
















DT - Overview						
Rationale	<p>The aim of our D.T. curriculum at Baden-Powell is to support each and every child's understanding of their place in the diverse world in which they live; to enthuse and inspire all children by challenging them both intellectually and creatively; to learn about the design process and the significance of each stage, both for their own creations and for those in the wider world; to appreciate the skills and techniques required when designing; to encourage innovation, imagination and creativity; and to see the importance of our school values of Respect, Friendship, Compassion, Aspiration and Resilience as they do so.</p> <p>The knowledge and skills that we have chosen to include in our D.T. curriculum derive directly from the objectives set out in the National Curriculum (2014).</p> <p>Lastly, we aim to highlight three substantive concepts which we consider to be integral to the subject of D.T. – Safety, Innovation and Invention and Sustainability. We weave these ideas throughout our topics to further increase the relevance and real-world application of the learning the children encounter.</p>					
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3		Structures & Mechanisms Packaging		Sewing Egg Cosies		Cooking & Nutrition Salad
		Substantive concepts: 		Substantive concepts: 		Substantive concepts: 
		Key people:		Key people:		Key people:
Year 4		Structures & Mechanisms Packaging		Cooking & Nutrition Healthy Fruit Drinks		Sewing Binka Bookmarks
		Substantive concepts: 		Substantive concepts: 		Substantive concepts: 
		Key people: Robert Sabuda		Key people:		Key people:
Year 5		Cooking & Nutrition Scone Making	Structures & Mechanisms Cam Toys		Sewing Cushions	
		Substantive concepts: 	Substantive concepts: 		Substantive concepts: 	
		Key people:	Key people:		Key people:	
Year 6		Cooking & Nutrition Soup Making		Sewing Arpilleras		Structures & Mechanisms Mayan Creatures
		Substantive concepts: 		Substantive concepts: 		Substantive concepts: 
		Key people:		Key people:		Key people: Louis Henry Sullivan

3 Substantive Concepts	
Safety	
Innovation and invention	
Sustainability	

DT - Progression

Year 3

The aim of our D.T. curriculum at Baden-Powell is to support each and every child's understanding of their place in the diverse world in which they live; to enthuse and inspire all children by challenging them both intellectually and creatively; to learn about the design process and the significance of each stage designing; to encourage innovation, imagination and creativity; and to see the importance of our school values of Respect, Friendship, Compassion, Aspiration and Resilience as they do so.  
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Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1
	Structures and Mechanisms Packaging		Sewing Egg Cosies	
	<b>Key Knowledge</b>		<b>Key Knowledge</b>	
	Packaging needs to be created and designed for its purpose (size, shape, material, decoration) Tabs are used to make joins more robust. Scoring makes folding cardboard easier and more accurate		A plan is important so you know how to achieve your desired outcome. The purpose of a product needs to be shown in the design. You need to secure the end of the thread before starting sewing.	
	<b>Other Knowledge</b>		<b>Other Knowledge</b>	
