

Ghyllgrove Primary School - D&T Curriculum 2020-21

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn Outcomes		An Eye on London - Structure- Make a landmark- needs to be made stronger, stiffer and stable.	The invisible force – Magnetic game – pulley mechanism fish game.	Romans – Roman soldier sandals – sewing Mad Scientist – Food – Follow a recipe – measure using scales.		The Americas - Food
Spring Outcomes	All Aboard – Mechanisms, chassis axels		Brilliant Bodies – Food – sandwich/pizza dough	Rock Stars – Structure – musical instrument	Spies – Electrical power – robots Astronomers Entrepreneurs – Trade - Food	A world without WiFi – Electrical and mechanisms – moving toys
Summer Outcomes	Ghyllgrove Gardeners – Food technology Toy Museum – Design a toy, strengthen structures	Carnival of Animals - Mechanisms- Make animals on wheels. Down on the Farm - Food- Measure and weigh ingredients and understand healthy eating.	Green Fingers – Structure – mini greenhouse	World War II – Electrical – torch for shelters	From summit to Sea – Structures - bridges	World of Wonders – Structure – Bug hotel
Designing, skills	Design products that have a clear purpose and an intended user.		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. Year 3 - Generate designs with annotated sketches and computer-aided design (CAD) where appropriate.		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.	
Making skills	Fold, tear and cut paper or card. Investigate strengthening sheet materials. Roll paper to create tubes. Demonstrate a	Demonstrate a range of joining techniques such as gluing, taping or creating hinges. Cut materials safely using tools provided. Demonstrate a range of cutting and	Measure and mark out accurately. Cut materials accurately and safely by selecting appropriate tools. Cut slots.	Measure and mark out to the nearest mm. ☐ Use and explore complex popups. ☐ Cut slots and internal shapes. ☐ Create nets.	Cut materials with precision. ☐ Cut accurately and safely to a marked line. ☐ Join/combine materials with temporary, fixed or moving joints.	Cut materials with precision and refine the finish with appropriate tools (such as sanding wood). ☐ Show an understanding of the qualities of materials

	range of joining techniques such as gluing or taping. Measure and mark out lines.	shaping techniques such as tearing, cutting, folding and curling. Use simple pop-ups.				to choose appropriate tools to cut and shape
Evaluating skills	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	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.		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.		
Specific skills, knowledge and concepts – STRUCTURES	Explore structures, exploring how they can be made stronger, stiffer and more stable Layering, gluing...	Strengthen and stiffen more complex structures Strengthen frames using diagonal struts.	Strengthen and stiffen more complex structures. Investigate how to make structures more stable e.g by widening the base	Strengthen and stiffen more complex structures Join materials using appropriate methods		
Specific skills, knowledge and concepts - MECHANISMS	Attach wheels to chassis using an axle.	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.	Understand and use mechanical structures in their products e.g. gears, pulleys, levers and gears	Use a cam to make an up and down mechanism	
Specific skills, knowledge and concepts – FOOD	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	☑ 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.	☑ 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,	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

		electronic scales.			methods, cooking times and temperatures. Understand the importance of correct storage and handling of ingredients.	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.
Specific skills, knowledge and concepts – Electrical and computing systems			Create series circuits.	Create series and parallel circuits.	Control a model using an ICT control model.	Create circuits that employ a number of components (such as LEDs, resistors and transistors).
Featured designers and inventors						