



DESIGN TECHNOLOGY CURRICULUM COVERAGE

DT INTENT

Here at Wheatlands Primary School, DT is taught with the intent of giving children a secure, fundamental understanding of design and technology, as outlined in the National Curriculum.

We aim to inspire children through a broad range of practical experiences to create innovative designs which solve real and relevant problems within a variety of different contexts. The design process is fundamental and runs throughout each year group unit. This process encourages children to identify problems, critically evaluate existing products and then design and create solutions to solve problems. They are encouraged to take risks and be resourceful, drawing on a broad range of subject knowledge. As part of the design process, time is built in to reflect, evaluate and improve on prototypes using design criteria throughout to support this process.

Opportunities are provided for children to evaluate key events and individuals who have helped shape the world, showing the real impact of design and technology on daily life and the wider world and helping to inspire children to become the next generation of innovators.

EYFS						
		Skills			Knowledge	
		Designing	Making	Evaluating	Technical Knowledge	Possible learning Challenges
Nursey	Cooking and Nutrition: Fruit kebabs Textiles: Weaving Structures: Exploring materials linked to the 3 little pigs				Realises that tools can be used for a purpose Explores the textures and tastes of new and different foods. Experiments with different ways of joining materials Can construct with a purpose in mind Holds marking making tools in a comfortable and developing grip. Uses one handed tools to make changes to materials	• Make patterns with the fruit (AB) • Healthy eating
	Structures: Junk Modelling	• Making verbal plans and material choices. • Developing a junk model.	• Improving fine motor/scissor skills with a variety of materials. • Joining materials in a variety of ways (temporary and permanent). • Joining different materials together. • Describing their junk model, and how they intend to put it together.	• Giving a verbal evaluation of their own and others' junk models with adult support. • Checking to see if their model matches their plan. • Considering what they would do differently if they were to do it again. • Describing their favourite and least favourite part of their model.	• To know there are a range to different materials that can be used to make a model and that they are all slightly different. • Making simple suggestions for how to fix their junk model.	
Reception	Structures: Junk Modelling	• Making verbal plans and material choices. • Developing a junk model.	• Improving fine motor/scissor skills with a variety of materials. • Joining materials in a variety of ways (temporary and permanent). • Joining different materials together. • Describing their junk model, and how they intend to put it together.	• Giving a verbal evaluation of their own and others' junk models with adult support. • Checking to see if their model matches their plan. • Considering what they would do differently if they were to do it again. • Describing their favourite and least favourite part of their model.	• To know there are a range to different materials that can be used to make a model and that they are all slightly different. • Making simple suggestions for how to fix their junk model.	
	Structures: Boats	• Designing a junk model boat. • Using knowledge from exploration to inform design.	• Making a boat that floats and is waterproof, considering material choices.	• Making predictions about, and evaluating different materials to see if they are waterproof.	• To know that 'waterproof' materials are those which do not absorb water.	• To know that some objects float and others sink. • To know the different parts of a boat.

				• Making predictions about, and evaluating existing boats to see which floats best. • Testing their design and reflecting on what could have been done differently. • Investigating how the shape and structure of a boat affect the way it moves.		
	Cooking and Nutrition: Soup	• Designing a soup recipe as a class. • Designing soup packaging.	• Chopping plasticine safely. • Chopping vegetables with support.	• Tasting the soup and giving opinions. • Describing some of the following when tasting food: look, feel, smell and taste. • Choosing their favourite packaging design and explaining why.	• To know that soup is ingredients (usually vegetables and liquid) blended together. • To know that vegetables are grown. • To recognise and name some common vegetables. • To know that different vegetables taste different. • To know that eating vegetables is good for us. • To discuss why different packages might be used for different foods.	•
	Textiles: Bookmarks	• Discussing what a good design needs. • Designing a simple pattern with paper. • Designing a bookmark. • Choosing from available materials.	• Developing fine motor/cutting skills with scissors. • Exploring fine motor/threading and weaving (under, over technique) with a variety of materials. • Using a prepared needle and wool to practise threading.	• Reflecting on a finished product and comparing to their design.		•