	Different components contribute to making packaging purposeful (e.g. material and joining techniques) Decoration is included to appeal to the consumer A fold should be firmly made so that it is remembered by the paper. Lines need to be cut accurately.		Textiles can be shaped using templates. A running stitch can be used to join two pieces of material. To thread a needle, you pass the needle over the thread rather than push the thread through. Other materials and objects can be used for decoration e.g. buttons, fabric pen, ribbon	
	<b>Key Skills</b>		<b>Key Skills</b>	
	<b>Research</b> Investigate how a product is made by deconstructing and reconstructing. <b>Design</b> Consider the best way of fixing and joining, e.g. tabs. <b>Make</b> Score and cut materials/components with accuracy Fold on a line. Investigate how materials can be joined together in different ways, e.g. when allowing for tabs to assist with joins on the net of a 3D shape. <b>Evaluate</b> Identify flaws in the design of their product, making reference to the design criteria e.g. The box does not shut properly so the bauble may fall out		<b>Research</b> To begin to research others' needs e.g. Why do people need specific products like egg cosies? <b>Design</b> To develop my own design criteria through discussion, including both function and appearance. To create a plan which shows the order of making, equipment and tools, fit for purpose <b>Make</b> To apply simple finishing techniques with some accuracy. To adapt a template to create a pattern and cut this out. To use one type of stitch to join two pieces of material. To thread a needle. <b>Evaluate</b> To evaluate their product, considering: how well it has been made, materials used, whether it works, the making process used, if it is fit for purpose.	
	<b>Key Vocabulary</b>		<b>Key Vocabulary</b>	
	<b>Accurate:</b> correct in all details <b>Audience:</b> a group of people who listens or follows the events <b>Brief:</b> to share or tell by means of a short explanation <b>Component:</b> a part of something <b>Container:</b> something physical that can hold goods in <b>Construct:</b> to make or form by combining or arranging parts <b>Create:</b> to cause or make something happen <b>Decorate:</b> to make more beautiful by adding decorations or designs <b>Design:</b> a plan or outline showing how something is to be built or carried out, or the way that something is put together. <b>Durability:</b> not easily broken or worn out: lasting <b>Fold:</b> to bring together by crossing or twining together <b>Produce:</b> to put together and present for the public to enjoy <b>Protection:</b> keeping something safe from harm or the condition of being protected <b>Purpose:</b> a reason or plan that guides an action; design or goal <b>Score:</b> the process of scribing the material along the line to be bent or folded <b>Suitable:</b> being fit for purpose		<b>Needle:</b> a fine piece of metal used to pierce the material <b>Thread:</b> a thin piece of material. <b>Material:</b> such as felt and wool <b>Egg cosies:</b> a small cover made of wool or other material and designed to be placed over a boiled egg to keep it warm <b>Product design:</b> creative process to create product <b>Sewing:</b> the activity of making or mending clothes or other things using a needle and thread <b>Evaluate:</b> reflect on what went well and what you can improve in the future <b>Stitch:</b> a loop of thread resulting from a single movement of the needle	
cross curricular links				

