DESIGN AND TECHNOLOGY Curriculum End points

#How does learning in EYFS link to Design and Technology learning in KS1?	
Children in EYFS will …	**Vocabulary** Create, design, join, make, evaluate Creation, model, Equipment, tools, method, evaluation Soft, hard, bumpy, rough, smooth, sticky, stretchy, Pinch, squeeze, stretch, flatten, roll,
During the year in Nursery: Use small world and construction to make creations with. Make simple models which they can talk about. Join materials and explore different textures. Develop their own ideas and will use different materials to express them. **During the year in Reception:** Find out how to use simple tools competently and appropriately. Explore different techniques for joining materials. Explore a range of materials Design and make using a range of materials Explore different techniques when using moldable materials such as clay or playdough. Use some cooking techniques. Use non-statutory measures for cooking. Design and make models with a purpose. Learn how to adapt their work where necessary. Have opportunities to talk about how they made their creation. Have opportunities to evaluate their work. **Books:** **Experiences** - Access to creative areas and junk modelling materials - Designing and making diwas out of clay - Designing and making fruit salads. - Wild Tribe weekly lessons Enhancements in continuous provision eg	**EYFS Knowledge** I know how to make a model out of different materials. I know how to join materials using different techniques. I know how to use simple tools competently and appropriately. I know how to use different techniques when using moldable materials. I know how to design and make models with a purpose. I know how to use some cooking techniques. I know how to measure for cooking using non-statutory measures. I know how to evaluate my work.

DESIGN AND TECHNOLOGY Curriculum End points

A Designer by the end of KS1…	
Will be able to	Will define and use in context the following **vocabulary** throughout their Design and Technology projects.
• 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 • select from and use a range of tools and equipment to perform practical 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. • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria. • 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.	Design criteria, materials, template plan, product, explain Cut, join, glue, sew, fix, tape, mix, stir Choose, explain, measure, centimetres, grams Evaluate, Improvement, reason Technical Knowledge/Food Nutrition Mechanism, rotate, lever, strong, stable, stiff running stitch, needle, thread Water, soap, clean, cut, chop, grate, peel, knife, blade, safely, ingredients, weigh, measure, recipe, hygiene, texture, taste
•	I know some healthy and unhealthy foods. I know how to measure for cooking using non-statutory measures. I know how to evaluate my work.

DESIGN AND TECHNOLOGY Curriculum End points

KS1 Cycle A Autumn Term 2				
Will study ..	**Substantive Knowledge** **I know..**	**Disciplinary Knowledge** **DESIGN/MAKE/EVALUATE process** **I can ..**	**Vocabulary**	**Experience**
Chop, slice and Make (Food)	I know… • I know that food comes from two main sources: animals and plants. • I know a healthy diet should include meat or fish, starchy foods, dairy foods, a small amount of fat and plenty of fruit and vegetables. • I know that ideas can be communicated in a variety of ways. • I know that different tools have characteristics that make them suitable for specific purposes. • I know some ingredients need to be prepared before they can be cooked or eaten. • I know that finished products can be compared with design criteria to see how closely they match and that improvements can then be planned.	I can… • I can identify the origin of some common foods. • I can describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal. • I can generate and communicate my ideas using different methods. • I can select the appropriate tool for a task and explain my choice. • I can prepare ingredients by peeling, grating, chopping and slicing. • I can explain how closely my finished products meets my design criteria and say what I could do better in the future.	Plants Animals Source Fruit Dairy Vegetables Fats Diet Ingredients Chop Peel Grate	

KS1 Cycle A Spring Term 2				
Will study..	**Substantive Knowledge** **I know..**	**Disciplinary Knowledge** **DESIGN/MAKE/EVALUATE process** **I can ..**	**Vocabulary**	**Experience**
Cut Stitch and Join (Textiles)	I know… • Everyday household products can be made from fabric and can name some examples. • Cath Kidson is a British designer, and she designs products with easily recognisable features.	I can… • Recognise features of Cath Kidson's designs e.g. floral and London Bus. • Use appropriate tools to cut with accuracy.	Design Guide Designer Joining Product Stitching Feature	

DESIGN AND TECHNOLOGY Curriculum End points

	• A pattern is used as a guide to making a product. • Stitching is a way of joining two pieces of materials. • Embellishment is a decorative detail or feature added to something to make it attractive. • A design criterion shows what needs to be included in a product design. • My product is successful if it meets the design criteria	• Choose an appropriate joining technique to join my pattern. • Use a running stitch to join two pieces of fabric. • Name different items that can be used for embellishment. • Create my own design for bag tag using some of my own ideas. • Follow my design to create my bag tag. • Evaluate my product using the bag tag evaluation sheet.	Sewing Pattern Embellishment Evaluation	