Year 1						
		Skills			Knowledge	
		Designing	Making	Evaluating	Technical Knowledge	Possible learning Challenges
Year 1	Mechanisms: Matching Slider Game	- Thinking about what others might want from a design. - Beginning to recognise how products and designs in the world around us solve certain needs. - Considering who they are designing for – by identifying the user. - Stating what they intend to make and why – by identifying the purpose. - Talking about ideas with purpose and user in mind. - Talking about existing products when generating ideas. - Creating mock-ups to communicate designs.	- Planning more than one step ahead. - Choosing between a small number of materials, ingredients or components. - Explaining their choices based on personal experiences. - Requesting equipment appropriate to the purpose. (e.g. scissors for cutting, glue for joining). - Explaining in simple terms why certain tools must be handled carefully. - Following and recalling simple safety instructions. - Beginning to use objects with a fixed width or length to create even spacing of markings or cuts. (e.g. a lolly stick). - Refining their grip to cut competently and confidently. - Cutting straight lines and evenly spaced lines. - Beginning to cut large shapes and thicker materials like card. - Puncturing holes. - Applying masking tape to fix something in place or join to edges. - Using tools, like scissors, to create shapes - Beginning to cut large shapes and thicker materials like card.	- Discussing existing products, saying what they like about them. - Discussing how their products could be improved based on personal preferences. - Saying what they like about their peers' designs and products. - Accepting feedback and understanding it is meant to improve their work.	- Recognising and exploring everyday objects that have mechanisms. - Recognising everyday objects that use a slider mechanism (eg. drawers, sliding doors, paper trimmer).	To know that the 'user' is the person who will use the product. - To know that different users may want different things from a design. - To know that designers usually design and make something to solve a problem. - To know that who they are designing for makes a difference to what they design. - To know that the purpose is what something is for. - To know that a mock-up is a model of how something works. - To know that choosing different materials or components will have an effect on what their product does or looks like. - To know that different equipment does different things. - To know the names of common pieces of equipment. - To know that some tools are sharp like scissors and knives. - To know that following instructions helps with safety. - To know that cutting in a straight line can be helpful when making. - To know that some products will be better than others.

						• To know that their ideas or products can be made better. • To know that many things that move have parts inside to help them work. • To know that mechanisms usually limit unwanted movement. • To know that a slider mechanism moves an object in a straight line (eg. left/right, up/down). • To know that sliding mechanisms are designed to keep movement in one direction (eg. using guides/rails etc).
	Textiles: Puppets	• To use a template to create my design for a puppet	• Cutting fabric neatly with scissors. • Using joining methods to decorate a puppet. • Sequencing steps for construction.	• Reflecting on a finished product, explaining likes and dislikes		• To know that joining technique means connecting two pieces of material together • To know that there are various temporary methods of joining fabric using staples, glue or 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.
	Cooking and Nutrition: Smoothies	• Designing smoothie carton packaging by-hand. • Learning where and how fruits and vegetables grow.	• Chopping fruit and vegetables safely to make a smoothie. • Juicing fruits safely to make a smoothie. • Identifying if a food is a fruit.	• Tasting and evaluating different food combinations. • Describing appearance, smell and taste. • Suggesting information to be included on packaging. • Comparing their own smoothie with someone else's.		• To know that a blender is a machine which mixes ingredients together into a smooth liquid. • To know that a fruit has seeds and a vegetable does not. To know that fruits grow on trees or vines. • To know that vegetables can grow either above or below ground. • To know that vegetables is any edible part of a plant.

