

	LKS2	UKS2	KS2 Endpoints
Knowledge – Materials / Structures	<ul style="list-style-type: none"> • There are a range of techniques I can use to join, cut and finish paper and card products • My 2d and 3d shapes and their properties, and that they are made up of nets. • Techniques to construct strong, stiff shell structures • The order of the main stages of making • The appropriate tools needed to do certain skills. • Food packages are designed to keep food stuffs safe and fresh. • There are a range of existing Easter Egg packages that have similar design structures to the one I am going to create. • Plastic, metal and clay will be suitable materials for the structure and bucket of my shaduf as they are waterproof and strong. 	<ul style="list-style-type: none"> • A frame structure consists of different parts combined in such a way to make the structure strong. • Structures must be strong and stable. • Glue and 2d card triangles are a permanent way to join two pieces of wood • Straws and square section wood can be used to make a small scale frame structure • Triangulation creates rigidity • My structure can be modified (changed) as it is being made. 	<ul style="list-style-type: none"> • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
Knowledge – presentation,	<ul style="list-style-type: none"> • CAD is Computer Aided Design and Foldify is an app that can be used to create designs onto my net. • An exploded diagram is a drawing showing different components in a design and how they fit together 	<ul style="list-style-type: none"> • A prototype is a model of a product to test if it works or not. 	<ul style="list-style-type: none"> • Apply their understanding of computing to program, monitor and control their products.
Knowledge – Electrical Systems	<ul style="list-style-type: none"> • A simple series electrical circuit must have a cell, wires and bulb/switch/buzzer. • There are faults in circuits when part of the circuit is broken. • There are a variety of materials that will allow light to travel through them. 	<ul style="list-style-type: none"> • A series circuit can contain a buzzer or light. • Research of electrical existing products is important in my design specification. • There are constraints around time, resources and cost that may influence my final product. • Technical vocabulary relevant to the project. • An input device is used to control an electrical circuit (switches or sensors) • An output device produces an outcome e.g. bulbs/buzzers • If the door of my money box opens, the circuit becomes complete and a buzzer sounds (alarm) 	<ul style="list-style-type: none"> • Understand and use electrical systems in their products (for example, series circuits).

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Knowledge – Mechanical Systems</p>	<ul style="list-style-type: none"> • A Shaduf is a long pole with a bucket attached to the end and a heavy weight acting as a counterweight on the other end, which people could use to raise and move water from rivers or lakes onto land. • A fulcrum is a pivot mechanism used in a Shaduf and a counterweight provides balance when the 'bucket' is full. • Choosing and using the correct counterweight and putting it in the right place will enable my shaduf to work. 	<ul style="list-style-type: none"> • Axles, axle holders and wheels can be fixed or free moving • Structures need to be strong • Mechanical systems have an input, process and an output. • Cams refers to a mechanism that changes one sort of movement to another • Cams can be used to change the direction of a movement • An input is normally a rotary motion • An output is the result of input, and the movement of cam and follower. • A lever is a piece of rigid material that moves to and fro around a pivot point creating reciprocating motion. • Designs can be changed to improve the quality of the product 	<ul style="list-style-type: none"> • Understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages).
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Knowledge – Cooking and Nutrition</p>	<ul style="list-style-type: none"> • It is important to prepare ingredients safely and hygienically so people are kept safe • A healthy diet consists of fruit/vegetables, protein, carbohydrates and fats. • Some ingredients taste well with others and some don't. • Some people may have allergies to certain foods including nuts and dairy and these need to be taken into consideration • Foods can be investigated and explored thoroughly using taste tests. • Greek food examples are: pitta bread, feta cheese, taramasalata, olives and olive oil, and salad ingredients. 	<ul style="list-style-type: none"> • Food hygiene is essential. • It is important to eat a nutritious, healthy and varied diet. • There are different substances in food / drink needed for health. • Seasonality affects the food available. • Empanadas are a type of baked turnover (similar to a pasty) consisting of pastry and filling, common in Latin America. • Alfajores are Brazilian Caramel sandwich cookies. • Brazilian cheese bread is a savoury snack. • Recipes can be adapted to suit particular dietary requirements. • A food allergy is an abnormal reaction by the immune system following consumption of a certain food and can be life threatening. • A food intolerance is difficulty digesting certain foods and having an unpleasant physical reaction to them. 	<ul style="list-style-type: none"> • Understand and apply the principles of a healthy and varied diet. • Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. • Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Knowledge – key inventors and influences	<ul style="list-style-type: none">• Thomas Edison famously invented the light bulb.• The Ancient Greeks' diet was healthy and has influenced the diet of the Western world.• Robert Gair invented the foldable cardboard box• The Ancient Egyptians invented the Shaduf as an irrigation system, and it has shaped the world today.	<ul style="list-style-type: none">• The electrical buzzer was invented in 1831 by Joseph Henry• Key chefs have influenced eating habits to promote varied and healthy diets.• Francis Mallmann is an Argentine celebrity chef.• Mark Hadfield is a local chef who uses locally sourced food.• In 1886, Karl Benz invented the first motorised vehicle. It was a two-seater, three-wheeled motor car, with three-spoke wheels.	<ul style="list-style-type: none">• Understand how key events and individuals in design and technology have helped shape the world.
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