



Curriculum Overview for DT - KAPOW

What we teach, when we teach it

EYFS	Autumn	Spring	Summer
Overview	Structures Towers	Food Preparing Foods	Mechanisms Moving Models
Key Concepts: (take from EYFS curriculum)	<p><u>Nursery</u> Design and Technology skills are promoted within the continuous provision of the indoor and outdoor areas. The DT area is a specific area, which offers children the opportunity to explore ways of joining materials to represent their ideas and intentions. Children are provided with a range of media and materials and are guided by adults.</p>		
	<p><u>Reception</u> Planning Designing and Communicating Ideas -Begin to use the language of designing (i.e. design, plan, draw) -Learn how to plan and adapt initial ideas to make them better -Verbally explain some features of their design</p>		
Knowledge	<p><u>Technical knowledge</u> -To know how to make a freestanding structure from simple blocks/boxes -To know how to make a structure taller -To know how to make a structure more stable</p> <p><u>Wider knowledge</u> -To know one example of a strong structure -To know one example of a strong/weak material</p>	<p><u>Technical knowledge</u> -To know how to mix ingredients -To know how to follow simple health and safety procedures</p> <p><u>Wider knowledge</u> -To know some foods from different cultures</p>	<p><u>Technical knowledge</u> -To know objects on wheels can be moved by pulling or pushing -To know how a wheel fits on to an axle</p> <p><u>Wider knowledge</u> -To know a product that has wheels</p>
Skills	<p>-Construct their product with a simple purpose in mind -Use simple tools to shape, assemble and join materials together -Verbally explain some features of their design</p>	<p>- Mix ingredients using simple utensils Follow basic food safety and hygiene procedures -Verbally explain what they like/dislike about their product -Suggest one thing that they might change when creating a similar product</p>	<p>Construct their product with a simple purpose in mind -Use simple tools to shape, assemble and join materials together -Begin to use the language of designing (i.e. design, plan, draw) -Learn how to plan and adapt initial ideas to make them better</p>
Vocabulary	<u>Freestanding Structures</u> -Cut, fold, join	<u>Preparing fruit and vegetables</u> Cut, taste, fruit, vegetable	<u>Wheels and axles</u> Car, wheel, pull, push

Year 1	Autumn	Spring	Summer
Overview	Textiles Puppets	Mechanisms Making a moving storybook	Food Fruit and vegetables
Prior Learning	EYFS -Begin to use the language of designing (i.e. design, plan, draw) -Learn how to plan and adapt initial ideas to make them better -Verbally explain some features of their design -Construct their product with a simple purpose in mind -Use simple tools to shape, assemble and join materials together -Mix ingredients using simple utensils -Follow basic food safety and hygiene procedures -Verbally explain what they like/dislike about their product -Suggest one thing that they might change when creating a similar product		
Knowledge - what will our children learn?	Technical <ul style="list-style-type: none"> - To know that 'joining technique' means connecting two pieces of material together. - To know that there are various temporary methods of joining fabric by using staples, glue and pins. - To understand that different techniques for joining materials can be used for different purposes. - To understand that a template (or fabric pattern) is used to cut out the same shape multiple times. - To know that drawing a design idea is useful to see how an idea will look. 	Technical <ul style="list-style-type: none"> - To know that a mechanism is the parts of an object that move together. - To know that a slider mechanism moves an object from side to side. - To know that a slider mechanism has a slider, slots, guides, and an object. - To know that bridges and guides are bits of card that purposefully restrict the movement of the slider. Additional <ul style="list-style-type: none"> - To know that in DT, we call a plan a 'design'. 	Technical <ul style="list-style-type: none"> - Understanding the difference between fruits and vegetables. - To understand that some foods typically known as vegetables are actually fruits (.g. cucumbers). - To know that a blender is a machine which mixes ingredients together into a smooth liquid. - To know that fruits grow on trees and vines. - To know that vegetables can grow either above or below the ground. - To know that vegetables can come from different parts of the plant (e.g. roots, potatoes, leaves, lettuce, fruit, cucumber)
Skills - what do we want our children to do?	Design <ul style="list-style-type: none"> - Use a template to create a design for a puppet. Make <ul style="list-style-type: none"> - Cutting fabric neatly with scissors. - Using joining methods to decorate a puppet. - Sequencing steps for construction. Evaluate <ul style="list-style-type: none"> - Reflecting on a finished product, explaining likes and dislikes. 	Design <ul style="list-style-type: none"> - Explaining how to adapt mechanisms, using bridges or guides to control the movement. - Designing a moving story book for a given audience. Make <ul style="list-style-type: none"> - Following a design to create moving models that use levers and sliders. Evaluate <ul style="list-style-type: none"> - Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed. - Reviewing the success of a product by testing it with its intended audience. 	Design <ul style="list-style-type: none"> - Designing smoothie carton packaging by hand or on ICT software. Make <ul style="list-style-type: none"> - Chopping fruit and vegetables safely to make a smoothie. Evaluate <ul style="list-style-type: none"> - Tasting and evaluating different food combinations. - Describing appearance, smell and taste. - Suggesting information to be included on packaging.