Year 2						
		Skills			Knowledge	
		Designing	Making	Evaluating	Technical Knowledge	Possible learning Challenges
Year 2	Structures: Baby Bear's chair	- Generating and communicating ideas using sketching and modelling. - Learning about different types of structures, found in the natural world and in everyday objects.	- Making a structure according to design criteria. - Creating joints and structures from paper/card and tape. - Building a strong and stiff structure by folding paper.	- Exploring the features of structures. - Comparing the stability of different shapes. - Testing the strength of own structures. - Identifying the weakest part of a structure. - Evaluating the strength, stiffness and stability of own structure.	- 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.	- To know that natural structures are those found in nature. - To know that man-made structures are those made by people.
	Cooking and Nutrition: Balanced diet	Designing three wrap ideas.	- Chopping foods safely to make a wrap. - Constructing a wrap that meets a design brief. - Grating foods to make a wrap. - Snipping smaller foods instead of cutting. - Spreading soft foods to make a wrap. - Identifying the five food groups. - Learning about balanced diet.	- Describing appearance, smell and taste. - Taste and evaluating different food combinations. - Describing the information that should be included on a label.		- To know that 'diet' means the food and drink that a person or animal usually eats. - To know what makes a balanced diet. - To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar. - To know that I should eat a range of different foods from each food group, and roughly how much of each food group.

						• To know that ‘ingredients’ means the items in a mixture or recipe. • To know how to cut, grate, snip and spread to prepare foods. • To know how to review and give a score to evaluate.
	Mechanism s: Making a moving monster	• Creating a class design criteria for a moving monster. • Designing a moving monster for a specific audience in accordance • with a design criteria.	• Making linkages using card for levers and split pins for pivots. • Experimenting with linkages adjusting the widths, lengths and thicknesses of card used. • Cutting and assembling components neatly.	• Evaluating own designs against design criteria. • Using peer feedback to modify a final design.	• 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.	• To know some real-life objects that contain mechanisms.

Year 3						
		Skills			Knowledge	
		Designing	Making	Evaluating	Technical Knowledge	Possible learning Challenges
	Mechanical Systems: Pneumatic Toys	Creating simple design criteria that outline basic functionality and appeal to individual users or target audiences. • Taking part in structured idea blasting sessions.	• Selecting equipment required for a series of tasks based on the plan. Explain why each piece is suitable for each stage. • Suggesting simple safety rules based on their understanding of tool dangers. • Participating in discussions about classroom safety procedures.	Analysing why specific products, designers or inventors are successful. • Evaluating their designs by comparing them against design criteria and considering feedback from peers to suggest improvements.	Beginning to understand how mechanisms work. • Recognising pneumatic systems in everyday objects (e.g. car boot, adjustable chair.)	• To know that a problem or need is something that a designer can help to solve. • To know that extra information on drawings or diagrams can help the user understand a design or idea. • To know that thumbnail sketches are less detailed quick sketches.

		• Coming up with more ideas and considering the feasibility of their ideas in the classroom. • Developing drawing and sketching skills with a focus on clarity and simplicity. • Developing designs by adding detail and justifications about materials, tools, methods. • Beginning to recognise the benefit of a range of diagram types or prototypes to communicate ideas. (eg. sketches, cross-sectional diagram, thumbnail sketches and exploded diagrams).	• Cutting out more complex shapes accurately. • Handle different sizes and types of scissors with confidence. • Using PVA glue to join corrugated card and light wood (e.g. balsa wood). • Choosing shapes to suit the function of a product. • Painting or colouring precisely to improve the finish. • Making facades from a range of materials. • Sealing edges with tape to cover gaps in joins.	• Explaining why they think certain aspects of a peer's design are effective or why they suggested specific improvements. • Reflecting on feedback to decide if and how it could be used to improve future iterations.		• To know that a cross-sectional diagram shows the inside of a product. • To know that an exploded diagram shows how the parts of a product fit together. • To know that different pieces of equipment will be used at different stages in a plan. • To know that different tools and equipment have different dangers. • To know that scissors are useful for cutting out complex shapes, • To know that designers and inventors create products. • To know that choices of materials and equipment can affect the final product. • To know that feedback is ideas and suggestions from other people that can help improve their work. • To know that they can choose to use feedback or not. • To understand that a mechanical system can allow us to move something more easily. • To know that mechanical systems have more than one mechanism that moves to make them work. • To know that mechanical systems are often hidden in products to make them look more appealing. • To know that pushing air can be used to move a mechanism. • To know that pivots can be used to create more movement in the mechanical system. • To know that a combination of mechanisms can improve a product.
	Cooking and Nutrition: Eating Seasonally	• Describing how climate affects where foods grow.	• Identifying seasonal ingredients from the UK. • Following the instructions within a recipe. • Tasting seasonal ingredients. • Peeling foods by hand or with a peeler. • Cutting ingredients safely. • Choosing ingredients based on a design brief.	• Describing the texture and flavour of ingredients. • Describing the benefits of seasonal fruits and vegetables and the impact on the environment.		• To know that seasonal means foods that grow in a given season in a given country. • To know some seasonal foods that grow in the UK and what season they grow in. • To know that eating seasonal foods can have a positive impact on the environment. • To know how to describe the flavour and texture of foods. • To know how to cut a peel safely. • To know that the appearance of food is as important as taste. • To know that similar coloured fruits and vegetables often have similar nutritional benefits.
	Digital World: Wearable technology	• Problem solving by suggesting which features on a Micro:bit might be useful and justifying my ideas.	• Following a list of design requirements. • Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm.	• Analysing and evaluating wearable technology. • Using feedback from peers to improve design.	• To understand that, in programming, a 'loop' is code that repeats something again and again until stopped. • To know that a Micro:bit is a pocket-sized, codeable computer.	• To know what the 'Digital Revolution' is and features of some of the products that have evolved as a result. • To understand what is meant by 'point of sale display.'

		• Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge. • Developing design ideas through annotated sketches to create a product concept. • Developing design criteria to respond to a design brief.			• To know that a simulator is able to replicate the functions of an existing piece of technology.	• To know that CAD stands for 'Computer-aided design'. • To know what a focus group is by taking part in one.
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Year 4						
		Skills			Knowledge	
		Designing	Making	Evaluating	Technical Knowledge	Possible learning Challenges
	Electrical Systems: Electric Poster	• Carry out research based on a given topic (e.g. The Romans) to develop a range of initial ideas. • Generate a final design for the electric poster with consideration to the client's needs and design criteria. • Design an electric poster that fits the requirements of a given brief. • Plan the positioning of the bulb (circuit component) and its purpose.	• Create a final design for the electric poster. • Mount the poster onto corrugated card to improve its strength and allow it to withstand the weight of the circuit on the rear. • Measure and mark materials out using a template or ruler. • Fit an electrical component (bulb). • Learn ways to give the final product a higher quality finish (e.g. framing to conceal a roughly cut edge).	• Learning to give and accept constructive criticism on own work and the work of others. • Testing the success of initial ideas against the design criteria and justifying opinions. • Revisiting the requirements of the client to review developing design ideas and check that they fulfil their needs.	• To understand that an electrical system is a group of parts (components) that work together to transport electricity around a circuit. • To understand common features of an electric product (switch, battery or plug, dials, buttons etc.). • To list examples of common electric products (kettle, remote control etc.). • To understand that an electric product uses an electrical system to work (function). • To know the name and appearance of a bulb, battery, battery holder and crocodile wire to build simple circuits.	• To understand the importance and purpose of information design. • To understand how material choices (such as mounting paper to corrugated card) can improve a product to serve its purpose (remain rigid without bending when the electrical circuit is attached).
	Textiles: Cross Stitch and Applique	• Designing and making a template from an existing cushion and applying individual design criteria.	• Following design criteria to create a cushion or Egyptian collar. • Selecting and cutting fabrics with ease using fabric scissors. • Threading needles with greater independence.	• Evaluating an end product and thinking of other ways in which to create similar items.		• 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.

