

Beam County Primary School: Long-term Component Map - Nursery



Domain	Autumn	Spring	Summer
Composite Goal	<p>Structures – Hibernation Models</p> <p>To learn about and explore different classroom materials to develop spatial awareness and to develop an understanding of how to create a balanced, stable structure.</p>	<p>Structures – Boats</p> <p>To learn about the different features of boats and ships before investigating their shape and structures to build their own.</p>	<p>Cooking and Nutrition – Rainbow Salads</p> <p>To learn the basic skills to choose and prepare ingredients for a healthy, balanced diet.</p>
Components	<p>Component 1 To explore what hibernation means; To understand what is needed for hibernation; To understand and explain why some animals hibernate.</p> <p>Component 2 To explore and investigate the tools and materials used in making models; To investigate cutting different materials; To learn how to plan and select the correct resources needed to make a model.</p> <p>Component 3 To verbally plan and create a model that could be used for hibernation.</p> <p>Component 4 To share a finished model and talk about the processes in its creation; To explore different ways to temporarily join materials together.</p> <p>Children begin to make verbal plans and material choices before starting and problem solve while making their structure.</p>	<p>Component 1 To understand what waterproof means and to test whether materials are waterproof.</p> <p>Component 2 To test and make predictions for which materials float or sink.</p> <p>Component 3 To compare the uses of boats.</p> <p>Component 4 To investigate how the shape and structure of boats affects the way they move.</p> <p>Component 5 To design a boat.</p> <p>Component 6 To create a boat based upon their own design.</p>	<p>Component 1 Pupils refresh their knowledge of fruits and vegetables and explore what it means to have a healthy balanced diet. They design their own rainbow salad combination.</p> <p>Component 2 After revisiting the health and safety rules, pupils prepare the ingredients to create their rainbow salad. They taste and evaluate their rainbow salad.</p>

Beam County Primary School: Long-term Component Map - Reception



Domain	Autumn	Spring	Summer
Composite Goal	<p>Cooking and Nutrition – Soup</p> <p>To explore the differences between fruits and vegetables using their senses (taste/texture/smell).</p>	<p>Structures - Junk Modelling</p> <p>To learn about the types of permanent and temporary join.</p>	<p>Textiles – Bookmarks</p> <p>To learn the basic sewing skills to help design and sew a personal bookmark.</p>
Components	<p>Component 1 To use adjectives to describe how fruits and vegetables look, feel, smell and taste, and to explore fruits and vegetables and the differences between them.</p> <p>Component 2 To listen to and recall elements from the story The Best Pumpkin Soup, and explore a pumpkin and describe it using the five senses.</p> <p>Component 3 To design a fruit and vegetable soup recipe.</p> <p>Component 4 To learn how to use a knife safely and to practise cutting with a knife.</p> <p>Component 5 To observe and help (where appropriate) with the use of tools to prepare ingredients and to describe the finished product and evaluate the process.</p> <p>Component 6 To design food packaging.</p>	<p>Component 1 Explore and investigate the tools and materials in the junk modelling area.</p> <p>Component 2 Investigate cutting different materials.</p> <p>Component 3 To learn how to plan and select the correct resources needed to make a model.</p> <p>Component 4 To verbally plan and create a junk model.</p> <p>Component 5 To share a finished model and talk about the processes in its creation.</p> <p>Component 6 To explore different ways to temporarily join materials together.</p>	<p>Component 1 Children develop their threading and weaving skills by exploring different materials and objects, such as ribbons through wire racks or wool through ten-frames.</p> <p>Component 2 Building on lesson one, the children continue to explore weaving techniques, using a weaving base and paper strips.</p> <p>Component 3 The children apply what they learnt in lesson one to develop their threading skills using wool through hessian fabric, and then with a sewing needle and thread.</p> <p>Component 4 Children learn about the history of the bookmark back in Victorian times and compare them to modern-day styles before developing design ideas for their own.</p> <p>Component 5 After developing their own design in lesson four, children begin to plan and sew their bookmark design using hessian fabric and thread.</p> <p>Component 6 Continuing from lesson five, children complete their bookmarks and then in pairs, reflect and evaluate each other's bookmarks - paper versus fabric designs.</p>