## DT - Progression

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 4		Structures & Mechanisms Paper Engineering		Cooking & Nutrition Healthy Fruit Drinks		Sewing Binka Bookmarks
		<b>Key Knowledge</b>		<b>Key Knowledge</b>		<b>Key Knowledge</b>
		The user of a product will affect design choices. Making a prototype allows the designer to make improvements before making the final product Different effects can be created by using different styles of pop-up		We must prepare ourselves in order to safely and hygienically cook (hair tied up, hand wash, apron on) Ingredients must be kept in the appropriate conditions otherwise our food will become contaminated (particularly ingredients for fruit drinks that need to be kept chilled e.g., milk, yogurt). We must prepare our ingredients safely, particularly when using sharp knives, peelers and graters		The user of a product will affect design choices. We can finish sewing by over stitching. We can sew using a variety of stitches to embroider a design such as running stitch, (back stitch and cross stitch).
		<b>Other Knowledge</b>		<b>Other Knowledge</b>		<b>Other Knowledge</b>
		Design criteria identifies the needs the design should meet. More than one idea should be evaluated to decide which would meet the brief best. Different scissors create different cutting techniques and are used for different purposes. Different fonts can be used to create different effects I can use line guides and stencils when presenting my work. Using a prototype reduces cost and wasting materials A hinge pop up can be used to make an image stand out from the page when it is opened. A mouth pop up needs precise folding to be successful. Different pop ups can be used together to create more advanced effects e.g. layer pop up.		We must prepare our work area in order to prepare our food well (clean work surface, ingredients needed, equipment needed) Accurate measuring is needed to make a successful recipe We must use appropriate, safe cutting skills: bridge hold, claw grip, fork hold		A design brief identifies a need for an audience or user and can be broken down into design criteria, which identifies the needs the design should meet. Products are designed for different purposes and different users By evaluating different products we can identify criteria that can be used for our own designs More than one idea should be evaluated to decide which would meet the brief best. We can review what is successful about a finished product and what can be improved.
		<b>Key Skills</b>		<b>Key Skills</b>		<b>Key Skills</b>
		<b>Research</b> To research different design ideas to collect examples. <b>Design</b> To develop a clear idea, planning how to use materials, equipment and processes. To make a prototype e.g. folded skirt for hippo <b>Make</b> To investigate how materials can be joined together in different ways, e.g. through cutting slots To develop different techniques for adding decorative details. <b>Evaluate</b> To suggest improvements and identify which solution will work best and why. To identify the impact of any changes to the design on the finished product's functionality and appearance		<b>Research</b> To suggest how to adapt a recipe with consideration to nutrition, taste and presentation. <b>Design</b> To consider the views of others and use them to adapt my plan. <b>Make</b> To work through a plan in order. To measure ingredients using standard (e.g. weight and ml) and non-standard measurements (cups, spoons etc.). <b>Evaluate</b> To suggest how to adapt a recipe with consideration to nutrition, taste and presentation. To identify whether products can be recycled or reused e.g. composting fruit skins, packaging the fruit / yoghurt comes in. To evaluate the sustainability of materials used in product design. i.e. air miles, fruits in season, fairtrade		<b>Research</b> To consider the views of others and use them to adapt my plan. <i>market research – who are they making them for</i> <b>Design</b> To design a template, given examples. <b>Make</b> To understand that focus needles need to be handled safely, and that there are safety rules associated with the tool. To use a variety of stitches, e.g. overstitch, running stitch, cross stitch, identifying which is the most appropriate. <b>Evaluate</b> To listen to the views of others and use this to suggest ways to improve my work. To consider different options when attempting to solve a problem in manufacture.
	<b>Key Vocabulary</b>		<b>Key Vocabulary</b>		<b>Key Vocabulary</b>	
	<b>Design Brief:</b> a set of instructions for a project outlining its purpose <b>Design criteria:</b> precise goals that a project must achieve to be successful <b>Target audience:</b> the person who will be using the product <b>Annotate:</b> labelling your design with information that is useful—colour, materials <b>Mechanism:</b> the working or moving part <b>Prototype:</b> a practice version of your design to test if it works, stands up, moves in the way you want		<b>Design Brief:</b> a set of instructions for a project outlining its purpose <b>Safety:</b> protecting us from harm, danger or injury <b>Hygiene:</b> maintaining health and preventing disease, especially through cleanliness <b>Recipe:</b> a list of ingredients and instructions for making a food dish <b>Ingredients:</b> items that are needed in the recipe <b>Equipment:</b> tools that need to be used in the recipe <b>Method:</b> a particular way of doing something <b>Combine:</b> join or merge to form a single substance		<b>Design Brief:</b> a set of instructions for a project outlining its purpose <b>Design criteria:</b> precise goals that a project must achieve to be successful <b>User:</b> the person who will be using the product <b>Needle:</b> a fine piece of metal used to pierce the material. <b>Thread:</b> a thin piece of material. <b>Stitch:</b> a loop of thread resulting from a single movement of the needle. <b>Embroider:</b> Decorate by sewing patterns on with thread	
cross curricular links				Science - Digestive System		

