	Autumn 2		Spring 2		Summer 2	
KS1-Year A	**STEM Lesson** Can you make a trap to catch the gingerbread man?	**Unit: Structures- stable structure** 1. Exploring stability 2. Building stable towers 3. Stabilizing structures with weight 4. Designing a stable pencil pot 5. Making a stable pencil pot	**STEM Lesson** Zipline challenge- decorate a tube to travel down a zipline. Can you create a basket to travel down the zipline?	**Unit: Textiles- simple stitches** 1. What is fabric? 2. Making stitches 3. Designing bunting 4. Stitching a design 5. Finishing and evaluating bunting	**STEM Lesson** Build a tall tower using buttons and playdough	**Unit:Smoothies** 1. Fruits 2. Growing 3. Cutting and juicing 4. Testing ingredients 5. Making smoothies 6. Evaluating
KS1- Year B	**STEM Lesson** Building a bridge for teddies. *challenge- which team can hold the most teddies?	**Unit: Structures- A chair for a bear** 1. All about chairs 2. How does the shape of something affect its strength 3. How does the thickness of something affect its strength 4. Making a chair for a bear 5. Evaluating, improving and finishing a chair for a bear	**STEM Lesson** Design and build a boat to keep a small toy dry	**Unit: Fairground wheel** 1. Designing a fairground wheel 2. Planning the build 3. Building the frame and wheels 4. Surveying design opinions 5. Adding pods and decoration	**STEM Lesson-** Build a wind powered car	**Unit: Mechanisms-Levers** 1. Seesaws 2. Levers in action 3. Scissors 4. Two levers together 5. Everyday levers

LKS2- Year A	**STEM Lesson-** Build a balloon powered car	**Unit: Digital wearable technology** 1. Evaluating wearable technology 2. Light up wearables 3. Programming wearable technology 4. Product concept 5. Point of sale displays 6. Focus groups	**STEM Lesson** Construct a free standing bridge out of spaghetti, strong enough to support a 250g bag of sugar.	**Unit: Structures- product packaging** 1. Exploring product packaging 2. Using nets 3. Reviewing designs 4. Making 3D packaging 5. Decorating and evaluating	**STEM Lesson-**Try to move jelly cubes from one place to another using chopsticks.	**Unit: Cooking and nutrition- Eating seasonally** 1. Food around the world 2. Seasonal food 3. Cutting and peeling 4. Tasting seasonal ingredients 5. Making a mock up 6. Evaluating seasonal tarts
LKS2- Year B	**STEM Lesson** Design a device to protect an egg from a fall.	**Unit: Helmets** 1. Exploring shell structures 2. Making papier mache shells 3. Strengthening techniques 4. Strengthening shell structures 5. Evaluating shell structures	**STEM Lesson** Build a tower using only two items. Who can build the tallest tower?	**Unit: Mechanical systems- cars** 1. Prototype 1- inclined plane 2. Prototype 2- slingshot car 3. Prototype 3- wind up car 4. Mechanical toy car kit: designing 5. Mechanical toy car kit: evaluating	**STEM Lesson-** Build a lolly stick catapult	**Unit: Electrical systems- torches** 1. Electrical products 2. Evaluating torches 3. Torch design 4. Torch assembly
UKS2- Year A	**STEM Lesson** Design a maze for the Bee Bots to travel around- a game	**Unit: Electrical systems- wobble bots** 1. Circuits and motors 2. Meet the kapow	**STEM Lesson** Design an umbrella to keep an object dry	**Unit: Mechanical systems- Gears and pulleys** 1. Gears 2. Improving	**STEM Lesson** Design a parachute for a miniature figure	**Unit: Developing a recipe** 1. From farm to fork 2. Different

	for others to enjoy	doodlers 3. Exploring wobble bots 4. Designing a wobble bot for a purpose 5. Making and evaluating a wobble bot		your gear design 3. Pulleys 4. Eco gadget bike project: market research 5. Eco gadget bike project: design		choices 3. Nutritional value 4. Preparing ingredients 5. Designing labels 6. Making bolegnaise
UKS2- Year B	**<u>STEM Lesson</u>** Design a marble run/maze for others to enjoy- *challenge- include a drop no taller than 5cm	**<u>Unit:</u> Textiles- Bags** 1. Deconstructing bag 2. Pattern pieces 3. Designing a bag 4. Making a bag prototype 5. Adding features	**<u>STEM Lesson</u>** Build a tower using only spaghetti and marshmallows- (focus on the strongest structure). The tower must stand for at least 20 seconds, which team's tower can stand the longest?	**<u>Unit:</u> Playground pioneers** 1. Playground design challenge 2. Designing structures with tinkercad 3. Making a prototype of a structure 4. Finishing a prototype of a structure 5. Prototype evaluation	**<u>STEM Lesson</u>** Design a board game for two-four players	**<u>Unit:</u> Digital world- Navigating the world** **1. Navigating the world** **2. Programming a navigation tool** **3. Product concept** **4. 3D CAD models** **5. Product pitch**