Subject: Design and Technology (Using Kapow Primary)

<table>
<tr><th colspan="3">National Curriculum links</th></tr>
<tr><td colspan="3">Aims
The national curriculum for design and technology aims to ensure that all pupils:
• develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
• build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
• critique, evaluate and test their ideas and products and the work of others
• understand and apply the principles of nutrition and learn how to cook.</td></tr>
<tr><th>Early Years Foundation Stage (EYFS)</th><th>Key Stage One (KS1)</th><th>Key Stage Two (KS2)</th></tr>
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<td>• Safely use and explore a variety of materials tools and techniques, experimenting with colour, design, texture, form and function.
• Share their creations, explaining the process they have used.
• Make use of props and materials when role playing characters in narratives and stories</td>
<td>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts.
When designing and making, pupils should be taught to:
<u>Design</u>
• design purposeful, functional, appealing products for themselves and other users based on design criteria
• generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology
<u>Make</u>
• select from and use a range of tools and equipment to perform practical</td>
<td>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts.
When designing and making, pupils should be taught to:
<u>Design</u>
• use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</td>
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	tasks [for example, cutting, shaping, joining and finishing] • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <u>Evaluate</u> • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria <u>Technical knowledge</u> • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. <u>Cooking and nutrition</u> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from.	<u>Make</u> • select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately • select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities <u>Evaluate</u> • investigate and analyse a range of existing products • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • understand how key events and individuals in design and technology have helped shape the world <u>Technical knowledge</u> • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products • understand and use electrical systems in their products • apply their understanding of computing to program, monitor and control their products. <u>Cooking and nutrition</u> • 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.

Year group: EYFS

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic	All About Me	Being a Hero	Me and My World (Paper mache planets)	Super creatures (Making sandwiches)	Once Upon a time (Puppets)	All at Sea (Designing and making boats)
Skills ELG: *Safely use and explore a variety of materials tools and techniques, experimenting with colour, design, texture, form and function. *Share their creations, explaining the process they have used. *Make use of props and materials when role playing characters in narratives and			**Nursery** *To explore making shapes with playdough *To cut materials making snips with scissors *To build models using the junk modelling **Reception** *To explore making recognisable shape/ objects using malleable materials for a purpose *To explore ways of joining materials together using glue, staples etc *To cut different materials using scissors *To use different construction materials	**Nursery** *To explore making shapes with playdough *To cut materials making snips with scissors **Reception** *To explore different techniques for joining materials (Glue Stick, PVA, Masking Tape, Tape) *To use different construction materials *To share creations and talk about the process *To know how to work safely and	**Nursery** *To create designs and self-select materials to create **Reception** *To plan what they are going to make *To manipulate materials	**Nursery** *To build models using the junk modelling *To explore colours and colour mixing *To create designs and self-select materials to create **Reception** *To know some similarities and differences between materials *To share creations, talk about process and evaluate their work

stories				hygienically *To use some cooking techniques (speading, cutting, sandwiches, fruit kebabs)		
Key knowledge			Know that different materials can be used in different ways to create Know that materials can be joined in different ways	Know that clean hands and equipment are needed for cooking Know some foods that are healthy	Know that materials can be joined in different ways Know that items can be added to textiles	Know that different materials can be used in different ways to create Know that materials can be joined in different ways
Key Vocabulary			Shapes Snips Joins Materials Construction models	Clean hands Equipment Cooking Spreading Cutting Hygiene	Join Materials Puppets Different Select create	Models Same Different Create Evaluate
Assessment of progress	Ongoing throughout the year using Tapestry. End of year EYFS assessment.					

Subject: Design and Technology

Year group: Year 1

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic		Textiles – Puppets		Food - fruit smoothie making		Mechanisms – wheels and axles - make a car *
Skills		Using a template to create a design for a puppet. Cutting fabric neatly with scissors. Using joining methods to decorate a puppet.		Designing smoothie carton packaging by-hand or on ICT software. Chopping fruit and vegetables safely to make a smoothie.		Designing a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move. Creating clearly labelled drawings that illustrate movement.

		Sequencing steps for construction. Reflecting on a finished product, explaining likes and dislikes.		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.		Adapting mechanisms. Testing mechanisms, identifying what stops wheels from turning, knowing that a wheel needs an axle in order to move.
Key knowledge		To know that 'joining technique' means connecting two pieces of material together. To know that there are various temporary methods of joining fabric by using staples, glue or pins. To understand that different techniques for joining materials can be used for different purposes. To understand that a template (or fabric pattern) is used to cut out the same shape multiple times. To know that drawing a design idea is useful to see how an idea will look.		To understand the difference between fruits and vegetables. To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber). To know that a blender is a machine which mixes ingredients together into a smooth liquid. To know that a fruit has seeds and a vegetable does not. To know that fruits grow on trees or vines. To know that vegetables can grow either above or below ground. To know that vegetables can come from different parts of the plant.		To know that wheels need to be round to rotate and move. To understand that for a wheel to move it must be attached to a rotating axle. To know that an axle moves within an axle holder which is fixed to the vehicle or toy. To know that the frame of a vehicle (chassis) needs to be balanced. To know some real-life items that use wheels.
Key vocabulary		decorate		Blender		Axle

