Design and Technology Progression at Wylye Valley C.E. Primary School

At Wylye Valley, we use Kapow to teach Design and Technology.

Year Group	Design and Technology content – sequence of learning	Why this?	Why now?	*Vocabulary*
Reception	Expressive Arts and Design ELG: Creating with Materials Children at the expected level of development will: - 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.	Children will be able to: Learn in an environment that encourages creative exploration and the development of essential skills required in Design and technology.	On starting school our children will be introduced to learning experiences that will increase their knowledge of expressive arts and design. All children start school with a range of experiences and their education will be tailored to meet the needs of the children.	
Year Group	**Design and Technology content – sequence of learning**	**Why this?**	**Why now?**	***Vocabulary***
Year 1/2 A **Constructing A Windmill**	**Structures- Constructing a windmill** **Make a stable structure, which will eventually support the turbine, out of card, tape and glue. Make functioning turbines and axles that are assembled into the main supporting structure. Say what is good about their windmill and what they could do better.** **Design** • Learning the importance of a clear design criteria. • Including individual preferences and requirements in a design. **Make** • Making stable structures from card, tape and glue. • Learning how to turn 2D nets into 3D structures. • Following instructions to cut and assemble the supporting structure of a windmill. • Making functioning turbines and axles which are assembled into a main supporting structure. **Evaluate** Not covered	Children will be able to: Identify some features that would appeal to the client (a mouse) and create a suitable design. Explain how their design appeals to the mouse. Make stable structures, which will eventually support the turbine, out of card, tape and glue. Make functioning turbines and axles that are assembled into the main supporting structure. Say what is good about their windmill and what they could do better.	Builds upon EYFS work on physical development and independent use of tools. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	*axle* *bridge* *design* *design criteria* *model* *net* *packaging* *structure* *template* *unstable* *stable* *strong* *weak*

	Technical • To understand that the shape of materials can be changed to improve the strength and stiffness of structures. • To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses). • To understand that axles are used in structures and mechanisms to make parts turn in a circle. • To begin to understand that different structures are used for different purposes. • To know that a structure is something that has been made and put together.			
Making a moving storybook	**<u>Mechanisms: Making a moving storybook</u>** **Make a picture that meets the design brief with parts that move easily.** **Design** Explaining how to adapt mechanisms, using bridges or guides to control the movement. • Designing a moving story book for a given audience. **Make** • Following a design to create moving models that use levers and sliders. **Evaluate** • Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed. • Reviewing the success of a product by testing it with its intended audience. **Technical** To know that a mechanism is the parts of an object that move together. •To know that a slider mechanism moves an object from side to side. • To know that a slider mechanism has a slider, slots, guides and an object. • To know that bridges and guides are bits of card that purposefully restrict the movement of the slider.	Children will be able to: Identify whether a mechanism is a side-to-side slider or an up-and-down slider and determine what movement the mechanism will make. Clearly label drawings to show which parts of their design will move and in which direction. Make a picture, which meets the design criteria, with parts that move purposefully as planned. Evaluate the main strengths and weaknesses of their design and suggest alterations.	Builds upon EYFS work on physical development and independent use of tools. Builds upon EYFS work on Expressive Arts and Design ELG: Creating with Materials Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	*sliders* *mechanism* *adapt* *design criteria* *design* *input* *model* *template* *assemble* *test*
Fruit and Vegetables	**<u>Food:Fruit and Vegetables</u>** **Prepare fruits and vegetables to make a smoothie.**	Children will be able to:	Builds upon EYFS work done in Personal, Social and Emotional Development: Through adult modelling and guidance, they will learn how to look after their bodies, including healthy eating, and manage personal needs independently.	*fruit* *vegetable* *seed* *leaf*