Vocabulary Each lesson teacher to choose a couple of words to add under learning steps. Model with children throughout lesson.	Decorate, design, fabric, glue, model, hand puppet, safety pin, staple, stencil, template	Sliders, mechanisms, adapt, design, design criteria, input, mechanism, model, sliders, template, assemble, test	Fruit, vegetable, seed, leaf, root, stem, smoothie, healthy, carton, design, flavour, peel, slice
Year 2	Autumn	Spring	Summer
Overview	Textiles Pouches	Mechanisms Making a moving monster	Structure Baby bear's chair
Prior Learning	Textiles Puppets (Year 1 - see above)	Mechanisms Making a moving storybook (Year 1 - see above)	
Knowledge - what will our children learn?	<p><u>Technical</u></p> <ul style="list-style-type: none"> - To know that sewing is a method of joining fabric. - To know that different stitches can be used when sewing. - To understand the importance of tying a knot after sewing the final stitch. - To know that a thimble can be used to protect my fingers when sewing 	<p><u>Technical</u></p> <ul style="list-style-type: none"> - To know that mechanisms are a collection of moving parts that work together as a machine to produce movement. - To know that there is always an input and output in a mechanism. - To know that an input is the energy that is used to start something working. - To know that an output is the movement that happens as a result of the input. - To know that a lever is something that turns on a pivot. - To know that a linkage mechanism is made up of a series of levers. <p><u>Additional</u></p> <ul style="list-style-type: none"> - To know some real-life objects that contain mechanisms. 	<p><u>Technical</u></p> <ul style="list-style-type: none"> - To know that shapes and structures with wide, flat bases or legs are the most stable. - To understand that the shape of a structure affects its strength. - To know that materials can be manipulated to improve strength and stiffness. - To know that a structure is something which has been formed or made from parts. - To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move. - To know that a 'strong' structure is one which does not break easily. - To know that a 'stiff' structure or material is one which does not bend easily. <p><u>Additional</u></p> <ul style="list-style-type: none"> - To know that natural structures are those found in nature. - To know that man-made structures are those made by people.
Skills - what do we want our children to do?	<p><u>Design</u></p> <ul style="list-style-type: none"> - Designing a pouch. <p><u>Make</u></p> <ul style="list-style-type: none"> - Selecting and cutting fabrics for sewing. - Decorating a pouch using fabric glue or running stitch. - Threading a needle. 	<p><u>Design</u></p> <ul style="list-style-type: none"> - Creating a class design criteria for a moving monster. - Designing a moving monster for a specific audience in accordance with a design criteria. <p><u>Make</u></p> <ul style="list-style-type: none"> - Making linkages using card for levers and split pins for pivots. 	<p><u>Design</u></p> <ul style="list-style-type: none"> - Generating and communicating ideas using sketching and modelling. - Learning about different types of structures, found in the natural world and in everyday objects. <p><u>Make</u></p> <ul style="list-style-type: none"> - Making a structure according to design criteria.