		design fabric glue model hand puppet safety pin staple stencil template		Carton Fruit Healthy Ingredients Peel Peeler Recipe Slice Smoothie Stencil Template Vegetable		Axle holder Chassis Design Evaluation Fix Mechanic Mechanism Model Test Wheel
Assessment of progress		Quiz – puppets (start and end of unit)		Quiz – fruit and vegetables (start and end of unit)		Quiz – wheels and axles (start and end of unit) End of year teacher assessment

Subject: Design and Technology

Year group: Year 2

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic	Textiles - Make a pouch for an expedition	Structures – Santa/Elf chair – link to Christmas		Food - A Balanced diet		Mechanisms - Make a Fairground Wheel
Skills	Designing a pouch. 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.	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.		Designing a healthy wrap based on a food combination which works well together. Slicing food safely using the bridge or claw grip. Constructing a wrap that meets a design brief.		Selecting a suitable linkage system to produce the desired motions. Designing a wheel. Selecting appropriate materials based on their properties. Selecting materials according to their characteristics.

	Neatly pinning and cutting fabric using a template. 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.	Creating joints and structures from paper/card and tape. Building a strong and stiff structure by folding paper. Exploring the features of structures. Comparing the stability of different shapes. Testing the strength of their own structures. Identifying the weakest part of a structure. Evaluating the strength, stiffness and stability of their own structure.		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.		Following a design brief. Evaluating different designs. Testing and adapting a design.
Key knowledge	To know that sewing is a method of joining fabric. To know that different stitches can be used when sewing. To understand the importance of tying a knot after sewing the final stitch. To know that a thimble can be used to protect my fingers when sewing.	To know that shapes and structures with wide, flat bases or legs are the most stable. To understand that the shape of a structure affects its strength. To know that materials can be manipulated to improve strength and stiffness. To know that a structure is something which has been formed or made from parts. To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move. To know that a 'strong' structure is one which does not break easily.		To know that 'diet' means the food and drink that a person or animal usually eats. To understand what makes a balanced diet. To know where to find the nutritional information on packaging. To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar. To understand that I should eat a range of different foods from each food group, and roughly how much of each food group. To know that nutrients are substances in		To know that different materials have different properties and are therefore suitable for different uses. To know the features of a Ferris wheel include the wheel, frame, pods, a base, an axle and an axle holder. To know that it is important to test my design as I go along so that I can solve any problems that may occur.

		To know that a 'stiff' structure or material is one which does not bend easily.		food that all living things need to make energy, grow and develop. To know that 'ingredients' means the items in a mixture or recipe. To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy. To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'.		
Key vocabulary	Accurate Fabric Knot Pouch Running-stitch Sew Shape Stencil Template Thimble	Function Man-made Mould Natural Stable Stiff Strong Structure Test Weak		Alternative Diet Balanced diet Evaluation Expensive Healthy Ingredients Nutrients Packaging Refrigerator Sugar Substitute		Axle Decorate Evaluation Ferris wheel Mechanism Stable Strong Test Waterproof Weak
Assessment of progress	Quiz – pouches (start and end of unit)	Quiz – chairs (start and end of unit)		Quiz – balanced diet (start and end of unit)		Quiz – Fairground wheel (start and end of unit) End of year teacher assessment

Subject: Design and Technology

Year group: Year 3

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic		Make a pneumatic toy		Structures – constructing a Fort/Villa		Eating seasonally
Skills		Designing a toy that 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. 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 and weaving. Using the views of others to improve designs. Testing and		Designing a fort/villa with key features to appeal to a specific person/purpose. Drawing and labelling a fort/villa design using 2D shapes. Designing and/or decorating a fort/villa tower on CAD software. Constructing a range of 3D geometric shapes using nets. Creating special features for individual designs. Making facades from a range of recycled materials. 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.		Creating a healthy and nutritious recipe for a savoury tart 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 seasonal tart.