	Design • Designing smoothie carton packaging by-hand or on ICT software. **Make** • Chopping fruit and vegetables safely to make a smoothie. **Evaluate** • Tasting and evaluating different food combinations. • Describing appearance, smell and taste. • Suggesting information to be included on packaging. **Cooking and Nutrition** • Understanding 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 (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber).	Describe fruits and vegetables and explain why they are a fruit or a vegetable. Name a range of places that fruits and vegetables grow. Describe basic characteristics of fruit and vegetables. Prepare fruits and vegetables to make a smoothie.	Builds upon EYFS work on fine motor control: independent use of tools., including using cutlery.	*root* *stem* *smoothie* *healthy* *carton* *design* *flavor* *peel* *slice*

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Year 1/ 2 B Puppets	**<u>Textiles: Puppets</u>** **Design, make and decorate a puppet that matches the brief.** **Design** • Using a template to create a design for a puppet. **Make** • Cutting fabric neatly with scissors. • Using joining methods to decorate a puppet. • Sequencing the steps taken during construction. **Evaluate** • Reflecting on a finished product, explaining likes and dislikes. **Technical**	Children will be able to: Join fabrics together using pins, staples or glue. Design a puppet and use a template. Join their two puppets' faces together as one.	Builds upon work done in EYFS Expressive Arts and Design ELG: Creating with Materials Children at the expected level of development will: - 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.	*decorate design fabric glue* *model hand puppet safety pin* *staple* *stencil* *template*

	• 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.	Decorate a puppet to match their design.		
Wheels and Axles	**<u>Mechanisms: Wheels and Axles</u>** **Design and make a vehicle with functioning wheels, axles and axle holders.** **Design** • Designing a vehicle that includes wheels, axles and axle holders, that when combined, will allow the wheels to move. • Creating clearly labelled drawings that illustrate movement. **Make** • Adapting mechanisms, when: they do not work as they should, to fit their vehicle design, to improve how they work after testing their vehicle. **Evaluate** • Testing wheel and axle mechanisms, identifying what stops the wheels from turning, and recognising that a wheel needs an axle in order to move. **Technical** • 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.	Children will be able to: Explain that wheels move because they are attached to an axle. Recognise that wheels and axles are used in everyday life, not just in cars. Identify and explain vehicle design flaws using the correct vocabulary. Design a vehicle that includes functioning wheels, axles and axle holders. Make a moving vehicle with working wheels and axles. Explain what must be changed if there are any operational issues.	Builds upon work done in 'Making a moving storybook'. Testing materials and adapting mechanisms. Identifying faults and evaluating their own work. Developing their knowledge of mechanisms and articulating their ideas using the correct vocabulary.	*axle holder* *chassis* *diagram* *dowel* *equipment* *mechanism* *wheel*
A balanced diet	**<u>Food: A balanced diet</u>** **Construct a healthy wrap that meets their design brief.** **Design** • Designing a healthy wrap based on a food combination which work well together. **Make**	Children will be able to: Name the main food groups and identify foods that belong to each group.	Builds upon work done in 'Fruits and vegetables'. Children will be introduced to the main food groups and will describe the nutritional benefits of different foods. Children will be asked to think about how different foods impact their health and start to use their reasoning in designing a healthy wrap.	*balanced diet* *carbohydrate* *dairy* *fruit* *ingredients* *oils* *sugar* *protein*

	• Slicing food safely using the bridge or claw grip. • Constructing a wrap that meets a design brief **Evaluate** • 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. **Cooking and Nutrition** • 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 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'.	Describe the taste, texture and smell of a given food. Think of four different wrap ideas, considering flavour combinations. Construct a wrap that meets the design brief and their plan.		*vegetable* *design criteria*

