



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mechanisms	Pupils will know- Common uses of sliders Different methods to create card sliders How sliders can create simple mechanisms		Pupils will know- Types of levers and linkages Key terminology relating to levers and linkages How levers and linkages can change the direction of movement	Pupils will know- Types of hinges and the related terminology Common uses for hinges	Pupils will know- Types of gears and terminology relating to gears Common uses of pulleys and gears How pulleys and gears can change the direction of movement	
	Pupils will be able to- Design and make a slider product Evaluate the success of their outcomes and recommend improvements		Pupils will be able to- Design and make simplistic lever and linkage products Evaluate the success of their outcomes and recommend improvements	Pupils will be able to- Make a variety of model hinges Make and evaluate hinged products using modelling materials	Pupils will be able to- Design and make products that use pulleys and gears to lift loads Evaluate the success of their outcomes and recommend improvements	
Structures	Pupils will know- A freestanding structure is a structure that stands on its own foundation or base without attachment to anything else	Pupils will know- Paper becomes stronger when it is folded A load is the amount of weight a structure must carry	Pupils will know- Bridges are structures that allow people and vehicles to cross over an open space Towers, piers and arches provide strength to a bridge			Pupils will know- Structures can be supported with guy lines and flying buttresses The shorter the piece of spaghetti, the stronger it will be
	Pupils will be able to- Build structures that are freestanding using a range of different materials	Pupils will be able to- Fold paper to increase strength and stability Test and record how much weight paper can hold	Pupils will be able to- Design and build a beam bridge that can hold the weight of 100 pennies Identify and name parts of a bridge			Pupils will be able to- Construct a flying buttress to support a tower Use appropriate lengths of spaghetti to increase strength and stability
Food and Nutrition	Pupils will know- Why colourful food can be healthier How different foods can affect their senses	Pupils will know- Why vegetables are so important to our health What processed foods are	Pupils will know- What is meant by the term balanced Why fresh foods are better	Pupils will know- Processed foods have many added ingredients	Pupils will know- Some foods and key ingredients from other cultures How other cultures' food can be nutritious	Pupils will know- What street foods are How snacks can be good foods to eat
	Pupils will be able to- Peel, chop and grate a selection of vegetables. Modify food to suit their food senses	Pupils will be able to- Prepare a range of salad vegetables Shape and season a bread snack	Pupils will be able to- Make a fruit and yoghurt dessert Make homemade chips Flavour foods to increase their sensory qualities	Pupils will be able to- Make, roll and shape bread dough Make a soup	Pupils will be able to- Make, roll and cook a flatbread Prepare a range of vegetables Present foods to a high standard	Pupils will be able to- Make a burrito Make and roll bread dough Make a savoury pastry
Understanding materials	Pupils will know- Building materials have different properties which enable them to be used for different purposes					

	Pupils will be able to- Identify, sort and select materials that can be used in construction. Combine materials					
Textiles		Pupils will know- How to cut out shapes which have been created by using a template How to use a range of basic sewing skills		Pupils will know- Fastenings have different functions A shank provides a small amount of space between the button and fabric		Pupils will know- Plastic waste can be recycled and repurposed into practical, useful items
		Pupils will be able to- Use a template to transfer a pattern Cut out and join fabric shapes using a template		Pupils will be able to- Select appropriate fastenings and attach them to fabric Make a shank for a button		Pupils will be able to- Make a crochet hook out of a chopstick Use plastic bags and snack packets to create practical items
Systems and electrical systems			Pupils will know- Different types of energy Why designers need to carefully consider energy sources	Pupils will know- A switch is an interruption in a circuit Switches are widely used in a range of products	Pupils will know- Technology can be used to program and control a product	Pupils will know- More than one switch can be used to change the functionality of a product
			Pupils will be able to- Identify how things are powered Suggest appropriate energy sources for design problems	Pupils will be able to- Incorporate different types of switches into circuits to perform a function	Pupils will be able to- Combine elements of their design knowledge to fulfil a brief	Pupils will be able to- Use switches to adapt a product in response to a design brief