

Progression of Milestones in Design Technology

	Food	Structures	Mechanisms	Textiles	Electrical Systems
Rec	<p>Spring 1 (PSHE)</p> <ul style="list-style-type: none"> I know how to eat healthily. I know what makes a healthy lunch. I know I need to wash my hands before preparing food. <p>Summer 1</p> <ul style="list-style-type: none"> I know that food grows from the earth. I know that meat comes from animals I know the people involved in growing and supplying food. I know how food is grown on an allotment. I know what fruit grows in our local orchard. Spring 1 I can mix ingredients to help make rock cakes. <p>Spring 2</p> <ul style="list-style-type: none"> I can use baking tools to crush and mix ingredients to make Easter nests. 	<p>Autumn 1</p> <ul style="list-style-type: none"> I can use glue to join materials to make a model of my house. I know how to make a model of my house using a construction kit. I can use one handed tools and equipment. (PD) I can make snips in paper with scissors. (PD) <p>Autumn 2</p> <ul style="list-style-type: none"> I can use scissors to cut in a straight line. (PD) <p>Spring 1</p> <ul style="list-style-type: none"> I know how to join and decorate junk materials. I can make a model of a rocket using glue, masking tape and sellotape. I know how to add texture to my model. I can connect sticks/straws to my puppet to make it move. I can use a range of equipment with more control. (PD) I can use scissors to cut curved lines. (PD) <p>Spring 2</p> <ul style="list-style-type: none"> I can design and make an Easter basket. I can cut accurately along the lines. I can use a range of tools safely and confidently. (PD) I can use scissors to cut shapes. (PD) <p>Summer 1</p> <ul style="list-style-type: none"> I can make my own nature paintbrush using materials from the local environment. I can draw my bird feeder design. I can use lard to coat my bird feeder and join the seeds. I can investigate ways to use string as a joining tool. I can use scissors independently. (PD) <p>Summer 2</p> <ul style="list-style-type: none"> I can use a template to make a shadow puppet with card. I can design and make a roller coaster carriage using junk materials. I can join in different ways. I can use scissors for a purpose. (PD) 	<p>Spring 1</p> <ul style="list-style-type: none"> I know how to make flaps by bending paper and card. I know how to join and decorate materials. I can fold paper backwards and forwards to make the body of a Chinese dragon puppet. 	<p>Summer 2</p> <ul style="list-style-type: none"> I can design a Rangoli pattern and trace onto silk using a gutta pen. I know how to use silk paints. I know how to thread pasta on a string. I can make a repeating pattern in my South African necklace. 	
	<p>Knowledge, skills and understanding are further developed through both inside and outside continuous provision in the indoor and outdoor classrooms. These include: Indoor: Construction, Mathematics, Reading, Malleable and Craft, Role Play, Writing Outdoor: Mud Kitchen, Bike Track, Construction, Music and Stage, Role Play, Sand, Storytelling, Water</p>				