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Year 3 **Textiles: Egyptian collars**	**<u>Textiles: Egyptian collars</u>** **Decorate their Egyptian collar using applique, cross-stitch, beads, buttons and pinking.** **Design** • Designing and making a template from an existing cushion and applying individual design criteria. **Make** • Following design criteria to create a cushion or Egyptian collar.	Children will be able to: Demonstrate their ability to use cross-stitch as a decorative feature or to join two pieces of fabric together. Develop appliqué designs based on design criteria.	Builds upon the work done in 'Puppets'. Children will know how to make a template that meets the design criteria. Use fabric scissors. Thread needles. Apply different stitches. Develop their understanding of key vocabulary and articulate their understanding.	*applique* *cross-stitch* *fabric* *running stitch* *patch* *thread* *embellish* *template* *cotton* *silk*

	• Selecting and cutting fabrics with ease using fabric scissors. • Threading needles with greater independence. • Tying knots with greater independence. • Sewing cross stitch to join fabric. • Decorating fabric using appliqué. • Completing design ideas with stuffing and sewing the edges (Cushions) or embellishing the collars based on design ideas (Egyptian collars). **Evaluate** • Evaluating an end product and thinking of other ways in which to create similar items. **Technical** •To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces. •To know that when two edges of fabric have been joined together it is called a seam. •To know that it is important to leave space on the fabric for the seam. •To understand that some products are turned inside out after sewing so the stitching is hidden.	Design, cut and shape their template for an usekh/wesekh collar, with increasing accuracy. Decorate their Egyptian collar using a variety of techniques such as appliqué, cross-stitch, beads, buttons and pinking. Measure and attach a ribbon with a running stitch. Recognise different types and qualities of fabrics. Explain the aesthetic and/or functional properties of some of their material choices.		*polyester* *wrinkle* *tear* *water-resistant* *breathable* *matt* *shiny* *biodegrade* *pinking*
Pneumatic Toys	**<u>Mechanisms: Pneumatic Toys</u>** **Create a finished pneumatic toy that meets the design brief.** **Design** • Designing a toy which 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. **Make** • 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. **Evaluate**	Children will be able to: Draw accurate diagrams with correct labels, arrows and explanations. Correctly identify definitions for key terms. Identify five appropriate design criteria. Communicate two ideas using thumbnail sketches. Communicate and develop one idea using an exploded diagram. Select appropriate equipment and materials to build a working pneumatic system.	Builds upon work done in 'wheels and axles. Children will know the workings of a pneumatic system and how it can be used effectively in toy design. Children will be building a secure housing for pneumatic system, selecting materials due to their functional and aesthetics characteristics.	*mechanism* *lever* *pivot* *linkage system* *pneumatic system* *input* *output* *component* *thumbnail sketch* *research* *adapt* *properties* *reinforce* *motion*

	• Using the views of others to improve designs. • Testing and modifying the outcome, suggesting improvements. • Understanding the purpose of exploded-diagrams through the eyes of a designer and their client. **Technical** • 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.	Assemble their pneumatic system within the housing to create the desired motion. Create a finished pneumatic toy that fulfils the design brief.		
Eating Seasonally	**<u>Food: Eating Seasonally</u>** **Design their own tart using seasonal ingredients.** **Design** • Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish. **Make** • Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination. • Following the instructions within a recipe. **Evaluate** • 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. **Cooking and Nutrition** • 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 which has been brought into the country. • To know that exported food is food which has been sent to another country. • To understand that imported foods travel from far away and this can negatively impact the environment.	Children will be able to: Explain that fruits and vegetables grow in different countries based on their climates. Understand that 'seasonal' fruits and vegetables are those that grow in a given season and taste best then. Know that eating seasonal fruit and vegetables has a positive effect on the environment. Design their own tart recipe using seasonal ingredients. Understand the basic rules of food hygiene and safety. Follow the instructions within a recipe.	Builds upon work being done in 'a balanced diet'. Children will learn how to prepare food in a safe way. They will test and review dishes. They will be describing the benefits of using seasonal fruits and vegetables.	*Diet* *Climate* *Imported* *Ingredients* *Natural* *Processed* *Recipes* *seasonal*

	• To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. • To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. • To know safety rules for using, storing and cleaning a knife safely. • To know that similar coloured fruits and vegetables often have similar nutritional benefits.			

