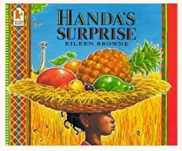
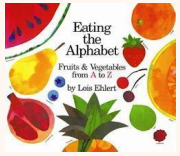
DT LTP	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	**All about me** Make use of props and materials when role playing characters in narratives and stories.	**Festivals** Share their creations, explaining the process they have used;	**Traditional Tales** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	**Fantasy creatures** Make use of props and materials when role playing characters in narratives and stories.	**Life Cycles and growing** Share their creations, explaining the process they have used;	**Summer** Make use of props and materials when role playing characters in narratives and stories
Year 1	**Smoothie** **Food** **Master Practical Skills** Cut, peel and grate ingredients safely and hygienically. Measure or weigh using measuring cups or scales. Assemble or cook ingredients. **Design, make, evaluate and improve**			**Levers** **Mechanics and** **Materials** **Master Practical Skills** • Create products using levers, wheels and winding mechanisms. • Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and		**Structures - make a swing** **Construction** ● Analyse and annotate existing products for inspiration and understanding. ● Design products that have a clear purpose and an intended user. ● Suggest improvements to existing designs. ● Make products, refining the design as work progresses.

	Design products that have a clear purpose and have an intended user. Make products, refining the design as work progresses. **Take inspiration from design throughout history** Explore how products have been created. Explore objects and designs to identify likes and dislikes.   			shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as glueing, hinges or combining materials to strengthen). **Design, make, evaluate and improve** • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. **Take inspiration from design throughout history** Explore how products have been created. Explore objects and designs to identify likes and dislikes.		• Cover all the different types of structure for evaluative process, nuanced understanding and analysis. • Finger Fluency: children need to work on building skills

Year 2	**Levers- Moving Picture** Mechanics **Master Practical Techniques** **Materials** • Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as gluing, using hinges or combining materials to strengthen).			**Snack Pouch** Textiles **Master Practical Skills** • Shape textiles using templates. • Join textiles using running stitch. • Colour and decorate textiles using a number of techniques (adding sequins). **Take inspiration from design throughout history** • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created **Design, make, evaluate and improve**	**Portable Snack** Food **Master Practical Techniques** Cut, peel and grate ingredients safely and hygienically. Measure or weigh using measuring cups or scales. Assemble or cook ingredients. Design products that have a clear purpose and have an intended user. Make products, refining the design as work progresses. **Take inspiration from design throughout history** • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs.	

	Take inspiration from design • Explore objects and designs to identify likes and dislikes. • Suggest improvements to existing designs. • Explore how products have been created. **Design, make, evaluate and improve** • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses.			• Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Use software to design.	• Explore how products have been created **Design, make, evaluate and improve** • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses.	
Year 3		**Create a dip for the class Christmas party** **Food** **Take inspiration from design throughout history**		**Pneumatic monsters** **Mechanics** • Use scientific knowledge of the transference of forces		**Design and make an Egyptian collar for a fancy dress party** **Textiles**

		• Identify some of the great designers in all of the areas of study to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work. • Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). **Design, make evaluate and improve** • Design with purpose by identifying opportunities to design. • Make products by working efficiently		to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). **Design, make evaluate and improve** • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually		• Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles. **Design, make evaluate and improve** • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs.

		(such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design.		evaluating the product design.		
Year 4		**<u>Paper circuits - Christmas cards</u>** **Electrical and Electronics** **Master Practical Skills** • Create series and parallel circuits **Design, make evaluate and improve** • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design.		**<u>Vegetable soup</u>** **Food** • Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). **Design, make evaluate and improve** • Design with purpose by		**<u>Bridge structure</u>** **Construction** • Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Select appropriate joining techniques. • Choose suitable techniques to construct products or to repair items.

		Take inspiration from design throughout history • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.		identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. **Take inspiration from design throughout history** • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices.		• Strengthen materials using suitable techniques. **Design, make evaluate and improve** • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. **Take inspiration from design throughout history** • Identify some of the great designers in all of the areas of study (including pioneers

				• Disassemble products to understand how they work.		in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.
Year 5		**<u>Ancient Greece - marble labyrinths</u>** **Construction** **Take inspiration from design throughout history.** • Look at old fashioned marble maze games, what helps them to work (gravity)? what is appealing? Colour? design? Complexity? **Master Practical Skills** • Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding).		**<u>Shackleton - making energy bars for a polar scientist.</u>** **Food** **Take inspiration from modern day design** • Take inspiration from existing products (energy bars). Examine packaging, taste the items. Think about a product's purpose, the users and how it is designed. **Master Practical Skills**		**<u>Ironbridge - make cloth bags to carry Jackfields tiles.</u>** **Textiles** and **Materials** **Take inspiration from design throughout history.** • Examine examples of soft cloth bags from victorian era. What stitching was used? What material? Why is it effective? what could be improved? • Look at more modern day examples of

		Design, make, evaluate and improve • Make labyrinths. Wooden structures. • Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding) • Assess the effectiveness of the product, evaluate and think about changes that could be made to improve		• Demonstrate a range of baking and cooking techniques. • Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. **Design, make, evaluate and improve** • Create and refine recipes, including ingredients, methods, cooking times and temperatures. • Taste and assess flavour, energy giving properties, ease of cooking, changes to product or to the process of making it.		bags/purses. Pay attention to fastenings, stitching, material etc. **Master Practical Skills** • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper). • Create objects (such as a cushion) that employ a seam allowance. • Join textiles with a combination of stitching techniques

						(such as back stitch for seams and running stitch to attach decoration). **Design, make, evaluate and improve** • Show an understanding of the qualities of materials • Choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper). • Use precise measurements to ensure the bag is fit for purpose. • Assess/evaluate effectiveness of item created. suggested changes to improve the item.
Year 6		**Stollen** Food	**Anderson Shelters** Construction Materials	**Circuits** **Make a torch**		**Fiver Challenge** Subject areas vary according to what each team chooses to make. Covering:

		Take inspiration from design throughout history • Learn about the origins of stollen, its traditional use and links to christmas. Practical or traditionals reasons for why certain ingredients were used. Taste samples and assess properties. **Master Practical Skills** • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. **Design, make, evaluate and improve** • Create and refine recipes, including ingredients, methods, cooking times and temperatures. • Understand the importance of correct storage and handling of ingredients (using	**Take inspiration from design throughout history** • Examine the origins of Anderson Shelters, why they were used, how effective the materials were etc. **Master Practical Skills** • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). **Design, make, evaluate and improve** • Show an understanding of the qualities of materials • Choose appropriate tools to cut and shape (such as the	**Electricals and electronics** **Master Practical Skills** • Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).		**Food** **Construction** **Materials** **Mechanics** **Textiles** **Electricals and electronics** **Take inspiration from design throughout history** • Children are self motivated to research their products, comparing them to and being inspired by existing products. **Master Practical Skills** • Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding). **Design, make, evaluate and improve**

		knowledge of micro-organisms). • Evaluate and improve recipes assessing ingredients, cooking times, practical issues.	nature of fabric may require sharper scissors than would be used to cut paper). • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. **<u>Wartime cooking</u>** **Food** **Master Practical Skills** • Demonstrate a range of baking and cooking techniques. **Design, make, evaluate and improve** • Create and refine recipes, including ingredients, methods, cooking times and temperatures.			• Ensure products have a high quality finish, using art skills where appropriate.

			• Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Evaluate and improve recipes assessing ingredients, cooking times, practical issues.			