	<ul style="list-style-type: none"> - Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. - Neatly pinning and cutting fabric using a template. <p>Evaluate</p> <ul style="list-style-type: none"> - Troubleshooting scenarios posed by teacher. - Evaluating the quality of the stitching on others' work. - Discussing as a class, the success of their stitching against the success criteria. - Identifying aspects of their peers' work that they particularly like and why. 	<ul style="list-style-type: none"> - Experimenting with linkages adjusting the widths, lengths and thicknesses of card used. - Cutting and assembling components neatly. <p>Evaluate</p> <ul style="list-style-type: none"> - Evaluating own designs against design criteria. - Using peer feedback to modify a final design. 	<ul style="list-style-type: none"> - Creating joints and structures from paper/card and tape. - Building a strong and stiff structure by folding paper. <p>Evaluate</p> <ul style="list-style-type: none"> - Exploring the features of structures. - Comparing the stability of different shapes. - Testing the strength of your own structures. - Identifying the weakest part of a structure. - Evaluating the strength, stiffness and stability of one's own structure.
Vocabulary	Accurate, fabric, knot, pouch, running-stitch, sew, shape, stencil, template, thimble	Evaluation, input, lever, linear motion, linkage, mechanical, mechanism, motion, oscillating motion, output, pivot, reciprocating motion, rotary motion, survey	Function, man-made, mould, natural, stable, stiff, strong, structure, test weak

Year 3	Autumn	Spring	Summer
Overview	Food Eating seasonally	Mechanisms Pneumatic toys	Textiles Cross-stitch and applique (cushions)
Prior Learning	Food Fruit and vegetables (Year 1 - see above)	Mechanisms Fairground wheel	Textiles Pouches (Year 2 - see above)
Knowledge - what will our children learn?	<p>Technical</p> <ul style="list-style-type: none"> - To know that not all fruits and vegetables can be grown in the UK. - To know that climate affects food growth. - To know that vegetables and fruit grow in certain seasons. - To know that cooking instructions are known as a 'recipe'. - To know that imported food is food which has been brought into the country. - To know that exported food is food which has been sent to another country.. - To know that eating seasonal foods can have a positive impact on the environment. - To know that similar coloured fruits and vegetables often have similar nutritional benefits. - To know that the appearance of food is as important as taste. 	<p>Technical</p> <ul style="list-style-type: none"> - To understand how pneumatic systems work. - To understand that pneumatic systems can be used as part of a mechanism. - To know that pneumatic systems operate by drawing in, releasing and compressing air. <p>Additional</p> <ul style="list-style-type: none"> - To understand how sketches, drawings and diagrams can be used to communicate design ideas. - To know that exploded-diagrams are used to show how different parts of a product fit together.. - To know that thumbnail sketches are small drawings to get ideas down on paper quickly. 	<p>Technical</p> <ul style="list-style-type: none"> - To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces. - To know that when two edges of fabric have been joined together it is called a seam. - To know that it is important to leave space on the fabric for the seam. - To understand that some products are turned inside out after sewing so the stitching is hidden.