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Year 4 **Slingshot car**	**<u>Mechanical systems: Making a slingshot car</u>** **Design and make a functioning car.** **Design** • 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 **Make** • Measuring, marking, cutting and assembling with increasing accuracy. • Making a model based on a chosen design. **Evaluate** • Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance. **Technical** • 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.	Children will be able to: Work independently to produce an accurate, functioning car chassis. Design a shape that is suitable for the project. Attempt to reduce air resistance through the design of the shape. Produce panels that will fit the chassis and can be assembled effectively using the tabs they have designed. Construct car bodies effectively. Conduct a trial accurately and draw conclusions and improvements from the results.	Builds upon work done in 'pneumatic toys'. Children will need to test different shapes and structures and identify what will reduce air resistance. They will need to measure, mark, cut and assemble with increasing accuracy.	*chassis* *energy* *kinetic* *mechanism* *air resistance* *design* *structure* *graphics* *research* *model* *template*
Torches	**<u>Electrical systems: Torches</u>** **Create a functioning torch with a switch according to their design criteria.** **Design**	Children will be able to: Identify electrical products and explain why they are useful.	Children are introduced to electrical systems in year 3. They Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.	*Battery* *bulb* *buzzer* *conductor* *circuit*

	• Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. **Make** • 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. **Evaluate** • Evaluating electrical products. • Testing and evaluating the success of a final product. **Technical** • 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.	Help to make a working switch. Identify the features of a torch and how it works. Describe what makes a torch successful. Create suitable designs that fit the success criteria and their own design criteria. Create a functioning torch with a switch according to their design criteria.	They will be using this knowledge and applying it to designing and making a torch. They will have to test and evaluate electrical products and their own final product.	*diagram* *electricity* *insulator*
Adapting a recipe	**<u>Food: Adapting a recipe</u>** **Adapt a biscuit recipe by adding extra ingredients.** **Design** • Designing a biscuit within a given budget, drawing upon previous taste testing judgements. **Make** • Following a baking recipe, from start to finish, including the preparation of ingredients. • Cooking safely, following basic hygiene rules. • Adapting a recipe to improve it or change it to meet new criteria (e.g. from savoury to sweet). **Evaluate** • 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 food products. • Suggesting modifications to a recipe (e.g. This biscuit has too many raisins, and it is falling apart, so next time I will use less raisins).	Children will be able to: Follow a recipe, with some support. Describe some of the features of a biscuit based on taste, smell, texture and appearance. Adapt a recipe by adding extra ingredients to it. Plan a biscuit recipe within a budget.	Builds upon work being done in a 'Eating seasonally. Children will be designing a biscuit within a given budget. They will need to test, evaluate and research independently in order to meet the design brief.	*Design criteria* *Research* *Texture* *innovative* *aesthetic* *measure* *cross-contamination* *diet* *processed* *packaging*

	Cooking and Nutrition • 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.			

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Year 5/6 A **Pop up book**	**<u>Mechanisms: Making a pop up book</u>** **Use a range of mechanisms and structures to illustrate their story and make it interactive for users.** **Design** • Designing a pop-up book which uses a mixture of structures and mechanisms. • Naming each mechanism, input and output accurately. • Storyboarding ideas for a book. **Make** • Following a design brief to make a pop-up book, neatly and with focus on accuracy. • Making mechanisms and/or structures using sliders, pivots and folds to produce movement. • Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result. **Evaluate** • Evaluating the work of others and receiving feedback on own work. • Suggesting points for improvement. **Technical** • To know that mechanisms control movement. • To understand that mechanisms can be used to change one kind of motion into another. • To understand how to use sliders, pivots and folds to create paper-based mechanisms.	Children will be able to: Produce a suitable plan for each page of their book. Produce the structure of the book. Assemble the components necessary for all their structures/mechanisms. Hide the mechanical elements with more layers using spacers where needed. Use a range of mechanisms and structures to illustrate their story and make it interactive for the users. Use appropriate materials and captions to illustrate the story.	Builds upon work done in 'making a slingshot car'. Children will need to know the different sliders, pivots and folds and the movements that they produce.	*Design* *input* *motion* *mechanism* *criteria* *research* *reinforce* *model*
Doodlers	**<u>Electrical Systems: Doodlers</u>** **To design and make a Doodler. A Doodler is an electrical device that uses a motor to generate a wobbly offset spin and scribble jagged circles and patterns.**	Children will be able to: Identify simple circuit components (battery, bulb and switch) with a basic explanation of their function.	Builds upon work done in 'Torches'. Children will need to apply their knowledge of electrical circuits and apply it to the design brief.	

