Grayrigg CE Primary School Design Technology Planning

SKILL	EYFS- links	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design, make, evaluate and improve	**Playing and exploring** – engagement Finding out and exploring Playing with what they know Being willing to 'have a go' **Active learning** – motivation Being involved and concentrating Keeping trying Enjoying achieving what they set out to do **Creating and thinking critically –** thinking Having their own ideas Making links Choosing ways to do things	Explain what they are making and which materials they are using. • Design products that have a clear purpose and an intended user. • Use pictures and words to convey what they want to make. • Make products, using a range of tools to cut, shape, join and finish. • Say what they like and don't like about their product and explain why. • Talk about how closely their finished product meets their design criteria. • Begin to use software to represent 2D designs.		• Investigate existing products, including drawing them to analyse and understand how they are made. • Plan a sequence of actions to make a product. • Develop more than one design. • Develop prototypes. • Generate designs with annotated sketches and computer-aided design (CAD) where appropriate. • Refine work and techniques as work progresses, continually evaluating the product design. • Identify strengths and weaknesses of their design ideas. • Talk about how closely their finished product meets their design criteria and meets the need of the user.		• Undertake research to inform design process. This may include surveys and interviews. • Use prototypes, cross-sectional diagrams, exploded diagrams and CAD software to represent designs. • Consider the views of others when evaluating their own work. • Ensure products have a high quality finish, using art skills where appropriate. • Justify their decisions about materials and methods of construction. • Make suggestions on how their design/product could be improved.	
WOOD WORK	•Uses simple tools to effect changes to materials. •Handles tools, objects, construction and malleable materials safely and with increasing control. **Children handle equipment and tools effectively, including pencils for writing.** •Eats a healthy range of foodstuffs and understands need for variety in food. •Shows understanding of the need for safety when tackling new challenges, and considers and manages some risks. •Shows understanding of how to transport and store equipment safely. •Practices some appropriate safety measures without direct supervision. **Children know the importance for a healthy diet, and talk about ways to keep healthy and safe.** •Orders two or three items by length or height **Children use everyday language to talk about size, to compare objects and to solve problems.** •Manipulates materials to achieve a planned effect. •Constructs with a purpose in mind, using a variety of resources. •Uses simple tools and techniques competently and appropriately. •Selects appropriate resources and adapts work where necessary. •Selects tools and techniques needed to shape, assemble and join materials they are using. **They safely use and explore a variety of materials, tools and techniques, experiment**	• Mark out materials to be cut using a template. • With support cut strip wood/dowel/balsa using a hacksaw • Use materials to practise drilling, screwing, nailing and gluing to strengthen products		• create rectangular frames (measure and cut accurately) • Make simple toys with wood.	• Investigate how to make structures more stable e.g. by widening the base. •Explore tightening and loosening screws.	• Use a glue gun • Join materials using appropriate methods. •Use a hand drill to drill tight and loose fit holes.	• Cut wood accurately to 1mm. Build frameworks using a range of materials e.g. wood, card and corrugated plastic.
Finishing		Sanding blocks Paint/felt tip		Explore different gradients of sand paper to ensure smooth finish Paint with specific indoor outdoor paints Varnish		Explore different techniques including decoupage and varnish	
projects		Simple vehicles, moving part model		bird box/box with lid		Upcycle project.	
Mechanics		• Attach wheels to chassis using an axle. • Make vehicles with moving wheels	• Use a range of materials to create models with wheels and axles e.g. tubes, dowel and cotton reels.	• Begin to use mechanical systems in their products e.g. gears, pulleys and levers.		• Use a cam to make an up and down mechanism.	
Textiles		Sewing- using pre-cut fabric kits Wool- loom bands, simple weaving, finger knitting		Sewing- running stitch and back stitch- bunting, buttons Wool- scarf		Sewing- make an outfit from old t-shirts Gathering.	
Cookery		• Understand where food comes from. • Group familiar food products e.g. fruit and vegetables. • Cut ingredients safely. • Prepare simple dishes-safely and hygienically-without using a heat source.	• Group foods into the five groups in The Eat well Plate. • Cut, grate or peel ingredients safely. • Prepare simple dishes-safely and hygienically-without using a heat source. • Measure or weigh using cups or electronic scales.	• Cut materials accurately and safely by selecting appropriate tools. • Know that a healthy diet is made up from a variety of different food and drink, as depicted in The Eat well Plate. • Measure and weigh ingredients appropriately. • Follow a recipe.	• Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Measure ingredients using scales. • Prepare ingredients hygienically and using the appropriate utensils by following a recipe.	• Assemble or cook ingredients, controlling the temperature of the oven or hob if cooking. • Measure accurately using different equipment. • Create recipes, including ingredients, methods, cooking times and temperatures. • Understand the importance of correct storage and handling of ingredients.	• Combine ingredients appropriately e.g. beating or rubbing. • Measure ingredients to the nearest gram and millilitre and calculate ratios of ingredients to scale up or down from a recipe. • Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. • Create and refine recipes, including ingredients, methods, cooking times and temperatures.
		Soup with bread and fruit salad/ pizza		Fish cakes Omega 3, pasta bake food groups		Create a classic with a twist.	
electronics				• Create series circuits.	• Create series and parallel circuits.	• Create circuits that employ a number of components (such as LEDs, resistors and transistors).	

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		Autumn	Spring	Summer
Acorns	Year A	Soup	Vehicles	Sewing
	Year B	Fruit Salad	Toys with moving parts	Weaving
Oaks	Year A	Fish Cakes	Box- with measurements	Sewing- running stitch, backstitch, and buttons.
	Year B	Pasta dish	Moving parts	Electronics project
Mighty Oaks	Year A	Classic Meal with a twist	Y5 Men in Sheds Y6 Upcycle	Create an outfit out of an old t-shirt.
	Year B	Classic Meal with a twist		Electronics project
	There is only a two year rolling plan for bot Key-stage 1 and 2 as the children in KS2 split into upper and lower Ks1 for DT (within the Oaks class)			