		modifying the outcome, suggesting improvements. Understanding the purpose of exploded-diagrams through the eyes of a designer and their client.				
Key knowledge		To understand how pneumatic systems work. To understand that pneumatic systems can be used as part of a mechanism. To know that pneumatic systems operate by drawing in, releasing and compressing air.		To understand that wide and flat based objects are more stable. To understand the importance of strength and stiffness in structures. To know key features of a fort/villa and their purpose. To know that a façade is the front of a structure. To understand that a fort needed to be strong and stable to withstand enemy attack.		To know that not all fruits and vegetables can be grown in the UK. To know that climate affects food growth. To know that vegetables and fruit grow in certain seasons. To know that cooking instructions are known as a 'recipe'. To know that imported food is food that has been brought into the country.
Key vocabulary		Exploded-diagram Function Input Lever Linkage Mechanism Motion Net Output Pivot Pneumatic system Thumbnail sketch		2D shapes 3D shapes Design criteria Evaluate Facade Feature Net Recyclable Scoring Stable Strong Structure Tab Weak		Climate Dry climate Exported Imported Mediterranean climate Nationality Nutrients Polar climate Recipe Seasonal food Seasons Temperate climate Tropical climate
Assessment of progress		Quiz – pneumatic toy (start and end of unit)		Quiz – constructing a		Quiz – Eating seasonally (start and end of unit)

				fort/villa (start and end of unit)		End of year teacher assessment

Subject: Design and Technology

Year group: Year 4

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic	Textiles – Egyptian collars Fastenings	Electrical Systems – Torches		Food – Adapting a recipe	Mechanical systems – making sling shot car	
Skills	Designing and making a template for an Eygptian collar and applying individual design criteria. Following their design criteria to create an Egyptian collar. Selecting and cutting fabrics with ease using fabric scissors. Threading needles with greater independence. Tying knots with greater independence. Sewing cross stitch to decorate or join fabric. Decorating fabric using appliqué, beads (or other embellishments), ribbon and pinking scissors. Incorporating a fastening to a design.	Design a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. Making a torch 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 success of a final product		Designing a biscuit 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	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. Measuring, marking, cutting and assembling with increasing accuracy. Making a model based on a chosen design. Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance.	

	Evaluating an end product.					
Key knowledge	To know that appliqué is a way of mending or decorating a textile by applying smaller pieces of fabric. To understand that a product's function relies on material choices. To identify and explain some materials and explain their aesthetic and/or functional properties. To know that a fastening is something that holds two pieces of material together. To know that different fastening types are useful for different purposes.	To understand that electrical conductors are materials which electricity can pass through. To understand that electrical insulators are materials which electricity cannot pass through. To know that a battery contains stored electricity that can be used to power products. To know that an electrical circuit must be complete for electricity to flow. To know that a switch can be used to complete and break an electrical circuit.		To know that the amount of an ingredient in a recipe is known as the 'quantity'. To know that it is important to use oven gloves when removing hot food from an oven. To know the following cooking techniques: sieving, creaming, rubbing method, cooling. To understand the importance of budgeting while planning ingredients for biscuits.	To understand that all moving things have kinetic energy. To understand that kinetic energy is the energy that something (object/person) has by being in motion. To know that air resistance is the level of drag on an object as it is forced through the air. To understand that the shape of a moving object will affect how it moves due to air resistance.	
Key vocabulary	appliqué cross-stitch fabric running stitch patch thread embellish template water-resistant biodegrade criteria fastening fix	battery bulb buzzer conductor circuit circuit diagram electricity insulator series circuit switch component design design criteria diagram evaluation LED model shape target audience input		design criteria research texture innovative aesthetic measure cross-contamination diet processed packaging	chassis energy kinetic mechanism air resistance design structure graphics research model template	

		recyclable theme aesthetics assemble equipment ingredients packaging properties				
Assessment of progress	Quiz – Egyptian collars + Fastenings (start and end of unit)	Quiz – Torches (start and end of unit)			Quiz – Sling shot car (start and end of unit)	End of year teacher assessment

Subject: Design and Technology

Year group: Year 5

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic	Lion's Roar project	Food – What could be healthier?		Textiles – Stuffed (ocean themed) toy		Structures – Bridges
Skills	**Planning:** • Generate ideas through brainstorming and identify a purpose for their product • Draw up a specification for their design • Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail **Making:**	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 recipes safely. Using equipment safely, including knives, hot pans and hobs.		Designing a stuffed toy considering the main component shapes required and creating an appropriate template. Considering the proportions of individual components. Creating a 3D stuffed toy from a 2D design. Measuring, marking and cutting fabric accurately and independently. Creating strong and secure blanket stitches when joining fabric.		Designing a stable structure that is able to support weight. Creating a frame structure with focus on triangulation. Making a range of different shaped beam bridges. Using triangles to create truss bridges that span a given distance and support a load. Building a wooden bridge structure. Independently measuring and marking wood accurately.