	Design • Identifying factors that could be changed on existing products and explaining how these would alter the form and function of the product. • Developing design criteria based on findings from investigating existing products. • Developing design criteria that clarifies the target user. **Make** • Altering a product's form and function by tinkering with its configuration. • Making a functional series circuit, incorporating a motor. . • Constructing a product with consideration for the design criteria. • Breaking down the construction process into steps so that others can make the product. **Evaluate** • Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses. • Determining which parts of a product affect its function and which parts affect its form. • Analysing whether changes in configuration positively or negatively affect an existing product. • Peer evaluating a set of instructions to build a product. **Technical** • To know that series circuits only have one direction for the electricity to flow. • To know when there is a break in a series circuit, all components turn off. • To know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin. • To know a motorised product is one which uses a motor to function.	Provide examples of motorised products that use movement to rotate or spin different parts. Remove and replace different parts of a Doodler, as part of a team. Suggest ways to switch the configuration to amend the form or function of the Doodler. Explain the changes made and the effect this had on the Doodler's function and form. Develop design criteria with consideration for the target user. Create a functional Doodler that creates scribbles on paper with or without a switch. Write instructions to build a functional circuit, explaining how to identify if it is functional or not.	They will need to understand about counter balance and how it's used to create a wobble and produce a scribble. Children will need to confidently provide suggestions to improve a peer's set of instructions after testing how effective they are at guiding someone.	
What could be healthier?	**<u>Food: What could be healthier?</u>** **Working as a team to amend a Bolognese recipe with healthy ingredients.** **Design** • 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. **Make** • Cutting and preparing vegetables safely.	Children will be able to: Understand how beef gets from the farm to our plates. Present a subject as a poster with clear information in an easy to read format.	Builds upon work being done in 'Adapting a recipe'. Children will be amending a recipe within a given budget. They will need to test, evaluate and research as a team in order to meet the design brief. They will need to work effectively and show increasing understanding of where food comes from and how to prepare and cook food safely.	*Beef* *Reared* *Processed* *Ethical* *Diet* *ingredients* *supermarket* *farm* *balanced*

	• Using equipment safely, including knives, hot pans and hobs. • Knowing how to avoid cross-contamination. • Following a step by step method carefully to make a recipe. **Evaluate** • Identifying the nutritional differences between different products and recipes. • Identifying and describing healthy benefits of food groups. **Cooking and Nutrition** • To understand where meat comes from - 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 understand that 'cross-contamination' means bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects.	Notice the nutritional differences between different products and recipes. Recognise nutritional differences between two similar recipes and give some justification as to why this is. Work as a team to amend a Bolognese recipe with healthy adaptations. Follow a recipe to produce a healthy Bolognese sauce. Design packaging that promotes the ingredients of the Bolognese.		