Skills - what do we want our children to do?	<p>Design</p> <ul style="list-style-type: none"> - Designing a recipe for a savoury tart. <p>Make</p> <ul style="list-style-type: none"> - Following the instructions within a recipe. - Tasting seasonal ingredients. - Selecting seasonal ingredients. - Peeling ingredients safely. - Cutting safely with a vegetable knife <p>Evaluate</p> <ul style="list-style-type: none"> - Establishing and using design criteria to help test and review dishes. - Describing the benefits of seasonal fruits and vegetables and the impact on the environment. - Suggesting points for improvement when making a seasonal tart. 	<p>Design</p> <ul style="list-style-type: none"> - Designing a toy which uses a pneumatic system. - Developing design criteria from a design brief. - Generating ideas using thumbnail sketches and exploded diagrams. - Learning that different types of drawings are used in design to explain ideas clearly <p>Make</p> <ul style="list-style-type: none"> - Creating a pneumatic system to create a desired motion. - Building secure housing for a pneumatic system. - Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy. - Selecting materials due to their functional and aesthetic characteristics. - Manipulating materials to create different effects by cutting, creasing, folding and weaving. <p>Evaluate</p> <ul style="list-style-type: none"> - Using the views of others to improve designs. - Testing and modifying the outcome, suggesting improvements. - Understanding the purpose of exploded-diagrams through the eyes of a designer and their client 	<p>Design</p> <ul style="list-style-type: none"> - Designing and making a template from an existing cushion and applying individual design criteria. <p>Make</p> <ul style="list-style-type: none"> - Following design criteria to create a cushion or Egyptian collar. - Selecting and cutting fabrics with ease using fabric scissors. - Threading needles with greater independence. - Tying knots with greater independence. - Sewing cross stitch to join fabric. - Decorating fabric using appliqué. - Completing design ideas with stuffing and sewing the edges (Cushions). <p>Evaluate</p> <ul style="list-style-type: none"> - Evaluating an end product and thinking of other ways in which to create similar items.
Vocabulary	Arid, climate, complementary, country export, import, mediterranean, mock-up, mountain, peel, polar, seasonal, seasons, snip, temperature, texture, tropical, weather	Exploded-diagram, function, input, lever, linkage, mechanism, motion, net, output, pivot, pneumatic system, thumbnail sketch	Accurate, applique, cross-stitch, cushion, decorate, detail, fabric, patch, running-stitch, seam, stencil, stuffing, target audience, target customer, template

Year 4	Autumn	Spring	Summer
Overview	Textiles Fastening	Structures Pavillions	Electrical systems Torches
Prior Learning	Textiles Cross-stitch and applique	Structures Baby bear's chair	
Knowledge - what will our children learn?	<p>Technical</p> <ul style="list-style-type: none"> - To know that a fastening is something which holds two pieces of material together for example a zipper, toggle, button, press stud and velcro. - To know that different fastening types are useful for different purposes. - To know that creating a mock up (prototype) of their design is useful for checking ideas and proportions 	<p>Technical</p> <ul style="list-style-type: none"> - To understand what a frame structure is. - To know that a 'free-standing' structure is one which can stand on its own <p>Additional</p> <ul style="list-style-type: none"> - To know that a pavilion is a a decorative building or structure for leisure activities. - To know that cladding can be applied to structures for different effects. - To know that aesthetics are how a product looks. 	<p>Technical</p> <ul style="list-style-type: none"> - To understand that electrical conductors are materials which electricity can pass through. - To understand that electrical insulators are materials which electricity cannot pass through. - To know that a battery contains stored electricity that can be used to power products. - To know that an electrical circuit must be complete for electricity to flow. - To know that a switch can be used to complete