	•Select appropriate materials, tools and techniques • Measure and mark out accurately • Use skills in using different tools and equipment safely and accurately **Evaluating:** • Evaluate a product against the original design specification • Evaluate it personally and seek evaluation from others	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.		Threading needles independently. Using appliqué to attach pieces of fabric decoration. Sewing blanket stitch to join fabric. Applying blanket stitch so the spaces between the stitches are even and regular. Testing and evaluating an end product and giving points for further improvements.		Selecting appropriate tools and equipment for particular tasks. Using the correct techniques to saw safely. Identifying where a structure needs reinforcement and using card corners for support. Explaining why selecting appropriate materials is an important part of the design process. Understanding basic wood functional properties. 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.
Key knowledge	To understand that a 'brief' gives an outline of what the end product needs to be/be able to do To understand that designs often need to be adapted To understand that improvements can be made to make the product better and there are different ways of doing this (testing, trial and error, etc)	To understand where meat comes from – e.g. learning that beef is from cattle and how beef is reared and processed, including key welfare issues. To know that I can adapt a recipe to make it healthier by substituting ingredients. To know that I can use a nutritional calculator to see how healthy a food option is.		To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric. To understand that it is easier to finish simpler designs to a high standard. To know that soft toys are often made by creating appendages separately and then attaching them to the main body.		To understand some different ways to reinforce structures. To understand how triangles can be used to reinforce bridges. To know that properties are words that describe the form and function of materials. To understand why material selection is important based on their properties.

		To understand that 'cross-contamination' means that bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects.		To know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely.		To understand the material (functional and aesthetic) properties of wood.
Key vocabulary	Design brief Product Plan Construct Improve prototype	beef reared processed ethical diet ingredients supermarket farm balanced		accurate annotate appendage blanket-stitch design criteria detail evaluation fabric sew shape stuffed toy stuffing template		beam bridge arch bridge truss bridge strength technique corrugation lamination stiffness rigid factors stability visual appeal aesthetics joints mark out hardwood softwood wood file/rasp sandpaper/glasspaper bench hook/vice tenon saw/coping saw assemble material properties reinforce wood sourcing evaluate quality of finish accuracy
Assessment of progress	Quiz – create own quiz linked to key vocab and skills	Quiz – what could be healthier (start and end of unit)		Quiz – stuffed toy (start and end of unit)		Quiz – bridges (start and end of unit)

						End of year teacher assessment

Subject: Design and Technology

Year group: Year 6

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic		Food: Come Dine with Me: create a 3-course modern Greek meal		Electrical systems: Steady hand game		Digital World: Navigating the world – design a digital tool (additional lessons for CAD software may be needed for confidence – see previous Digital units)
Skills		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.		Designing a steady hand game, identifying and naming the components required. Drawing a design from three different perspectives. Generating ideas through sketching and discussion. Modelling ideas through prototypes. Understanding the purpose of products (toys), including what is meant by 'fit for purpose' and 'form over function'. Constructing a stable base for a game. Accurately cutting, folding and		Writing a design brief from information submitted by a client. Developing design criteria to fulfil the client's request. Developing a product idea through annotated sketches. Placing and manoeuvring 3D objects, using CAD. Changing the properties of, or combine one or more 3D objects, using CAD. Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and

		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.		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 their own and others' finished games, identifying what went well and making suggestions for improvement. Gathering images and information about existing children's toys. Analysing a selection of existing children's toys.		bamboo). Explaining material choices and why they were chosen as part of a product concept. Programming an N,E, S,W cardinal compass. Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. Developing an awareness of sustainable design. Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch. Demonstrating a functional program as part of a product concept.
Key knowledge		To know that 'flavour' is how a food or drink tastes. To know that many countries have 'national dishes' which are recipes associated with that country. To know that 'processed food' means food that has been put through multiple changes in a factory. To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides.		To know that 'form' means the shape and appearance of an object. To know the difference between 'form' and 'function'. To understand that 'fit for purpose' means that a product works how it should and is easy to use. To know that 'form over purpose' means that a product looks good but does not work very well. To know the importance of 'form follows function' when designing: the product must be designed		To know that accelerometers can detect movement. To understand that sensors can be useful in products as they mean the product can function without human input. To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request. To know that 'multifunctional' means an object or product has more than one function. To know that magnetometers are

		To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork).		primarily with the function in mind. To understand the diagram perspectives 'top view', 'side view' and 'back'.		devices that measure the Earth's magnetic field to determine which direction you are facing.
Key vocabulary		equipment flavours ingredients method research recipe bridge method cookbook cross-contamination farm to fork preparation storyboard		assemble battery battery pack benefit bulb bulb holder buzzer circuit circuit symbol component conductor copper design design criteria evaluation fine motor skills fit for purpose form function gross motor skills insulator LED user		smart smartphone equipment navigation cardinal compass application (apps) pedometer GPS tracker design brief design criteria client function program duplicate replica loop variable value if statement boolean corrode moudable lightweight sustainable design environmentally friendly biodegradable recyclable product lifecycle
Assessment of progress		Quiz – Come dine with me (start and end of unit)		Quiz – steady hand game(start and end of unit)		Quiz – Navigating the world (start and end of unit) End of year teacher assessment