Design and Technology						
	Key Stage 1		Lower Key Stage 2		Upper Key Stage 2	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Structures Design Make Evaluation	• Learning the importance of a clear design criteria. • Including individual preferences and requirements in a design. • Making stable structures from card, tape and glue. • Following instructions to cut and assemble the supporting structures • Making functioning axles which are assembled into a main supporting structure. • Evaluating according to the design criteria, testing whether a structure is strong and stable and altering it if it isn't • Suggest points for improvements.	• Generating and communicating ideas using sketching and modelling. • Learning about different types of structures, found in the natural world and in everyday objects. • Making a structure according to design criteria • Creating joints and structures from paper/card and tape • 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	• Design a structure with key features to appeal to a specific person/ purpose. • Drawing and labelling a design using 2D shapes, labelling: - the 3D shapes that will create the features - material, need and colours. • Constructing a range of 3D geometric shapes using nets. • Creating special features for individual designs. • Evaluating own work and the work of others based on the aesthetic of the finished product and in comparison to the original design • Suggesting points for modification of the individual designs	• Design a stable structure that is aesthetically pleasing and selecting materials to create a desired effect • Building frame structures designed to support weight • Creating a range of different shaped frame structures • Making a variety of free standing frame structures of different shapes and sizes • Selecting appropriate materials to build a strong structure and for the cladding • Reinforcing corners to strengthen a structure • Creating a design in accordance with a plan • Learning to create different textural effects with materials • Evaluating structures made by the class • Describing what characteristics of a design and construction made it the most effective • Considering effective and ineffective designs	• Designing a stable structure that is able to support weight. • Creating frame structure with focus on triangulation • Making a range of different tall buildings • Using triangles to create stable structures. • 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 • Adapting and improving a structure by identifying points of weakness and reinforcing them as necessary • Suggesting points for improvements for own structure and those designed by others	• Design a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs • Building a range of structures drawing upon new and prior knowledge of structures • Measuring, marking and cutting wood to create a range of structures • Using a range of materials to reinforce and add decoration to structures • Improving a design plan based on peer evaluation • Testing and adapting a design to improve it as it is developed • Identifying what makes a successful structure
Mechanisms Design Make Evaluation	• Explaining how to adapt mechanisms to control the movement • Design a product for a given audience • Designing a vehicle that includes wheels, axles and axle holders, which will allow	• Creating a design criteria for a product with a mechanism. • Design a moving mechanism for a specific audience in accordance with a design criteria • Selecting a suitable linkage	• Designing a product which uses a pneumatic system. • Developing design criteria from a design brief • Generating ideas using thumbnail sketches and exploded diagrams • Learning that different	Drawing a net to create a structure. • Personalising a design. • Measuring, marking, cutting and assembling with increasing accuracy • Making a model based on a chosen design	• Design a product which uses a mixture of structures and mechanisms • Naming each mechanism, input and output accurately • Following a design brief to make a product,	• After experimenting with a range of cams, creating a design for an automata toy based on a choice of cam to create a desired movement • Understanding how linkages change the direction of a force

	the wheels to move • Creating clearly labelled drawings which illustrate movement. Following a design to create moving models that use levers and sliders Adapting mechanisms • Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed • Reviewing the success of a product by testing it with its intended audience • Testing mechanisms, identifying what stops wheels from turning,	system to produce the desired motions • Designing a wheel • Selecting appropriate materials based on their properties. • Making linkages using card for levers and split pins for pivots • Experimenting with linkages adjusting the widths, lengths and thicknesses of card used • Cutting and assembling components neatly • Selecting materials according to their characteristics • Following a design brief • Evaluating own designs against design criteria • Using peer feedback to modify a final design • Evaluating different designs • Testing and adapting a design	types of drawings are used in design to explain ideas clearly. • 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 product • Selecting materials due to their functional and aesthetic characteristics • Manipulating materials to create different effects by cutting, creasing, folding, weaving • Using the views of others to improve designs • Testing and modifying the outcome, suggesting improvements	• Evaluating the final product based on the design brief and the accuracy of workmanship on performance	neatly and with focus on accuracy • Making mechanisms and/ or structures using sliders, pivots and folds to produce movement • Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result • Evaluating the work of others and receiving feedback on own work • Suggesting points for improvement	• Making things move at the same time. • Measuring, marking and checking the accuracy of the wood and dowel pieces required • Measuring, marking and cutting components accurately using a ruler and scissors • Assembling components accurately to make a stable frame • Understanding that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles • Selecting appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set • Evaluating the work of others and receiving feedback on own work • Applying points of improvements • Describing changes they would make/ do if they were to do the project again
Electrical Systems Design Make Evaluation			• Designing a product that works using electricity • Identifying a design criteria and a target audience • Making a product referring to the design criteria • Using a wider range of materials and equipment safely • Learning to give constructive criticism on own work and the work of others • Testing the success of a product against the original design criteria and justifying opinions	• Designing a product giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas • Making a product with a working electrical circuit and switch • Using appropriate equipment to cut and attach materials • Assembling a torch according to the design and success criteria • Evaluating electrical products • Testing and evaluating the	• Designing an electronic product with a simple electrical control circuit • Creating a labelled design showing positive and negative parts in relation to the LED and the battery • Making a working circuit • Creating an electronic product referring to a design criteria • Mapping out where different components of the circuit will go • Evaluating a completed product against the original design sheet and looking at modifications that could be made to	• Design a product identifying and naming the components required • Drawing a design from three different perspectives • Generating ideas through sketching and discussion • Modelling ideas through prototypes • Making electromagnetic motors and tweaking the motor to improve its function • Constructing a stable base for an electromagnetic game • Accurately cutting,