		<ul style="list-style-type: none"> - To know that a product's function means its purpose. - To understand that the target audience means the person or group of people a product is designed for. - To know that architects consider light, shadow and patterns when designing. 	<p>and break an electrical circuit.</p> <p>Additional</p> <ul style="list-style-type: none"> - To know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens. - To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison.
Skills - what do we want our children to do?	<p>Design</p> <ul style="list-style-type: none"> - Writing design criteria for a product, articulating decisions made. - Designing a personalised book sleeve. <p>Make</p> <ul style="list-style-type: none"> - Making and testing a paper template with accuracy and in keeping with the design criteria. - Measuring, marking and cutting fabric using a paper template. - Selecting a stitch style to join fabric. - Working neatly by sewing small, straight stitches. - Incorporating a fastening to a design. <p>Evaluate</p> <ul style="list-style-type: none"> - Testing and evaluating an end product against the original design criteria. - Deciding how many of the criteria should be met for the product to be considered successful. - Suggesting modifications for improvement. - Articulating the advantages and disadvantages of different fastening types. 	<p>Design</p> <ul style="list-style-type: none"> - Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. - Building frame structures designed to support weight. <p>Make</p> <ul style="list-style-type: none"> - Creating a range of different shaped frame structures. - Making a variety of free standing frame structures of different shapes and sizes. - Selecting appropriate materials to build a strong structure and cladding. - Reinforcing corners to strengthen a structure. - Creating a design in accordance with a plan. - Learning to create different textural effects with materials. <p>Evaluate</p> <ul style="list-style-type: none"> - Evaluating structures made by the class. - Describing what characteristics of a design and construction made it the most effective. - Considering effective and ineffective designs 	<p>Design</p> <ul style="list-style-type: none"> - Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. <p>Make</p> <ul style="list-style-type: none"> - Making a torch with a working electrical circuit and switch. - Using appropriate equipment to cut and attach materials. - Assembling a torch according to the design and success criteria. <p>Evaluate</p> <ul style="list-style-type: none"> - Evaluating electrical products. - Testing and evaluating the success of a final product.
Vocabulary	Aesthetic, assemble, book sleeve, design criteria, evaluation, fabric, fastening, mock-up, net, running-stitch, stencil, target audience, target customer, template	Aesthetic, cladding, design criteria, evaluation, frame structure, function, inspiration, pavilion, reinforce, stable, structure, target audience, target customer, texture, theme	Battery, bulb, buzzer, cell, component, conductor, copper, design criteria, electrical item, electricity, electronic item, function, insulator, series circuit, switch, test, torch, wire

Year 5	Autumn	Spring	Summer
Overview	Food Developing a recipe	Mechanisms Pop-up book	Textiles Stuffed toys
Prior Learning	Food Adapting a recipe (Year 3 - see above)	Mechanisms Pneumatic toys (Year 3 - see above)	Textiles Fastenings
Knowledge - what will our children learn?	Technical	Technical	Technical

	<ul style="list-style-type: none"> - To understand where meat comes from learning that beef is from cattle and how beef is reared and processed. - To know that recipes can be adapted to suit nutritional needs and dietary requirements. - • To know that I can use a nutritional calculator to see how healthy a food option is. - • To understand that 'cross-contamination' means bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects. - To know that coloured chopping boards can prevent cross-contamination. - To know that nutritional information is found on food packaging. - To know that food packaging serves many purposes. 	<ul style="list-style-type: none"> - To know that mechanisms control movement. - To understand that mechanisms can be used to change one kind of motion into another. - • To understand how to use sliders, pivots and folds to create paper-based mechanisms. <p>Additional</p> <ul style="list-style-type: none"> - To know that a design brief is a description of what I am going to design and make. - To know that designers often want to hide mechanisms to make a product more aesthetically pleasing. 	<ul style="list-style-type: none"> - To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric. - To understand that it is easier to finish simpler designs to a high standard. - To know that soft toys are often made by creating appendages separately and then attaching them to the main body. - To know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely
Skills - what do we want our children to do?	<p>Design</p> <ul style="list-style-type: none"> - Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients. - Writing an amended method for a recipe to incorporate the relevant changes to ingredients. - Designing appealing packaging to reflect a recipe. - Researching existing recipes to inform ingredient choices. <p>Make</p> <ul style="list-style-type: none"> - Cutting and preparing vegetables safely. - Using equipment safely, including knives, hot pans and hobs. - Knowing how to avoid cross-contamination. - Following a step by step method carefully to make a recipe. <p>Evaluate</p> <ul style="list-style-type: none"> - Identifying the nutritional differences between different products and recipes. - Identifying and describing healthy benefits of food groups. 	<p>Design</p> <ul style="list-style-type: none"> - Designing a pop-up book which uses a mixture of structures and mechanisms. - Naming each mechanism, input and output accurately. - Storyboarding ideas for a book. <p>Make</p> <ul style="list-style-type: none"> - Following a design brief to make a pop up book, neatly and with focus on accuracy. - Making mechanisms and/or structures using sliders, pivots and folds to produce movement. - Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result. <p>Evaluate</p> <ul style="list-style-type: none"> - Evaluating the work of others and receiving feedback on own work. - Suggesting points for improvement. 	<p>Design</p> <ul style="list-style-type: none"> - Designing a stuffed toy, considering the main component shapes required and creating an appropriate template. - Considering the proportions of individual components. <p>Make</p> <ul style="list-style-type: none"> - Creating a 3D stuffed toy from a 2D design. - Measuring, marking and cutting fabric accurately and independently . - Creating strong and secure blanket stitches when joining fabric. - Threading needles independently. - Using appliqué to attach pieces of fabric decoration. - Sewing blanket stitch to join fabric. - Applying blanket stitch so the spaces between the stitches are even and regular. <p>Evaluate</p> <ul style="list-style-type: none"> - Testing and evaluating an end product and giving points for further improvements.
Vocabulary	Abattoir, adaptation, balanced, beef, brand, cook, cross-contamination, develop, enhance, equipment, farm, label, measure, nutrient, nutrition, nutritional value, preference, press, process, safety, theme	Aesthetic, computer-aided design, caption, design, design brief, design criteria, exploded-diagram, function, input, linkage, mechanism, motion, output, pivot, prototype, slider, structure, template	Accurate, annotate, appendage, blanket-stitch, design criteria, detail, evaluation, fabric, sew, shape, stuffed toy, stuffing, template

