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| **Skills** | Design, make Evaluate and improve | Cooking and nutrition | Construction, mechanics and electronics | Materials | Taking inspiration from design throughout history |
| **Year 1** | * Explain what they are making and which materials they are using. * Design products that nave a clear purpose and an intended use * 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 why. * Talk about how closely their finished product meets their design criteria. * Begin to use software to represent 2D shape | * Understand where food comes from. * Group familiar products e.g. fruit and vegetables * Cut ingredients safely * Prepare simple dishes safely and hygienically. | * Mark out materials to be cut using a template * Attach wheels to chassis using an axle * With support cut strip, wood or dowel using a hacksaw * Make vehicles with construction kits which contain free running wheels | * Fold, tear and cut paper or card * Investigate strengthening sheet material * Roll paper to create tubes * Demonstrate a range of joining techniques such as gluing or taping * Measure and mark out lines | * Explore objects and designs to identify likes and dislikes * Explore how products have been created |

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| **Year 2** | * Explain what they are making and which materials they are using. * Design products that nave a clear purpose and an intended use * 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 why. * Talk about how closely their finished product meets their design criteria. * Begin to use software to represent 2D shape | * Group foods into five groups in the eat well plate * Cut, grate or peel ingredients safely * Prepare simple dishes safely and hygienically * Measure or weigh using cups or electronic scales | * Use a range of materials to create models with wheels and axles e.g. tubes, dowels and cotton reels * Use materials to practise drilling, screwing, nailing and gluing to strengthen products | * 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 shaping techniques such as tearing, cutting, folding and curling * Use simple pop ups | * Explore objects and designs to identify likes and dislikes * Explore how products have been created |
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| **Year 3** | * 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. | * Cut materials accurately and safely by selecting appropriate tools. * Know that a healthy diet is made up of a variety of different food and drink, as depicted in the eat well plate. * Measure and weigh ingredients appropriately. * Follow a receipe | * Create series circuits * Strengthen frames using diagonal struts * Begin to use mechanical systems in their products e.g. gears, pulleys and levers | * Measure and mark out accurately * Cut materials accurately and safely by selecting appropriate tools * Cut slots | * Dissemble products to understand how they work * Improve on existing designs giving reasons for their choices * Identify some of the great designers in their areas of study to generate ideas for their designs |
| **Skills** | Design, make Evaluate and improve | Cooking and nutrition | Construction, mechanics and electronics | Materials | Taking inspiration from design throughout history |
| **Year 4** | * 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. | * 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. | * Create series and parallel circuits. * Investigate how to make structures more stable e.g. by widening the base. * Understand and use mechanical structures in their products e.g. gears, pulleys, levers and gears. | * Measure and mark out to the nearest mm. * Use and explore complex pop-ups. * Cut slots and internal shapes. * Create nets. | * Dissemble products to understand how they work * Improve on existing designs giving reasons for their choices * Identify some of the great designers in their areas of study to generate ideas for their designs |