KS1 Cycle A Summer Term 2				
Will study..	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience
Push and Pull (mechanisms)	I know… • A machine makes work easier for people. • A machine is made from different parts that work together to make a task. • The part of a machine that moves is called a mechanism. • A sliding mechanism works in a straight line. • Some examples of an everyday sliding mechanism. • A lever mechanism is a bar that moves around a fixed point called a pivot. • Some examples of an everyday lever mechanism.	I can… • Recognise features of a machine. • Follow instructions to make a sliding mechanism. • Make a picture move with a sliding mechanism. • Follow instructions to make a lever mechanism. • Make a picture move with lever mechanism. • Make a plan to design my own greetings card with moving parts.	Push Lever Plan Pull Fixed Pivot Greetings card Mechanism Linkage Slide Movement	

DESIGN AND TECHNOLOGY Curriculum End points

	• That a design criteria shows what needs to be included in a product design. • I know that my product is successful if it meets the design criteria	• Use a lever or a slider in my card to make the picture move. • Evaluate my product against evaluation sheet.		

KS1 Cycle B Autumn Term 2				
Will study…	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience
Remarkable Recipes (Food)	I know… • I know that food comes from two main sources: animals and plants. • I know a healthy diet should include meat or fish, starchy foods, dairy foods, a small amount of fat and plenty of fruit and vegetables. • I know that ideas can be communicated in a variety of ways. • I know that different tools have characteristics that make them suitable for specific purposes. • I know some ingredients need to be prepared before they can be cooked or eaten.	I can… • I can identify the origin of some common foods. • I can describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal. • I can generate and communicate my ideas using different methods. • I can select the appropriate tool for a task and explain my choice. • I can prepare ingredients by peeling, grating, chopping and slicing.		

DESIGN AND TECHNOLOGY Curriculum End points

	• I know that finished products can be compared with design criteria to see how closely they match and that improvements can then be planned.	• I can explain how closely my finished products meets my design criteria and say what I could do better in the future.		

KS1 Cycle B Spring Term 2				
Will study…	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience
Taxi (Mechanisms)	I know… • that ideas can be communicated in a variety of ways. • different tools have characteristics that make them suitable for specific purposes. • that finished products can be compared with design criteria to see how closely they match and that improvements can then be planned. • how safety and hygiene rules include washing hands before handling food, cleaning surfaces, tying long hair back, storing food appropriately and wiping up spills. • properties of components and materials determine how they can and cannot be used. • an axle is a rod or spindle that passes through the centre of a wheel to connect two wheels.	I can… • How to generate and communicate my ideas through a range of different methods. • How to select the appropriate tool for a task and explain my choice • How to explain how closely my finished products meet my design criteria and say what they could do better in the future. • How to work safely and hygienically in construction and cooking activities. • How to plan which materials will be needed for a task and explain why. • How to use wheels and axles to make a simple moving model.	Strong Weak Material Attach Properties Purpose Chassis Axle Wheel mechanism	

KS1 Cycle B Summer Term 2				
Will study…	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience

DESIGN AND TECHNOLOGY Curriculum End points

Beach Hut (Structures)	I know… • What a beach hut looks like and why someone uses them. • What a beach hut is made from. • Some techniques for strengthening a structure made from cardboard. • 'Scoring' a piece of cardboard helps to fold it. • Different techniques to join two pieces of cardboard. • A design criteria shows what needs to be included in a product design. • My product is successful if it meets the design criteria	I can… • Recognise features of a beach hut – size, design, shape. • Use appropriate tools and techniques to score, strengthen and join cardboard. • Design a beach hut made from cardboard with given features – roof, base, door, decoration. • Make a beach hut from cardboard following my design. • Evaluate my product using design criteria.	Beach Hut Material Purpose Structure Techniques Score Joining Strengthen Design Design features Evaluation	

DESIGN AND TECHNOLOGY Curriculum End points

A Designer by the end of LKS2	
Will be able to	Will define and use in context the following **vocabulary** throughout their Design and Technology projects.
Will be able to… • 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. • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at 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. • 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. • 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. • 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 programme, monitor and control their products.	evaluating, design brief design criteria, innovative, prototype, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, planning, annotated sketch, sensory evaluations. name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet

