



Weddington Primary School

Design and Technology Skills and Knowledge Progression Year 1

Autumn	Spring	Summer
National Curriculum Subject Content	National Curriculum Subject Content	National Curriculum Subject Content
Textiles Can I create a puppet to sell at the Christmas Fayre? Design purposeful, functional and appealing products for themselves and others. Select from and use a range of tools and techniques to perform practical tasks eg cutting, joining, finishing Select from and use a wide range of materials including textiles	Construction Can I design a car that would be seen in Weddington? Generate and develop ideas through talking, drawing and ICT Design functional products Select from a range of tools and materials according to their characteristics	Food Technology Can I make a smoothie to encourage Reception children to eat more fruit? Be taught how to cook and apply the principles of nutrition and healthy eating. Understand where food comes from.
Knowledge	Knowledge	Knowledge
Know that joining means connecting two pieces together Know fabric can be joined with staples, glue or pins Know different joining techniques can be used for different purposes Know drawing a design is useful to see how an idea will look	Know wheels need to be round to rotate and move Know that for a wheel to move it must be attached to a rotating axle Know that an axle moves within an axle holder which is fixed to the vehicle Know the frame of a vehicle needs to be balanced	Know that a fruit has seeds Know that fruits grow on trees or vines Know that vegetables can grow either above or below ground Know that vegetables is any edible part of a plant
Skills	Skills	Skills
Use a template to create a design for a puppet Cut fabric neatly with scissors Use joining methods to decorate a puppet Sequence steps for construction Reflect on a finished product, explaining likes and dislikes	Design a vehicle that includes wheels, axles and axle holders that will allow the wheel to move Create clearly labelled drawings that illustrate movement Adapt mechanisms when they do not work, to fit their design or to improve after testing	Design a smoothie carton that is attractive and eye catching Peel and chop fruits and vegetables Safely use a blender to mix ingredients together Suggest information to be included on packaging
Vocabulary	Vocabulary	Vocabulary
Joining, Template, Design, cut	Wheel, axle, vehicle, rotate,	Fruit Vegetable Blender





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Design and Technology Skills and Knowledge Progression Year 2

Autumn	Spring	Summer
National Curriculum Subject Content	National Curriculum Subject Content	National Curriculum Subject Content
Textiles Can I design a pouch to create a class advent calendar? Design purposeful, functional and appealing products for themselves and others. Select from and use a range of tools and techniques to perform practical tasks eg cutting, joining, finishing Select from and use a wide range of materials including textiles	Construction Can I design a bridge for the River Anker that can lift up? Generate and develop ideas through talking, drawing and ICT Design functional products Select from a range of tools and materials according to their characteristics Explore how structures can be made stronger, stiffer and more stable	Food Technology Can I make a healthy wrap for someone who doesn't eat meat? Be taught how to cook and apply the principles of nutrition and healthy eating. Understand where food comes from.
Knowledge	Knowledge	Knowledge
Know that sewing is a method of joining fabric Know that different stitches can be used when sewing Know the importance of tying a knot after sewing the final stitch Know a thimble can be used to protect their fingers	Know that mechanisms are a collection of moving parts that work together as a machine to produce movement Know that a lever is something that turns on a pivot	Know that diet means the food and drink that a person or animal usually eats Know what makes a balanced diet Know the five main food groups Know they should eat a range of different foods
Skills	Skills	Skills
Select and cut fabrics for sewing Decorate a pouch using fabric glue or running stitch Thread a needle Use running stitch, with evenly spaced, neat, even stitches to join fabric Neatly pin and cut the fabric using scissors Evaluate the quality of stitching on others' work	Design a moving bridge to match a design criteria Experiment with linkages and split pins to create levers and pivots Create joints and structures from paper, card and tape Build a strong and stiff structure by folding paper	Design a healthy wrap based on a food combination that works well Slice food safely using the bridge or claw grip Construct a wrap that meets a design brief Taste test food combinations and final products Describe information that should be included on a food label
Vocabulary	Vocabulary	Vocabulary
Stitch, needle, thread, running stitch, fabric,	Mechanism, lever, pivot, fold, stable, stiff	Vegetarian, balanced diet, ingredients Carbohydrates, Protein, dairy, fat, sugar, fruit vegetables





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Design and Technology Skills and Knowledge Progression Year 3