			• 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) <i>or</i> embellishing the collars based on design ideas (Egyptian collars).			• 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.
	Mechanical Systems: Mechanical Cars	• Taking part in structured brainstorming sessions. • Developing drawing and sketching skills with a focus on clarity and simplicity. • Beginning to recognise the benefit of a range of diagram types or prototypes to communicate ideas. (eg. sketches, cross-sectional diagram, thumbnail sketches and exploded diagrams) • Creating prototypes using materials with similar properties to their final design. • Creating simple design criteria that outline basic functionality and appeal to individual users or target audiences. • Developing designs by adding detail and justifications about materials, tools, methods.	• Following detailed safety instructions. • Using a ruler as a measuring tool with increasing accuracy by creating spaced marks using millimetres and measuring lengths of objects. • Handle different sizes and types of scissors with confidence. • With close supervision using a hot glue gun to join wooden materials (e.g. lolly sticks). • Selecting equipment required for a series of tasks based on the plan. Explain why each piece is suitable for each stage. • Selecting materials, components or ingredients from a wider choice but within a limited design space (e.g. seasonal ingredients from May and June in the UK).	• Explaining why they think certain aspects of a peer's design are effective or why they suggested specific improvements. • Reflecting on feedback to decide if and how it could be used to improve future iterations. • Investigating and analysing a range of existing products by looking at their functionality and appeal. • Analysing why specific products, designers or inventors are successful. • Evaluating their designs by comparing them against design criteria and considering feedback from peers to suggest improvements. • Evaluating how effective their chosen materials and tools were in fulfilling the design brief.	• To understand that a mechanical system can allow us to move something more easily. • To know that mechanical systems have more than one mechanism that moves to make them work. • To know that mechanical systems are often hidden in products to make them look more appealing.	• To know that extra information on drawings or diagrams can help the user understand a design or idea. • To know that an exploded diagram shows how the parts of a product fit together. • To know that a prototype is a detailed model that helps a user understand how a product will work. • To know that a target audience is a group of people that might like the idea. • To know that different tools and equipment have different dangers. • To know that a ruler can be used to measure length. • To know that a hot glue gun can be used to join materials. • To know that better suggestions of improvements mean better feedback. • To know that they can choose to use feedback or not. • To know that some products are more successful than other because of their function. • To know that choices of materials and equipment can affect the final product. • To know that feedback is ideas and suggestions from other people that can help improve their work.

Year 5						
	Skills			Knowledge		
	Designing	Making	Evaluating	Technical Knowledge	Possible learning Challenges	
	Cooking and Nutrition: Developing a recipe	• Researching existing recipes. • Suggesting alternative ingredients. • Designing a jar label.	• Writing an alternative recipe. • Understanding cross-contamination. • Using preparation skills. • Making a developed recipe.	• Explaining the farm to fork process. • Analysing nutritional content.		• To know that beef comes from cows reared on farms. • To know that recipes can be adapted to suit nutritional needs and dietary requirements. • To know that nutritional information is found on food packaging.

						• To know that coloured chopping boards can prevent cross-contamination. • To know that food packaging serves many purposes.
	Mechanical Systems: Gears and Pulleys	• Noticing wider-reaching problems or needs in the community. • Identifying a wide range of needs and potential barriers through market research. • Writing more complex problem statements that consider multiple factors and constraints. • Creating more complex design criteria that require considering detailed user needs, environmental impact, materials and cost. • Coming up with a broader range of ideas and deeper innovation, requiring pupils to think critically about their ideas' practicality and originality. • Beginning to use more complex annotated sketches, such as cross-sectional and exploded diagrams and pattern pieces in design. • Using a series of prototypes to refine and improve their designs.	• Consistently apply safety instructions. • Select appropriate scissors to handle delicate cutting tasks and challenging materials. • Cutting patterns and drawings accurately. • In supervised groups, using hot glue guns safely. • Recognising that hot glue is useful for joining materials that need a strong bond that sets quickly. • Choosing PVA glue over hot glue for its safety when joining materials in less intensive projects.	• Reflecting on the usability, aesthetics, innovation and sustainability of products and discussing how design choices impact these aspects. • Assessing their designs against a more complex set of design criteria that includes functionality, aesthetics, user experience, sustainability and cost. • Considering alternative materials, tools or techniques that could enhance the product. • Providing feedback that is helpful, specific, and encouraging. • Incorporating feedback from peers or users improve their product further, explaining the changes they made and the impact they had.	• That mechanical systems that use gears in everyday objects (eg bicycle, clock). • That gears and pulleys allow us to transfer movement and force from one part of a mechanical system to another. • That gears allow us to increase the output of a mechanism.	• That market research is a way of collecting information about problems or needs. • That constraints are things that might stop our ideas being successful. • That original and innovative ideas are different from what has been made before. • That annotations are detailed labels and comments on diagrams. • That risks are things that might happen. • That hot glue creates a strong bond quickly. • That is often better to choose safer equipment. • That sustainability means thinking about the materials that were used to make a product and how the product was made. • That their final product can still be improved by different materials or techniques. • That evaluating their designs in detail will help them understand its successful and less successful parts. • That feedback should be positive, helpful and specific. • That explaining how they used feedback to improve their design can help them create better products in the future.
	Structures: Bridges	• Designing a stable structure that is able to support weight. • Creating a frame structure with a focus on triangulation.	• Making a range of different shaped beam bridges. • Using triangles to create truss bridges that span a given distance and support a load. • Building a wooden bridge structure. • Independently measuring and marking wood accurately. • Selecting appropriate tools and equipment for particular tasks. • Using the correct techniques to saws safely. • Identifying where a structure needs reinforcement and using card corners for support. • Explaining why selecting appropriating materials is an important part of the design process.	• Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary. • Suggesting points for improvements for own bridges and those designed by others.	• To understand some different ways to reinforce structures. • To understand how triangles can be used to reinforce bridges. • To know that properties are words that describe the form and function of materials. • To understand why material selection is important based on properties. • To understand the material (functional and aesthetic) properties of wood.	• To understand the difference between arch, beam, truss and suspension bridges. • To understand how to carry and use a saw safely.