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Y1	<p>Summer 1</p> <ul style="list-style-type: none"> I know the difference between a fruit and a vegetable. I know that fruits and vegetables are grown. I can describe the taste and appearance of a range of fruit and vegetables. I can say which fruits and vegetables I like/dislike and why. I can use good hygiene when handling food. I can prepare fruits and vegetables by peeling, cutting, slicing, grating and squeezing. I can say what went well with my design. I can say how my product met the design criteria. I can say how I would improve my design to make it even better. 	<p>Autumn 1</p> <ul style="list-style-type: none"> I know what a structure is. I know some natural and manmade structures. I know when a structure is stable. I know that structures with wide, flat bases or legs are the most stable. I can design a stable structure. I know what joining techniques I will use to make my structure strong, stiff and stable. I know what finishing techniques I will use. I know how to make my design even better. I know and select the right tools to make my structure. 	<p>Spring 2</p> <ul style="list-style-type: none"> I know what a mechanism is. I know how a slider mechanism moves. I know how a lever mechanism moves. I can use my knowledge to design a moving picture using a slider or lever mechanism. I know what finishing techniques I will use to make my moving picture bright and eye catching for the user. I can cut the right size slot for a slider mechanism. I know and select the right tools to make my slider or lever mechanism. I know how well my moving picture meets the design criteria. I can make amendments to my moving picture based on my evaluation. 		
Y2	<p>Summer 1</p> <ul style="list-style-type: none"> I can describe the taste, texture and appearance of a range of vegetables. I can use the basic principles of a healthy and varied diet to design and prepare dishes. I know the five food groups I know why the five food groups are important for our body. I know how to use equipment to slice, dice, grate and julienne. I can use the bridge hold and claw grip technique to cut vegetables. I can design a purposeful, functional and appealing food product based on a design criteria. I can follow good hygiene and work safely. I can evaluate my product against the design criteria. 		<p>Autumn 1</p> <ul style="list-style-type: none"> I know what mechanism makes a toy or vehicle roll forwards. I know that a wheel must be attached to an axle. I can draw and label a diagram of an axle, wheel and axle holder. I know the difference between a fixed axle and a moving axle. I know what makes a wheel and an axle work. I can design a moving vehicle which includes functioning wheels, axles and axle holders. I can use a range of tools and equipment. I know what I need to do first, next, last. I know what materials, joining techniques and finishing techniques I am going to use and why. I know how to improve my design to make it even better. 	<p>Spring 1</p> <ul style="list-style-type: none"> I know how to thread a needle. I know how to sew fabrics using a running stitch. I know how to join fabrics using glue and stapling. I know how to thread buttons and beads. I can make and use a template to cut my fabric. I can use my knowledge to design a wall hanging; I know the joining techniques and embellishments I am going to use. I know and choose the right tools. I can decorate my wall hanging by securely joining embellishments. I know how well my wall hanging meets the design criteria. 	

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Y3	<p>Autumn 2</p> <ul style="list-style-type: none"> I know that not all fruits and vegetables can be grown in the UK as each country has its own climate. I know that imported food will have travelled from far away and has an impact on the environment. I can describe the taste, texture and appearance of a range of products. I know how to use a range of techniques to prepare ingredients hygienically including the bridge and claw technique and spreading. I know how to use basic food hygiene practices when handling food. I can evaluate a range of existing products and say how they contribute to a balanced diet. I can design a purposeful, functional and appealing food product based on a design brief. I can evaluate my product and identify if it met the design brief. 	<p>Spring 1</p> <ul style="list-style-type: none"> I know how 3D nets are made. I know how multiple shapes (2D and 3D) are combined to make a strong and stable structure. I know how to score materials. I know how to make a crisp fold. I can select and use tools with accuracy. I can use my knowledge to design a shell structure; I know the finishing techniques I am going to use. I know how to strengthen and stiffen materials by laminating, corrugating and ribbing. I know how well my shell structure meets the design criteria. I know how to improve my product. 		<p>Summer 2</p> <ul style="list-style-type: none"> I can design a textile product combining 2D shapes, to form a 3D product. I know how to sew using a running stitch, back stitch and cross stitch. I know how to use a range of finishing techniques. I can use a needle safely and accurately. I know the purpose of a seam allowance and can include this in my design. I can use a range of decorative techniques (including applique) to make my product aesthetically pleasing. I can select and use tools with accuracy. I know how well my product meets the design criteria. I know how to adapt my design to further improve my product. 	
Y4	<p>Summer 2</p> <ul style="list-style-type: none"> I can describe the features of a biscuit based on taste, aroma, texture and appearance. I know how to follow a recipe and modify it to create a new biscuit prototype. I can work as a group to design a biscuit to a given budget. I can use computer aided design to design packaging appropriate for a target audience. I can consider safety and hygiene when handling food. I can use my knowledge from research and creating a prototype to design a unique biscuit. I can complete a sensory evaluation of my product. I can evaluate my ideas and products against the design criteria and consider the views of others to improve my work. 		<p>Spring 1</p> <ul style="list-style-type: none"> I know how levers and linkages are used in the real world. I know the purpose of the pivot, slot, guide/bridge, lever, linkage on a lever and linkage mechanism. I know that levers and linkages can move in a linear, reciprocating, rotary or oscillating motion. I know that levers and linkages have an input movement (pushing) and an output movement (movement of the lever). I can select and use tools with accuracy. I can use my knowledge to design a lever and linkage mechanism; I know the finishing techniques I am going to use. I know how well my mechanism meets the design criteria. I know how to refine and adapt my product to improve it. 		<p>Autumn 2</p> <ul style="list-style-type: none"> I know what electrical conductors and insulators are. I know that a battery contains stored electricity which can be used to power products. I can analyse and evaluate the features and function of a torch. I can design a torch that meets the design specification. I know how to cut and assemble materials to create a working circuit using a switch. I can refine and modify my torch to improve my product. To add finishing techniques to my final product I can evaluate my torch referring to my design specification and provide suggestions on how I can improve my product.