Beam County Primary School: Long-term Component Map - Year 1



Domain	Summer Cooking and Nutrition - Smoothies	Spring Textiles – Puppets	Autumn Structures – Windmills
Composite Goal	To identify appropriate ingredients to help create a healthy and nutritional fruit smoothie.	To design, create and evaluate a piece of wearable technology using a set of design criteria and analysis of existing technology.	To follow criteria to meet the needs of a user by making a stable structure with functioning sails/blades that attach to the supporting structure.
Components	<p>Component 1 To identify fruits and to describe where fruits and vegetables grow.</p> <p>Component 2 To practise food preparation skills.</p> <p>Component 3 To select ingredients for a recipe.</p> <p>Component 4 To apply food preparation skills to a recipe and to evaluate against the design brief.</p>	<p>Component 1 To join fabrics together using different methods.</p> <p>Component 2 To use a template to create my design.</p> <p>Component 3 To join two fabrics together accurately.</p> <p>Component 4 To embellish my design using joining methods.</p>	<p>Component 1 To create a stable structure.</p> <p>Component 2 To use tools and equipment accurately to make part of a structure</p> <p>Component 3 To join parts of a structure.</p> <p>Component 4 To evaluate a structure.</p>

Beam County Primary School: Long-term Component Map - Year 2



Domain	Autumn Structures - Baby Bear's Chair	Spring Mechanisms – Fairground Wheel	Summer Mechanisms - Making a moving monster.
Composite Goal	To explore material strength and stability, and construction techniques to develop and create a model that supports a teddy bear.	To explore wheel mechanisms and appropriate materials to design and create a functioning, rotating Ferris wheel.	To explore pivots, levers and linkages to design, make and evaluate a moving monster.
Components	<p>Component 1 To explore and test the stability of 3D shapes using a scientific approach.</p> <p>Component 2 Strengthening materials To build, test and strengthen different paper structures to failure and destruction.</p> <p>Component 3 To design a chair for Baby Bear by apply a knowledge of how to build strong and stable structures.</p> <p>Component 4 To fix and test a structure by solving problems to adapt the structure of Baby Bear's chair as necessary.</p>	<p>Component 1 To explore wheel mechanisms and design a Ferris wheel.</p> <p>Component 2 To select appropriate materials.</p> <p>Component 3 To build and test a moving wheel.</p> <p>Component 4 To make and evaluate a structure with a rotating wheel.</p>	<p>Component 1: Pivots, levers and linkages Learning that a lever is something that turns on a pivot and that a linkage is a system of levers that are connected by pivots.</p> <p>Component 2 Making linkages Experimenting with making linkages that will enable the monsters to move.</p> <p>Component 3 Designing my monster.</p> <p>Component 4 Making my monster Constructing, assembling and evaluating the moving monsters.</p>

Beam County Primary School: Long-term Component Map - Year 3



Domain	Autumn Cooking and Nutrition – Seasonal Foods	Spring Digital World – Electronic Charms	Summer Textiles – Egyptian Collars
Composite Goal	To develop and create a seasonal fruit tart.	To design, create and evaluate a piece of wearable technology using a set of design criteria and analysis of existing technology.	To design and create a decorative neck collar using fabric and a variety of sewing techniques such as appliqué, cross-stitch, beads, buttons and pinking.
Components	<p>Component 1 To identify and recognise that different foods grow in different climates and different countries around the world. To identify seasonal foods that are grown in the UK.</p> <p>Component 2 To develop and practise food preparation skills using cutting and peeling. To create design criteria for a product after tasting different seasonal ingredients.</p> <p>Component 3 To develop and design a mock-up/prototype of a seasonal food.</p> <p>Component 4 To make and evaluate seasonal tarts.</p>	<p>Component 1 To research and evaluate existing products, and to develop design criteria.</p> <p>Component 2 To use code to program and control a product, and to develop and communicate ideas through my programmed product.</p> <p>Component 3 To develop ideas through computer-aided design to assist communicating ideas through my product creation.</p> <p>Component 4 To test and finalize my design against a design-criteria and to improve a design based on feedback from peers and customers.</p>	<p>Component 1 To learn how to sew cross-stitch and to appliqué.</p> <p>Component 2 To develop and use a template.</p> <p>Component 3 To assemble fabric parts into a fabric product.</p> <p>Component 4 To decorate fabric using appliqué and cross-stitch.</p>