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	Autumn 1	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	Cooking & Nutrition Making Scones	Structures & Mechanisms Cam Toys		Sewing Cushions	
	<b>Key Knowledge</b>	<b>Key Knowledge</b>		<b>Key Knowledge</b>	
	We use our fingertips (a cooler part of our hands) to rub butter into flour. We mix or combine ingredients of a similar texture first before adding ingredients of a different texture. We add the liquid a little at a time when combining with other ingredients.	A CAM mechanism turns rotary motion into linear (up and down) motion, using gravity. There are different types of glue for different purposes e.g. wood glue to stick frame and PVA to stick decorations Reinforcing structures with things like wooden dowel will strengthen our work and make it last longer		A cushion can be made by sewing two pieces of fabric together A decoration must be added before sewing the two sides of the cushion together We leave a hole in the seam to allow stuffing to be added before sewing the cushion closed	
	<b>Other Knowledge</b>	<b>Other Knowledge</b>		<b>Other Knowledge</b>	
	Ingredients must be kept in the appropriate conditions otherwise our food will become contaminated (particularly ingredients for scones that need to be kept refrigerated). Accurate weighing and measuring is needed to make a successful recipe We must preheat an oven so that we are cooking at the correct temperature all the time (otherwise it may not cook correctly or will take longer) Brushing the top of the uncooked scone e.g. with milk will change the appearance Using a cooling rack to cool the scone before putting it in a container means that it does not steam and go damp.	It is important to consider factors such as: sustainability, carbon footprint and cost effectiveness when designing a new product. Inaccurate measuring can affect the functionality and outcome of a product A product must work and look good to meet a brief We start by trying different ideas then decide which one is best, thinking about: function, appeal, resources, time, cost, sustainability We do a mid-project review and adjust our plans as we might find ways to improve our work or solve problems we are having		Needles need to be threaded with a skilful technique. All stitching must be started and ended in a secure way e.g. anchor stitch A pin is used to hold pieces of fabric together temporarily. There are different stitches used to join fabric and decorate fabric A design can be planned with an annotated sketch	
	<b>Key Skills</b>	<b>Key Skills</b>		<b>Key Skills</b>	
	<b>Research</b> To use internet research to develop design criteria. <b>Design</b> To create a step-by-step plan. <b>Make</b> To produce a suitable list of tools, equipment/materials needed. To follow a detailed step-by-step plan <b>Evaluate</b> To evaluate the product against the design, as part of a planned evaluation (mid-project review) and use this to make adjustments to the manufacture, as required.	<b>Research</b> To research products for overall appeal: functionality, appearance, cost, footprint, sustainability. <b>Design</b> To identify the strengths and areas of development in a design, using these to inform and refine future designs. <b>Make</b> To add reinforcements to joins to create a stronger structure, e.g. wooden dowelling struts To cut wood using a hacksaw, with support. To make something move using cams and axles. <b>Evaluate</b> To evaluate the quality of the design whilst in the process of designing and making. To test and evaluate my final product.		<b>Research</b> To take a user's view in to account when designing a product that is fit for purpose. <b>Design</b> To record designs using an annotated sketch. To create own templates or patterns. <b>Make</b> To develop different techniques for adding decorative details. To create seams on fabric edges. <b>Evaluate</b> To evaluate their products for overall appeal: functionality, appearance, cost, footprint, sustainability.	
<b>Key Vocabulary</b>	<b>Key Vocabulary</b>		<b>Key Vocabulary</b>		
<b>Recipe:</b> a list of ingredients and instructions for making a food dish <b>Scone:</b> a small cake made from flour and fat, usually eaten with butter <b>Design brief:</b> a set of instructions for a project outlining its purpose <b>Hygiene:</b> maintaining health and preventing disease, especially through cleanliness <b>Method:</b> a particular way of doing something <b>Design:</b> a plan or outline showing how something is to be built or carried out, or the way that something is put together <b>Sieve (verb):</b> to put flour through a sieve to remove all of the lumps <b>Cooling rack:</b> a rack used to place biscuits to cool down once they have come out of the oven <b>Mixing bowl:</b> the bowl used to mix all your ingredients together before baking in the oven <b>Flour dredger:</b> a container used to hold and sprinkle flour <b>Palette knife:</b> a very wide, flat knife that is used to smooth over mixture or can be used like a spatula to remove biscuits from a tray <b>Baking parchment:</b> sometimes called grease-proof paper. Paper that is used to line the baking tray before your biscuits go in the oven	<b>Cam:</b> a wheel with an off-centre hole or strange shape <b>Axle/shaft:</b> horizontal stick to turn <b>Follower:</b> vertical stick - goes up and down <b>Dowel:</b> round wood <b>Mechanism:</b> a series of moving parts that work together to make a model or machine work <b>Annotate:</b> labelling your design with information that is useful—colour, materials <b>Assemble:</b> to put the model together		<b>Design:</b> creating a detailed drawing of your idea before you begin making it <b>Pattern:</b> a piece of paper cut to the size and shape you want your finished cushion to be <b>Seam:</b> the line of stitching that joins the two sides of the cushion together <b>Anchor stitch:</b> a stitch used at the beginning and end of a row of stitches where you sew over the top of your stitches to hold them in place <b>Stuffing:</b> softer material that is used to pad out 3D pieces of the design		
cross curricular links		Science - Earth & The Solar System			