			Understanding basic wood functional properties.			
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Year 6						
		Skills			Knowledge	
		Designing	Making	Evaluating	Technical Knowledge	Possible learning Challenges
	Electrical Systems – steady hand games	- Designing a steady hand game - identifying and naming the components required. - Drawing a design from three different perspectives. - Generating ideas through sketching and discussion. - Modelling ideas through prototypes. - Understanding the purpose of products (toys), including what is meant by ‘fit for purpose’ and ‘form over function’.	- Constructing a stable base for a game. - Accurately cutting, folding and assembling a net. - Decorating the base of the game to a high quality finish. - Making and testing a circuit. - Incorporating a circuit into a base.	- Testing own and others finished games, identifying what went well and making suggestions for improvement. - Gathering images and information about existing children’s toys. - Analysing a selection of existing children’s toys.	- To know that batteries contain acid, which can be dangerous if they leak. - To know the names of the components in a basic series circuit, including a buzzer.	- To know that ‘form’ means the shape and appearance of an object. - To know the difference between ‘form’ and ‘function’. - To understand that ‘fit for purpose’ means that a product works how it should and is easy to use. - To know that form over purpose means that a product looks good but does not work very well. - To know the importance of ‘form follows function’ when designing: the product must be designed primarily with the function in mind. - To understand the diagram perspectives ‘top view’, ‘side view’ and ‘back’.
	Textiles: bags	- Developing annotated sketches to communicate design ideas. - Creating pattern pieces to use in design.	- Using a ruler to accurately measure and draw lines and marks. - Using nets to create 3D objects. - Using pins effectively to secure a template to fabric without creases or bulges. - Threading needles independently. - Tying knots at the end of thread to secure it. - Selecting textiles and buttons to improve aesthetics and function. - Attaching objects like buttons using thread.	- Reflecting on the functionality and aesthetics of products. - Discussing reasons for design choices.		- To know that nets can be folded to create 3D shapes. - To know that pattern pieces are like nets/templates. - To know how designers use pattern pieces when creating textiles products. - To know that products are sometimes made in parts that are sewn together. - To know that safety pins can hold fabric in place before sewing. - To know that there are different types of stitches. - To know what a running stitch is. - To know that aesthetics is how something looks. - To know that consistently sized stitches improve the aesthetic of a product.

						• To know that the shape of an object can affect both its aesthetics and function.
	Structure: Playgrounds	• Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs.	• 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.	• 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.	• To know that structures can be strengthened by manipulating materials and shapes.	• 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.