LKS2 Cycle A Autumn Term 2				
Will study..	**Substantive Knowledge** **I know..**	**Disciplinary Knowledge** **DESIGN/MAKE/EVALUATE process** **I can ..**	**Vocabulary**	**Experience**
Fresh Food, Good Food (Food)	I know.. • I know that particular areas of the world have conditions suited to growing certain crops. • I know seasonality is the time of year when the harvest or flavour of a type of food is at its best.	I can… • I can identify and name foods that are produced in different places in the UK and beyond.	Sweet savoury spicy baking boiling frying roasting	

DESIGN AND TECHNOLOGY Curriculum End points

	Buying seasonal food is beneficial for many reasons. • I know that a balanced diet gives your body all the nutrients it needs to function correctly. This means eating a wide variety of foods in the correct proportions. • I know sweet dishes are usually desserts, such as cakes, fruit pies and trifles. Savoury dishes usually have a salty or spicy flavour rather than a sweet one. • I know that the design of a product is sometimes influenced by culture or society. • I know there are many rules for using tools and equipment safely and these may vary depending on the tools being used. • I know that testing a product against the design criteria will highlight anything that needs improvement or redesign. • I know cooking techniques include baking, boiling, frying, grilling and roasting.	• I can describe what seasonality means and explain some of the reasons why it is beneficial. • I can design a healthy snack or packed lunch and explain why it is healthy. • I can identify and use a range of cooking techniques to prepare a simple meal or snack. • I can evaluate meals and consider if they contribute towards a balanced diet. • I can use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish. • I can explain how the design of a product has been influenced by the culture or society in which it was designed or made. • I can name and select appropriate tools for a task and use them safely. • I can test and evaluate products against a detailed design specification and make adaptations as they develop the product.	grilling nutrients seasonality harvest flavour culture adapt product	

LKS2 Cycle A Spring Term				
Will study..	**Substantive Knowledge** **I know..**	**Disciplinary Knowledge** **DESIGN/MAKE/EVALUATE process** **I can ..**	**Vocabulary**	**Experience**
Greenhouse (Structures)	I will know… • Particular products are designed for specific tasks. • Certain products require specific materials.	I can… • Explain an existing product benefits the user. • Create triangular shapes using diagonal struts.	Green House Specific material Purpose Properties Structure Woodwork Strengthen	

DESIGN AND TECHNOLOGY Curriculum End points

	• Diagonal struts create triangular shapes within a frame structure. • Adding diagonal struts to a frame structure adds strength and stability. • Which materials will be needed for a task and explain why. • How to implement improvements to my product.	• Strengthen and stabilise a frame using diagonal struts. • Use tools safely for cutting and joining materials and components. • Explain why materials for a specific task must be selected on the basis of their properties. • Evaluate my own product using an evaluation sheet and suggest improvements that could be made.	Stabilise Diagonal Strut Joining Components Butt joint Hacksaw Bench hook G clamp Hot glue gun Evaluation	

LKS2 Cycle A Summer Term 2				
Will study..	**Substantive Knowledge I know..**	**Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..**	**Vocabulary**	**Experience**
Making it Move (Mechanisms)	• Cams are devices that can convert circular motion into up-and-down motion. • Cams are fixed to the axle and the follower sits on the cam. When the axle is rotated, the follower moves up and down, following the shape of the cam. • Different shaped cams produce different patterns of movement in the follower. • Design criteria are the exact goals a project must achieve to be successful. • Materials for a specific task must be selected on the basis of their properties. Availability and cost have also got to be considered. • Asking questions can help others to evaluate their products.	• Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account. • Use tools safely for cutting and joining materials and components. • Make working models with simple mechanisms or electrical circuits.	Mechanism Linkage Cam Follower Slider Wheels User Purpose Lever Axle Function Lever Authentic Design Fulcrum	

DESIGN AND TECHNOLOGY Curriculum End points

LKS2 Cycle B Autumn Term 2				
Will study…	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience
Scrumdidlyumptious (Food)	• I know the types of food that will grow in a particular area depend on a range of factors, such as the rainfall, climate and soil type. • I know there are five main food groups that should be eaten regularly as part of a balanced diet. Foods high in fat, salt and sugar should only be eaten occasionally as part of a healthy, balanced diet. • I know the preparation techniques for savoury dishes include peeling, chopping, deseeding, slicing, dicing, grating, mixing and skinning. • I know that design criteria are the exact goals a project must achieve to be successful. • I know that specific tools can be used for different methods of cutting. • I know that asking questions can help others to evaluate their products.	• I can identify and name foods that are produced in different places. • I can identify main food groups (carbohydrates, protein, dairy, fruits and veg, fats and sugars). • I can prepare and cook a simple savoury dish. • I can develop design criteria to inform a design. • I can use tools safely for cutting. • I can suggest improvements to my products and describe how to implement them, beginning to take the views of others into account.	peel chop slice deseed dice texture food groups carbohydrates protein fats balanced diet 5 a day consistency mixing ingredients sauce	

