

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	<ul style="list-style-type: none"> • Designing a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move • Creating clearly labelled drawings which illustrate movement 	<ul style="list-style-type: none"> • Generating and communicating ideas using sketching and modelling • Learning about different types of structures, found in the natural world and in everyday objects • Designing a pouch 	<ul style="list-style-type: none"> • Designing a toy which uses a pneumatic system • Developing design criteria from a design brief • Generating ideas using thumbnail sketches and exploded diagrams • Learning that different types of drawings are used in design to explain ideas clearly 	<ul style="list-style-type: none"> • Designing a shape that reduces air resistance • Drawing a net to create a structure from • Choosing shapes that increase or decrease speed as a result of air resistance • Personalising a design • Writing design criteria for a product, articulating decisions made • Designing a personalised book sleeve 	<ul style="list-style-type: none"> • Designing an electronic greetings card with a copper track circuit and components • Creating a labelled circuit diagram showing positive and negative parts in relation to the LED and the battery • Writing design criteria for an electronic greeting card • Compiling a moodboard relevant to my chosen theme, purpose and recipient • Designing a stable structure that is able to support weight • Creating frame structure with focus on triangulation 	<ul style="list-style-type: none"> • Designing a waistcoat in accordance to specification linked to set of design criteria to fit a specific theme • Annotating designs
Make	<ul style="list-style-type: none"> • Adapting mechanisms 	<ul style="list-style-type: none"> • Making a structure according to design criteria • Creating joints and structures from paper/card and tape • Building a strong and stiff structure by folding paper • Selecting and cutting fabrics for sewing • Decorating a pouch using fabric glue or running stitch • Threading a needle • Sewing running stitch, with evenly spaced, neat, even stitches to join fabric • Neatly pinning and cutting fabric using a template 	<ul style="list-style-type: none"> • Creating a pneumatic system to create a desired motion • Building secure housing for a pneumatic system • Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy • Selecting materials due to their functional and aesthetic characteristics • Manipulating materials to create different effects by cutting, creasing, folding, weaving 	<ul style="list-style-type: none"> • Measuring, marking, cutting and assembling with increasing accuracy • Making a model based on a chosen design • Making and testing a paper template with accuracy and in keeping with the design criteria • Measuring, marking and cutting fabric using a paper template • Selecting a stitch style to join fabric, working neatly sewing small neat stitches • Incorporating fastening to a design 	<ul style="list-style-type: none"> • Making a functional series circuit • Creating an electronics greeting card, referring to a design criteria • Mapping out where different components of the circuit will go • Making a range of different shaped beam bridges • Using triangles to create truss bridges that span a given distance and supports a load • Building a wooden bridge structure • Independently measuring and marking wood accurately • Selecting appropriate tools and equipment for particular tasks • Using the correct techniques to saws safely • Identifying where a structure needs reinforcement and using card corners for support • Explaining why selecting appropriating materials is an important part of the design process • Understanding basic wood functional properties 	<ul style="list-style-type: none"> • Using a template when pinning panels onto fabric • Marking and cutting fabric accurately, in accordance with a design • Sewing a strong running stitch, making small, neat stitches and following the edge • Tying strong knots • Decorating a waistcoat - attaching objects using thread and adding a secure fastening • Learning different decorative stitches • Sewing accurately with even regularity of stitches
Evaluate	<ul style="list-style-type: none"> • Testing mechanisms, identifying what stops wheels from turning, knowing that a wheel needs an axle in order to move 	<ul style="list-style-type: none"> • Exploring the features of structures • Comparing the stability of different shapes • Testing the strength of own structures • Identifying the weakest part of a structure • Evaluating the strength, stiffness and stability of own structure • Troubleshooting scenarios posed by teacher • Evaluating the quality of the stitching on others' work • Discussing as a class, the success of their stitching against the success criteria • Identifying aspects of their peers' work that they particularly like and why 	<ul style="list-style-type: none"> • Using the views of others to improve designs • Testing and modifying the outcome, suggesting improvements • Understanding the purpose of exploded-diagrams through the eyes of a designer and their client 	<ul style="list-style-type: none"> • Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance • Testing and evaluating an end product against the original design criteria • Deciding how many of the criteria should be met for the product to be considered successful • Suggesting modifications for improvement • Articulating the advantages and disadvantages of different fastening types 	<ul style="list-style-type: none"> • Evaluating a peer's product against design criteria and suggesting modifications that could be made to improve the reliability or aesthetics of it or to incorporate another type of circuit component • Stating what Sir Rowland Hill invented and why it was important for greeting cards • Analysing and evaluating a range of existing greeting cards • Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary • Suggesting points for improvements for own bridges and those designed by others 	<ul style="list-style-type: none"> • Evaluating work continually as it is created