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National Curriculum Subject Content	National Curriculum Subject Content	National Curriculum Subject Content
<p>Textiles Can I create a hanging Christmas decoration to sell at the Christmas Fayre? Design functional, appealing products aimed at a particular group and are fit for purpose Select from a wider range of tools and materials to perform practical tasks</p>	<p>Construction Can I create a lift that can lift an Easter egg above 30cm? Use research to inform the design of functional and approving products that fit a purpose Investigate and analyse a range of existing products Apply their knowledge if how to strengthen and reinforce more complex structures Understand and use mechanical systems in their products</p>	<p>Food Technology Can I create a sandwich using ingredients grown in the UK? Be taught how to cook and apply the principles of nutrition and healthy eating Understand where food comes from Understand seasonality and know where and how a variety of ingredients are grown</p>
Knowledge	Knowledge	Knowledge
<p>Know applique is a way of decorating a textile by applying smaller pieces of fabric to larger pieces Know when two pieces of fabric are joined together it is called a seam Know it is important to leave space on the fabric for the seam Understand that some products are turned inside out after sewing so the stitching is hidden.</p>	<p>Know that pneumatic systems operate by drawing in, releasing and compressing air Understand the importance of strength and stiffness in structures Know that a design specification is a list of success criteria for a product</p>	<p>Know that vegetables and fruit grow in certain seasons Know imported food is brought into the country Know eating seasonal foods can have a positive impact on the environment Know similar coloured fruits and vegetables have similar nutritional benefits Know appearance of food is as important as taste</p>
Skills	Skills	Skills
<p>Design and make a template Know and understand the purpose of running stitch, backstitch and cross stitch Thread needles and tying knots with greater independence Decorate fabric using appliqué</p>	<p>Draw and label a lift design using the shapes to be created and the materials needed Construct 3D shapes using geometric nets Create a pneumatic system to create a desired motion Manipulate materials to create different effects by cutting, creasing, folding and weaving. Suggest points for modification of the individual designs</p>	<p>Create a nutritious sandwich using products grown in the UK Use basic food hygiene rules when preparing themselves and the work space Describe the benefits of choosing seasonal foods and the impact on the environment</p>
Vocabulary	Vocabulary	Vocabulary
<p>Applique, cross stitch, running stitch, seam</p>	<p>Pneumatic</p>	<p>Imported, exported, seasonal, nutritional benefits</p>





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National Curriculum Subject Content	National Curriculum Subject Content	National Curriculum Subject Content
<p>Textiles Can I create a personalised pencil case? Use research to design functional products that are fit for purpose Generate and develop their ideas through the use of prototypes, pattern pieces and computer aided design Select from a range of materials according to functional properties and aesthetic qualities</p>	<p>Construction Can I create a slingshot car that can travel over 1metre in distance? Use research and develop design criteria to inform the design of innovative, functional products that are fit for purpose Select from and use a wider range of tools and equipment to perform practical tasks accurately Understand how key events and individuals in design and technology have helped shaped the world</p>	<p>Food Technology Can I design a biscuit within a given budget? Be taught how to cook and apply the principles of nutrition and healthy eating. Understand where food comes from. Learn how to feed themselves and others affordably and well</p>
Knowledge	Knowledge	Knowledge
<p>Know that a fastening is something which holds two pieces of material together for example a zipper, toggle, button, press stud and Velcro Know that different fastening types are useful for different purposes</p>	<p>Understand that all moving things have kinetic energy Know that air resistance is the level of drag on an object as it is forced through the air Understand that the shape of a moving object will affect how it moves due to air resistance Understand what a frame structure is Know that cladding can be applied to structures for different effects</p>	<p>Know the amount of an ingredient in a recipe is the quantity Know safety and hygiene are important when cooking Know how to sieve, measure, stir, cut out and shape Know the importance of budgeting</p>
Skills	Skills	Skills
<p>Make and test a paper template with accuracy and in keeping with the design criteria Measure, marking and cutting fabric using a paper template Selecting a stitch style to join fabric Working neatly by sewing small, straight stitches Incorporate a fastening to a design.</p>	<p>Select appropriate materials to build a strong structure and cladding Reinforce corners to strengthen a structure Create a design in accordance with a plan Learn to create different textural effects with materials Measure, mark, cut and assemble with increasing accuracy</p>	<p>Design a biscuit within a budget Draw on taste testing judgements Follow a basic recipe Adapt a recipe to improve or change it to meet a new criteria Describe the impact of a budget on the selection of ingredients</p>
Vocabulary	Vocabulary	Vocabulary
<p>fastenings</p>	<p>Net, kinetic energy, air resistance,</p>	<p>Recipe, quantity, sieving, measuring, stirring, cutting out, shaping</p>