LKS2 Cycle B Spring Term 2				
Will study…	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience

DESIGN AND TECHNOLOGY Curriculum End points

Torches (Electrical Circuits and Conductors)	I know… • what a simple series electrical circuit is. • that companies use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. • how to gather information about needs and wants, and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. • technical vocabulary relevant to the project and be able to use it when talking about their design. • specific switches are used for different purposes • evaluations can be done by considering whether the product does what it was designed to do and includes suggesting improvements and explaining why they should be made.	I can… • gather information about needs and wants, and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. • generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. • select from and use tools and equipment to cut, join and finish with some accuracy. • select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities. • investigate and analyse a range of existing battery-powered products. • evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.	Series circuit Fault Connection Toggle switch Push-to-make switch Push-to-break switch Battery Battery holder Bulb holder Wire Insulator Conductor Crocodile clip Program System Input device Output device Control User Purpose function prototype design criteria innovative appealing design brief	

LKS2 Cycle B Summer Term 2				
Will study…	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience
Functional and Fancy Fabrics (Textiles)	I know… • annotated sketches and exploded diagrams show specific parts of a design, highlight sections or show functions.	I can… • generate and communicate my ideas through a range of different methods.	Loom weaving Embellishment Fabric Tassel	

DESIGN AND TECHNOLOGY Curriculum End points

	• specific tools are used for cutting and should only be used with adult supervision. • evaluation can be done by considering whether the product does what it was designed to do and includes suggesting improvements and explaining why they should be made. • different materials and components have a range of properties, making them suitable for different tasks and materials should be selected depending on the design criteria. • a loom weaving is a piece of fabric that has been woven on a loom by interlacing threads. • an embellishment is a decorative detail or feature, such as a silk flower, tassel or bow, added to something to make it more attractive.	• select the appropriate tool for a task and explain my choice • explain how closely my finished products meet my design criteria and say what they could do better in the future. • work safely and hygienically in construction and cooking activities. • plan which materials will be needed for a task and explain why. • use wheels and axles to make a simple moving model.	Interlacing Man-made Natural Synthetic Loom Weave Cloth Tapestry Plaine weave Pattern	

A Designer by the end of UKS2	
Will be able to	Will define and use in context the following **vocabulary** throughout their Design and Technology projects.
Will be able to… • 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. • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at 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. • 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. • 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.	

DESIGN AND TECHNOLOGY Curriculum End points

• 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 programme, monitor and control their products.	

UKS2 Cycle A Autumn Term 2				
Will study..	**Substantive Knowledge** **I know..**	**Disciplinary Knowledge** **DESIGN/MAKE/EVALUATE process** **I can ..**	**Vocabulary**	**Experience**
Eat the Seasons (Food)	I will know… • Seasonality is the time of year when the harvest or flavour of a type of food is at its best. • Buying seasonal food is beneficial for many reasons. • A balanced diet gives your body all the nutrients it needs to function correctly and this means eating a wide variety of foods in the correct proportions. • Sweet dishes are usually desserts, such as cakes, fruit pies and trifles. • Savoury dishes usually have a salty or spicy flavour rather than a sweet one. • The design of a product is sometimes influenced by culture or society. • There are many rules for using tools and equipment safely and these may vary depending on the tools being used.	I can… • Describe what seasonality means and explain some of the reasons why it is beneficial. • Evaluate meals and consider if they contribute towards a balanced diet. • Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish. • Explain how the design of a product has been influenced by the culture or society in which it was designed or made. • Name and select appropriate tools for a task and use them safely. • Test and evaluate products against a detailed design specification and make adaptations and recommendations for improvement.	Seasonal Seasonality Harvest Nutrients Minerals Vitamins Fibre Diet Balanced Varieties Dicing Peeling Grating Boiling Steaming Sautéing Preparation Recipe	

	• Testing a product against the design criteria will highlight anything that needs improvement or redesign.			