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Y5	<p>Spring 2</p> <ul style="list-style-type: none"> I know how some foods are processed. I can use the internet to carry out research. I can use my five senses to evaluate a range of foods. I can research the nutritional values, seasonality and the availability of food products. I can use my knowledge to make design decisions that meet the design specification. I can safely follow a recipe and I can follow good hygiene practices when handling food. I know how to measure accurately using scales, spoons and a measuring jug. I know how to knead dough and the purpose of this process. I can be critical about my product and make suggestions as to how my design could be improved. 	<p>Summer 1</p> <ul style="list-style-type: none"> I can identify a range of structures in my local area including beam bridges, arch bridges and truss bridges. I know how triangulation is used to reinforce structures. I know how to make a truss bridge that will hold a weight. I know how the framework of a bridge affects its strength. I can effectively design a structure that can hold a weight, withstand compression, is cost effective, is well reinforced, and fits with the local environment. I can design using an exploding diagram and annotated sketches. I know how to use a saw, sand edges and securely join my structure. I know how to strengthen, stiffen and reinforce my structure. I can amend and improve my design and structure against the design criteria. 		<p>Autumn 1</p> <ul style="list-style-type: none"> I can explore, analyse and evaluate a range of existing textile products. I can use my knowledge to make design decisions that meet the design specification. I can formulate a clear plan and select appropriate tools to make the design. I can sew neatly using a running stitch, back stitch and blanket stitch. I know for what purpose different stitches are best used. I can add embellishments using beads, applique and embroidery. I can be critical about my product and make suggestions as to how my design could be improved. I can evaluate my ideas and products against the design specification and consider the views of others to improve my work. 	
Y6	<p>Spring 2</p> <ul style="list-style-type: none"> I know where and how a variety of ingredients are grown, reared, caught and processed. I can describe a food from 'farm to fork'. I know about seasonality and how this impacts the availability of food. I know key chefs that promote seasonality. I know the advantages and disadvantages of eating seasonally. I know and apply the principles of a healthy and varied diet. I can conduct market research and use my findings to inform my design. I can articulate how my product is innovative and authentic. I know the costings of my product. I know how to make pizza dough. I know how to prepare foods by dicing, rolling and grating. 		<p>Summer 2</p> <ul style="list-style-type: none"> I know the components of an automata toy. I know how to measure, mark, cut and check the accuracy of the wood and card automata components. I can select and use a range of tools safely. I can cut and assemble a stable frame with precision to achieve a high-quality finish. I know the cam profile causes a follower to rise, fall or remain static at different points depending on its shape. I can design an automata mechanism to meet my design criteria. I can measure and apply panels to my automata to conceal the inner-workings. I know that good quality products should be neat, accurate and securely assembled. I can critically analyse my product to produce an evaluation about how my product could be enhanced. 		<p>Autumn 2</p> <ul style="list-style-type: none"> I can effectively research and analyse a range of images and information about children's toys. I know the components of a steady hand game. I can design a steady hand game using 3D perspective drawings. I can design a simple net through computer aided design. I can construct a stable base using a net. I know how to cut and assemble with precision to achieve a high-quality finish. I can design and incorporate a working circuit into the base. I know how to refine and adapt my product to ensure it meets the design specification. I can provide constructive feedback for my peers. I can critically analyse my product and know how it could be enhanced.