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Year 5/6 B Bridges	**<u>Structures: Bridges</u>** **Use triangles to construct a simple truss bridge to support a load. Complete a bridge with varying degrees of accuracy and finish, supported by the teacher.** **Design** • Designing a stable structure that is able to support weight. • Creating a frame structure with a focus on triangulation. **Make** • 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. • Selecting appropriate tools and equipment for particular tasks.	Children will be able to: identify stronger and weaker shapes. Recognise that supporting shapes can help increase the strength of a bridge, allowing it to hold more weight. Identify beam, arch and truss bridges and describe their differences. Use triangles to create simple truss bridges that support a load (weight).	Builds upon work done in 'making a slingshot car'. Children will need to know that triangles are used to support structures. They will need to test different structures and materials and identify which will provide stability when supporting a weight. Children will be learning how to use saws safely and accurately.	*beam bridge* *arch bridge* *truss bridge* *strength* *corrugation* *rigid* *stability* *factors* *visual appeal* *aesthetics* *hardwood* *softwood* *bench hook/vice* *saw* *assemble* *material properties* *reinforce* *wood sourcing* *evaluate* *quality of finish*

	• Using the correct techniques to saws safely. • Identifying where a structure needs reinforcement and using card corners for support. • Explaining why selecting appropriating materials is an important part of the design process. • Understanding basic wood functional properties. **Evaluate** • 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 **Technical** • 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 properties. • To understand the material (functional and aesthetic) properties of wood.	Cut beams to the correct size, using a cutting mat. Smooth down any rough cut edges with sandpaper. Follow each stage of the truss bridge creation as instructed by their teacher. Complete a bridge, with varying ranges of accuracy and finish, supported by the teacher. Identify some areas for improvement, reinforcing their bridges as necessary.		*accuracy*
Textiles: Stuffed toy	**<u>Textiles: Stuffed toy</u>** **Design, make and decorate their stuffed toy.** **Design** • Designing a stuffed toy, considering the main component shapes required and creating an appropriate template. • Considering the proportions of individual components. **Make** • 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. • 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. **Evaluate**	Children will be able to: Design a stuffed toy, considering the main component shapes of their toy. Create an appropriate template for their stuffed toy. Join two pieces of fabric using a blanket stitch. Neatly cut out their fabric. Use appliqué or decorative stitching to decorate the front of their stuffed toy.	Builds upon work being done in 'Egyptian collars'. Children are required to create an appropriate template. They will need to measure, mark out and cut independently and with increased accuracy. Children will know how to apply blanket stitch when joining fabric. Children will need 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	*accurate* *annotate* *appendage* *blanket-stitch* *design criteria* *detail* *evaluation* *fabric* *sew* *shape* *stuffed toy* *stuffing* *template*

	• Testing and evaluating an end product and giving point for further improvements. **Technical/Knowledge** • 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 know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely.	Use blanket stitch to assemble their stuffed toy, repairing when needed. Identify what worked well and areas for improvement.		
Come dine with me	**<u>Food: Come dine with me</u>** **Write a recipe and prepare a meal.** **Design** • Writing a recipe, explaining the key steps, method and ingredients. • Including facts and drawings from research undertaken. **Make** • 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. **Evaluate** • Evaluating a recipe, considering: taste, smell, texture and origin of the food group. • Taste testing and scoring final products. • Suggesting and writing up points of improvements when scoring others' dishes, and when evaluating their own throughout the planning, preparation and cooking process. • Evaluating health and safety in production to minimise cross contamination. **Cooking and Nutrition** • 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.	Children will be able to: Find a suitable recipe for their course. Record the relevant ingredients and equipment needed. Follow a recipe, including using the correct quantities of each ingredient. Write a recipe, explaining the process taken. Explain where certain key foods come from before they appear on the supermarket shelf.	Builds upon work being done in a 'What could be healthier?' Children will be planning a meal from start to finish, using all the knowledge and skills that they have developed over the years at Wylye Valley school. They will need to be able to test, research and plan a meal independently. They will be preparing and cooking their meals in a safe way. There will be more emphasis on evaluating their end product and their planning and preparation. They will also be peer assessing and scoring final products.	*equipment* *flavours* *ingredients* *method* *research* *recipe* *bridge method* *cookbook* *cross-contamination* *farm to fork* *preparation* *storyboard*

	• To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides. • To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork).			