UKS2 Cycle A Spring Term 2				
Will study..	**Substantive Knowledge** **I know..**	**Disciplinary Knowledge** **DESIGN/MAKE/EVALUATE process** **I can ..**	**Vocabulary**	**Experience**
Make do and Mend (Textiles)	I will know… • Deconstructing garments identifies how they were made, the materials that were used and their properties. • The stitches, running stitch, blanket stitch and whip stitch. • That a pattern template is a guide used when cutting material. • That pinning and tacking fabrics holds materials in place to help sewing.	I can… • Use selected tools safely and precisely to investigate clothing. • Talk about the decorative features used on items. • Explain what repurposing is. • Use running stitch, whip stich and Blanket stitch. • Choose the best materials for a task, showing an understanding of their working characteristics. • I can use a pattern template. • Pin and tack fabrics in preparation for sewing.	Deconstruct Stitching unpicker Seam Function Repurpose Running stitch Whip stitch Blanket Stitch Thread Needle Sewing Properties Garment Pattern template Bunting Pin cushion Wadding	

UKS2 Cycle A Summer Term 2				
Will study..	**Substantive Knowledge** **I know..**	**Disciplinary Knowledge** **DESIGN/MAKE/EVALUATE process** **I can ..**	**Vocabulary**	**Experience**
Burglar Alarm (Electrical Circuits and Components)	I know… • The essential characteristics of a series circuit.	I can…	Series circuit Battery Powered Electrical	

DESIGN AND TECHNOLOGY Curriculum End points

	• How to use research to develop a design specification.	• Build a battery-powered electrical product. • Include components that respond automatically to changes in the environment Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.	Switch Wire Conduct Pictorial representation Input device Output device Control Program Use Purpose Modify	

UKS2 Cycle B Autumn Term 2				
Will study…	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience
Food for Life (Food)	I know… • organic produce is food that has been grown without the use of man-made fertilisers, pesticides, growth regulators or animal feed additives. • eating a balanced diet is a positive lifestyle choice that should be sustained over time. • ingredients can usually be bought at supermarkets, but specialist shops may stock different items. • design criteria should cover the intended use of the product, age range targeted and final appearance.	I can… • explain how organic produce is grown. • plan a healthy daily diet, justifying why each meal contributes towards a balanced diet. • follow a recipe that requires a variety of techniques and source the necessary ingredients independently. • develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways.	Organic Produce Fertilisers Pesticides Recipe Ingredients	

DESIGN AND TECHNOLOGY Curriculum End points

	• precision is important in producing a polished, finished product. • design is an evaluative process, meaning alterations and improvements are made continually throughout the manufacturing process.	• select appropriate tools for a task and use them safely and precisely. • demonstrate modifications made to a product as a result of ongoing evaluation by myself and others.		

UKS2 Cycle B Spring Term 2				
Will study…	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience
Exploring Pneumatics (Mechanisms)	I know… • design criteria should cover the intended use of the product, age range targeted and final appearance. • I know the safety of the user has to be taken into account when designing a new product. • it is important to understand the characteristics of different materials to select the most appropriate material for a purpose. • precision is important in producing a polished, finished product. • design is an iterative process, meaning alterations and improvements are made continually throughout the manufacturing process. • pneumatic systems use energy that is stored in compressed air to do work, such as inflating a balloon to open a model monster's mouth. • mechanical systems can include sliders, levers, linkages, gears, pulleys and cams. Other mechanisms include pneumatics and hydraulics.	I can… • develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways. • demonstrate how my products take into account the safety of the user. • select and use a range of materials, beginning to explain their choices. • select appropriate tools for a task and use them safely and precisely. • demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others. • use mechanical systems in my products. • explain and use mechanical systems in their products to meet a design brief.	Compress Force Pneumatic Mechanical Energy	

DESIGN AND TECHNOLOGY Curriculum End points

UKS2 Cycle B Summer Term 2				
Will study…	Substantive Knowledge I know..	Disciplinary Knowledge DESIGN/MAKE/EVALUATE process I can ..	Vocabulary	Experience
Engineer (Structures)	I know… • Bridge structures have changed over time. This is due to factors such as technology, design innovation and new and better access to materials. • Significant engineers have improved, safety, people's lives and trade through their constructions. • Significant bridges include: the Menai Bridge, Clifton Suspension Bridge and Forth Bridge. • Strength can be added to a framework by using multiple layers or changing its shape. • It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability. • Triangles do not collapse or distort easily and so are used in architecture to provide support and stability. • An evaluative process starts with requirements and continues by creating a product, testing it, and revising it before creating a better version.	I can… • Create a detailed comparative report about two or more products or inventions. • Select the most appropriate materials and frameworks for different structures, explaining what makes them strong. • Choose the best materials for a task, showing an understanding of their working characteristics. • Select the most appropriate materials and frameworks for different structures, explaining what makes them strong. • Choose the best materials for a task, showing an understanding of their working characteristics. • Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others	Engineer Bridge Arch bridge Beam bridge Truss bridge Suspension bridge Force Compression Tension Strength Concertina Distort Span	

DESIGN AND TECHNOLOGY Curriculum End points