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National Curriculum Subject Content	National Curriculum Subject Content	National Curriculum Subject Content
<p>Textiles Can I create a stuffed toy to create a class nativity scene? Generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes and pattern pieces Select from and use a wider range of materials including textiles according to their functional properties and aesthetic qualities</p>	<p>Construction Can I create a moveable vehicle that could be used to explore another planet? Use research to generate design criteria to inform the design of products that are fit for purpose Understand how key events and individuals in design and technology have helped shape the world Understand and use electrical systems in their products</p>	<p>Food Technology Can I design a healthy snack inspired by the Middle East? Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of dishes using a range of techniques Understand seasonality and where and how ingredients are grown</p>
Knowledge	Knowledge	Knowledge
<p>Know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric Understand that it is easier to finish simpler designs to a high standard Know that soft toys are often made by creating appendages separately and then attaching them to the main body Know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely</p>	<p>Know how mechanical systems such as cams, pulleys or gears enable movement with a motor Know how to reinforce or strengthen a 3D framework</p>	<p>Know recipes can be adapted to suit nutritional needs and that I can use a nutritional calculator to see how healthy a food option is Understand what 'cross-contamination' means Know that coloured chopping boards can prevent cross-contamination.</p>
Skills	Skills	Skills
<p>Create a 3D stuffed toy from a 2D design Measure, mark and cut fabric accurately and independently Create strong and secure blanket stitches when joining fabric Thread needles independently Using appliqué to attach pieces of fabric decoration Apply blanket stitch so the spaces between the stitches are even and regular</p>	<p>Measure, cut, join and fix materials accurately and economically Use mechanical pulleys to allow movement Select appropriate tools and equipment Design, make, evaluate and refine</p>	<p>Research existing recipes to inform ingredient choices Adapt a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients Cut and prepare vegetables safely Use equipment safely, including knives, hot pans and hobs. Know how to avoid cross-contamination. Follow a step by step method carefully to make a recipe.</p>
Vocabulary	Vocabulary	Vocabulary
Seam, blanket stitch	Gears, pulleys, motor	Cross contamination, traditional, recipe, nutritional value





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Design and Technology Skills and Knowledge Progression Year 6

Autumn	Spring	Summer
National Curriculum Subject Content	National Curriculum Subject Content	National Curriculum Subject Content
Textiles Can I create a Christmas gift bag with a fastening? Generate, develop, model and communicate their ideas through annotated sketches, prototypes, pattern pieces and computer aided design Select from and use a wider range of materials and components according to their functional properties and aesthetic qualities Investigate and analyse a range of existing products	Construction Can I design an interactive book for a young child? Investigate and analyse a range of existing products Select from a wider range of tools and equipment to perform tasks accurately Understand and use mechanical systems in their products e.g. gears, pulleys, levers Understand and use electrical systems in their products	Food Technology Can I make a healthy wrap for someone who doesn't eat meat? Be taught how to cook and apply the principles of nutrition and healthy eating. Understand where food comes from.
Knowledge	Knowledge	Knowledge
Know and understand the purpose of running stitch, backstitch, cross stitch, blanket stitch and overstitch Understand the properties of materials to achieve functioning solutions Know how to attach fastenings	Know that mechanisms control movement Understand that mechanisms can be used to change one kind of motion into another Understand how to use sliders, pivots and folds to create paper-based mechanisms Know that a design brief is a description of what I am going to design and make Know that designers often want to hide mechanisms to make a product more aesthetically pleasing	Know that diet means the food and drink that a person or animal usually eats Know what makes a balanced diet Know the five main food groups Know they should eat a range of different foods
Skills	Skills	Skills
Measure accurately to produce a paper pattern and final product Use running stitch, backstitch, and overstitch to bond edges Use blanket stitch to decorate products Select the correct tools and equipment Design, make, evaluate and refine	Follow a design brief to make a pop up book, neatly and with focus on accuracy Make mechanisms and/or structures using sliders, pivots and folds to produce movement, light or sound Use layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result.	Design a healthy wrap based on a food combination that works well Slice food safely using the bridge or claw grip Construct a wrap that meets a design brief Taste test food combinations and final products Describe information that should be included on a food label
Vocabulary	Vocabulary	Vocabulary
Fastening, stiffen, running stitch, back stitch, overstitch, blanket stitch	Design brief, mechanisms, circuit, aesthetics	Vegetarian, balanced diet, ingredients Carbohydrates, Protein, dairy, fat, sugar, fruit vegetables



Every child Every chance Every day

Weddington's vision is for all to thrive. 'Weddy' graduates will venture into the wider world as curious, courageous and confident individuals, who are equipped with the tools for continued success