**DT - Progression**

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Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Cooking & Nutrition Making Soup		Sewing Arpilleras		Structures & Mechanisms Mayan Wire Game
	<b>Key Knowledge</b>		<b>Key Knowledge</b>		<b>Key Knowledge</b>
	Soup was a cheap, versatile and available food source during WW2 (link to rationing). Soup is still used as a food source for all e.g. soup kitchens Using native ingredients which are in season helps reduce our carbon footprint and can support the local economy.		A padded, 3D shape can be added to a base fabric. Sewing a hem creates a neat edge to a product. Various techniques can be used to sew or attach a button.		Function and form are the two main aspects when designing a toy that is fit for purpose. An appropriate level of challenge will make a game more appealing Annotating a design with appropriate detail is an important part of the planning process.
	<b>Other Knowledge</b>		<b>Other Knowledge</b>		<b>Other Knowledge</b>
	There is sometimes a need to adapt cooking times and temperatures. Ensuring all food is piping hot when reheated reduces the risk of contamination Home-grown vegetables were often the only option for people during WW2. Evaluating how much products cost to make can affect the choices I make throughout the design of my product. Designing new products should improve upon existing products.		Materials of different textures and patterns can be mixed together to create a tactile image Material can be added to a base piece using different stitches. Tacking a piece can help you attach it before stitching. Some materials will need to be attached with glue / adhesive.		There are different tools and techniques for cutting materials There are different contexts in which to use different tools. Rulers and measuring tapes are used to mark out and cut to the nearest millimetre. The finished product must have a high quality finish Art skills can be used to decorate my product.
	<b>Key Skills</b>		<b>Key Skills</b>		<b>Key Skills</b>
	<b>Research:</b> To incorporate market research in to a design, e.g. through a questionnaire. <b>Design:</b> To identify features of a design that will appeal to the intended user. To design innovative products that improve upon existing products. <b>Make:</b> To be resourceful with practical problems. To use ratios to adjust quantities of recipes. <b>Evaluate:</b> To explain what to improve and the effect that different resources chosen may have on the final product. i.e. link with rationing To evaluate how much products cost to make.		<b>Research</b> To evaluate the finish of an existing product. <b>Design</b> To follow and refine a logical plan. <b>Make</b> To select appropriate materials, fit for purpose, and explain choices, considering the function and aesthetics. <b>Evaluate</b> To evaluate the finish of their product. To engage in constant review of the design criteria during the manufacturing process.		<b>Research</b> To identify features of a design that will appeal to the intended user. <b>Design</b> To create design criteria from research To use simple exploded diagrams to show specific parts of a design and how they are fit for purpose. <b>Make</b> To measure, draw and cut a net for a specific design To make a sound using electric circuits, e.g. buzzers, <b>Evaluate</b> To be able to give balanced feedback to others about their product, including strengths in meeting the design criteria and the improvements that could be made.
	<b>Key Vocabulary</b>		<b>Key Vocabulary</b>		<b>Key Vocabulary</b>
	<b>Adapt:</b> to make changes <b>Soup:</b> a liquid dish, typically savoury and made by boiling meat, fish, or vegetables etc. in stock or water <b>Rations:</b> a fixed amount of a commodity officially allowed to each person during a time of shortage, as in wartime <b>Herbs:</b> any plant with leaves, seeds, or flowers used for flavouring, food, medicine, or perfume <b>Native:</b> a person born in a specified place or associated with a place by birth <b>Stock:</b> a mixture of boiled or simmered ingredients that typically include meats and vegetables <b>Chop:</b> cut into pieces with repeated sharp chops of a knife <b>Chopping knife:</b> a knife with crescent-shaped blade for chopping or mincing <b>Recipe:</b> a list of ingredients and instructions for making a food dish.		<b>Annotate:</b> labelling your design with information that is useful—colour, materials <b>Specification:</b> things that must be included in your design <b>Materials:</b> things that you will use - fabric, buttons, needles, pins etc. <b>Appliqué:</b> attaching fabric to other piece of fabric to decorate or add design <b>Template / pattern pieces:</b> paper pieces that you make to the exact size/shape to help you cut out fabric pieces <b>Tack / tacking:</b> pinning templates or fabric together to help you cut it out or sew it <b>Seam:</b> a line along which pieces of cloth are joined by sewing <b>Running stitch:</b> a simple 'in-out' stitch that is used to join two fabrics together <b>Stuffing:</b> softer material that is used to pad out 3D pieces of the design <b>Embroidery:</b> using the thread to create an outline or textured effect <b>3D effect:</b> a way of creating a more realistic design to have a greater impact on the audience		<b>Design:</b> creating a detailed drawing of your idea before you begin making it. <b>Annotate:</b> labelling your design with information that is useful—colour, materials. <b>Prototype:</b> a practice version of your design to test if it works, stands up, moves in the way you want. <b>Measure:</b> using a ruler (or tape or scales etc) to check the length (or weight or height). <b>Millimetres (mm):</b> unit of measurement for length—there are 10mm in 1cm. <b>Adhesive:</b> another word for glue. There are lots of different adhesives that can join materials: tape, glue, hot glue, etc. <b>Frame:</b> a sturdy structure that is built to support a model and help it stand upright. <b>Base:</b> the flat, sturdy piece of material that your model stands on. <b>Structure:</b> the body/main part of your model. <b>Electrical vocabulary:</b> circuit—wires, batteries and parts connected together. <b>Motor—</b> equipment that moves. <b>Switch—</b> can control the circuit and start/stop the flow of electricity.
cross curricular links	History - WW2		Geography - South America		Science - Electricity

Year 6