, seasonality and characteristics of a broad range of ingredients.</p> <p>Comment upon the sources of food poisoning</p> <p>Types of contamination</p> <p>Signs and symptoms of food poisoning</p> <p>Cross contamination and how to prevent</p> <p>Important temperatures</p>	<p>Properties of different fabrics and working characteristics.</p>	<p>Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups.</p> <p>Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.</p>

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