Year 6	Autumn	Summer
Overview	Food Come dine with me	Structures Playgrounds
Prior Learning	Food Developing a recipe	Structures Bridges
Knowledge - what will our children learn?	<u>Technical</u> <ul style="list-style-type: none"> - To know that 'flavour' is how a food or drink tastes. - To know that many countries have 'national dishes' which are recipes associated with that country. - To know that 'processed food' means food that has been put through multiple changes in a factory. - To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides. - To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork). 	<u>Technical</u> <ul style="list-style-type: none"> - To know that structures can be strengthened by manipulating materials and shapes. <u>Additional</u> <ul style="list-style-type: none"> - To understand what a 'footprint plan' is. - To understand that in the real world, design , can impact users in positive and negative ways. - To know that a prototype is a cheap model to test a design idea.
Skills - what do we want our children to do?	<u>Design</u> <ul style="list-style-type: none"> - Writing a recipe, explaining the key steps, method and ingredients. - Including facts and drawings from research undertaken. <u>Make</u> <ul style="list-style-type: none"> - Following a recipe, including using the correct quantities of each ingredient. - Adapting a recipe based on research. - Working to a given timescale. - Working safely and hygienically with independence. <u>Evaluate</u> <ul style="list-style-type: none"> - IEvaluating a recipe, considering: taste, smell, texture and origin of the food group. - Taste testing and scoring final products. - Suggesting and writing up points of improvements when scoring others' dishes, and when evaluating their own throughout the planning, preparation and cooking process. 	<u>Design</u> <ul style="list-style-type: none"> - Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs. <u>Make</u> <ul style="list-style-type: none"> - Building a range of play apparatus structures drawing upon new and prior knowledge of structures. - Measuring, marking and cutting wood to create a range of structures. - Using a range of materials to reinforce and add decoration to structures. <u>Evaluate</u> <ul style="list-style-type: none"> - Improving a design plan based on peer evaluation. - Testing and adapting a design to improve it as it is developed. - Identifying what makes a successful structure.

	- Evaluating health and safety in production to minimise cross contamination.	
Vocabulary	Balance, bitter, bridge method, complement, cookbook, farm to fork, method, nationality, reared, research, pairing, preparation, salty, sour, storyboard, sweet, umami	Adapt, apparatus, bench hook, cladding, coping saw, design, dowel, evaluation, feedback, idea, jelutong, landscape, mark out, measure, modify, natural materials, plan view, playground, prototype, reinforce, sketch, strong, structure, tenon saw, texture, user, vice, weak.