Beam County Primary School: Long-term Component Map - Year 4



Domain	Autumn Structures -Pavilions	Spring Mechanical Systems – Pneumatic Toys	Summer Electrical Systems - Torches
Composite Goal	To design, develop, create and build a 3-D structural building.	To understand how pneumatic systems work and apply this knowledge to design, create and evaluate a pneumatic toy.	To design and create a torch flashlight using electrical circuitry and components, and to evaluate the final product.
Components	<p>Component 1 To explore different frame structures to test and identify which are the most stable using toothpicks and sweets.</p> <p>Component 2 To design a visually pleasing pavilion structure using prior knowledge about stable structures.</p> <p>Component 3 To building a strong frame structure for a pavilion using a variety of materials.</p> <p>Component 4 To experiment with different decorative techniques and materials to clad a pavilion structure.</p>	<p>Component 1 To understand how pneumatic systems work.</p> <p>Component 2 To design a toy that uses a pneumatic system.</p> <p>Component 3 To create a pneumatic system.</p> <p>Component 4 To test and finalise ideas against design criteria.</p>	<p>Component 1 To learn about electrical items and how they work.</p> <p>Component 2 To analyse and evaluate electrical products.</p> <p>Component 3 To design a product to fit a set of specific user needs.</p> <p>Component 4 To make and evaluate a torch.</p>

Beam County Primary School: Long-term Component Map - Year 5



Domain	Autumn Electrical Systems - Doodlers	Spring Mechanical Systems – Making a Pop-up Book	Summer Cooking and Nutrition – Adapting a Recipe
Composite Goal	To design and create a functional Doodler that creates draws on paper with or without an electrical switch.	To understand and apply a range of different mechanisms and structures to help design, create and evaluate a pop-up book to help illustrate a story.	To make adaptations, prepare ingredients and follow an adapted recipe to make Viking bread.
Components	<p>Component 1 To understand how motors are used in electrical products.</p> <p>Component 2 To investigate an existing product to determine the factors that affect the product's form and function.</p> <p>Component 3 To apply the findings from research to develop a unique product.</p> <p>Component 4 To develop a DIY kit for another individual to assemble their product.</p>	<p>Component 1 To design a pop-up book.</p> <p>Component 2 To follow my design brief to make my pop-up book.</p> <p>Component 3 To use layers and spacers to cover the working of mechanisms.</p> <p>Component 4 To create a high-quality product suitable for a target user.</p>	<p>Component 1 To understand how ingredients are grown, harvested and processed.</p> <p>Component 2 To make adaptations to design a recipe.</p> <p>Component 3 To evaluate nutritional content</p> <p>Component 4 To practise food preparation skills.</p> <p>Component 5 To design a product label.</p> <p>Component 6 To follow and make an adapted recipe.</p>

Beam County Primary School: Long-term Component Map - Year 6



Domain	Autumn Textiles – Waistcoats	Spring Structures – Playgrounds	Summer Digital World: Navigating the World
Composite Goal	To design, assemble and decorate a waistcoat for a target customer.	To design a playground featuring various structures, considering how the structures will be used.	To develop, design, program and market a navigational device
Components	<p>Component 1 To design a waistcoat.</p> <p>Component 2 To mark and cut fabric according to a design.</p> <p>Component 3 To assemble a waistcoat.</p> <p>Component 4 To decorate your waistcoat.</p>	<p>Component 1 To design a playground with a variety of structures.</p> <p>Component 2 To build a range of structures.</p> <p>Component 3 To improve and add detail to structures.</p> <p>Component 4 To create a surrounding landscape.</p>	<p>Component 1 To develop an informed design brief and criteria based on information extracted and analysed from a client's letter.</p> <p>Component 2 To program a navigation tool which combines various functions to produce a multifunctional device for trekkers.</p> <p>Component 3 To learn about the impact humans are having on the planet and consider how we can make more sustainable material choices.</p> <p>Component 4 To develop skills to combine 3D objects to form a complete product in CAD 3D modelling software and to learn about its application in industries such as film and animation.</p> <p>Component 5 To create a presentation/pitch to share and 'sell' their final product concepts and programs to the Adventure Awaits company.</p>