				success of a final product and taking inspiration from the work of peers	improve the reliability or aesthetics of it or to incorporate another type of electronic device, eg: buzzer	folding and assembling a net • Decorating the base of the game to a high quality finish • Making and testing a circuit • Incorporating a circuit into a base • Testing own and others finished products identifying what went well and making suggestions for improvement
Cooking and Nutrition Design Make Evaluation	• Chopping fruit and vegetables safely to make a product • Identifying if a food is a fruit or a vegetable • Learning where and how fruits and vegetables grow • Tasting and evaluating different food combinations • Describing appearance, smell and taste • Suggesting information to be included on packaging	• Designing a healthy product based on a food combination which work well together • Slicing food safely using the bridge or claw grip • Constructing a product that meets a design brief • Describing the taste, texture and smell of fruit and vegetables • Taste testing food combinations and final products • Describing the information that should be included on a label • Evaluating which grip was most effective	• Creating a healthy and nutritious recipe using seasonal ingredients, considering the taste, texture, smell and appearance of the dish • Knowing how to prepare themselves and a workspace to cook safely in, learning the basic rules to avoid food contamination • Following the instructions within a recipe • Establishing and using design criteria to help test and review dishes • Describing the benefits of seasonal fruits and vegetables and the impact on the environment • Suggesting points for improvement when making a product	Designing a product within a given budget, drawing upon previous taste testing • Following a baking recipe • Cooking safely, following basic hygiene rules • Adapting a recipe • Evaluating a recipe, considering: taste, smell, texture and appearance • Describing the impact of the budget on the selection of ingredients • Evaluating and comparing a range of products • Suggesting modifications	• Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients • Writing an amended method for a recipe to incorporate the relevant changes to ingredients • Designing appealing packaging to reflect a recipe • Cutting and preparing vegetables safely • Using equipment safely, including knives, hot pans and hobs • Knowing how to avoid cross contamination • Following a step by step method carefully to make a recipe • Identifying the nutritional differences between different products and recipes • Identifying and describing healthy benefits of food groups	• Writing a recipe, explaining the key steps, method and ingredients • Including facts and drawings from research undertaken • Following a recipe, including using the correct quantities of each ingredient • Adapting a recipe based on research • Working to a given timescale • Working safely and hygienically with independence Evaluating a recipe, considering: taste, smell, texture and origin of the food group • Taste testing and scoring final products • Suggesting and writing up points of improvements in productions • Evaluating health and safety in production to minimise cross contamination
Textiles Design Make Evaluation	• Using a template to create a design • Cutting fabric neatly with scissors • Using joining methods	• Designing a textile product using their own template • Selecting and cutting fabrics for sewing	• Designing and making a template from an existing product and applying individual design criteria • Following design criteria	• Writing design criteria for a product, articulating decisions made • Designing personalised product	• Designing a product considering the main component shapes required and creating an appropriate template	• Designing a product in accordance to specification linked to set of design criteria to fit a specific theme

	connect fabric pieces • Sequencing steps for construction • Reflecting on a finished product, explaining likes and dislikes	• Decorating fabric using fabric glue or running stitch • 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	to create a product • Selecting and cutting fabrics with ease using fabric scissors • Sewing cross stitch to join fabric • Decorating fabric using appliqué • Completing design ideas with by sewing the edges • Evaluating an end product and thinking of other ways in which to create similar items	• 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 • 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	• Considering proportions of individual components • Measuring, marking and cutting fabric accurately and independently • Creating strong and secure blanket stitches when joining fabric • Using applique to attach pieces of fabric decoration • Testing and evaluating an end product and giving point for further improvements	• Annotating designs • Using template 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 product attaching objects using thread and adding a secure fastening • Evaluating work continually as it is created