Year 3 - Topic 1 – Textiles - Puppets

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Design □ 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 **Make** □ 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	**Innovation** Children begin to understand how design can be used to plan a new product for a given criteria. **Functionality** Children can begin to discuss why a product is made in a certain way, discussing its purpose with their peers. Children begin to problem solve in order to test functionality. **Annotated Sketches** Children know that designs need labels to describe them and start to label their own designs using simple terms. **Prototype** Children should understand how practising a design or skill is necessary to make a good final product. **Tools and Equipment** Children should begin to understand why certain tools and equipment are chosen. They should use these to make and finish their own products. **Materials and Components** Children should be able to name different materials from visual clues and be able to predict what products can be made from it. **Aesthetics** Children should discuss whether they like a chosen design using their 5 senses to guide this discussion**.**	**Design** Show design meets a range of requirements. Describe purpose of product. Follow a given design criteria. Have at least one idea about how to create product. Create a plan which shows order, equipment and tools. Describe design using an accurately labelled sketch and words. Make design decisions. Explain how product will work. Begin to use computers to show design. Select appropriate materials, fit for purpose. **Make** Work through plan in order. Begin to measure, mark out, cut and shape materials/components with some accuracy. #Select suitable tools/equipment, explain choices; begin to use them accurately. Begin to cut materials/components with some accuracy. Begin to assemble, join and combine materials and components with some accuracy. Begin join different textiles in different ways. **Evaluate** Look at design criteria while designing and making. Use design criteria to evaluate finished product. Say what I would change to make design better. Begin to evaluate existing products, considering how well they have been made, materials, whether they work, how they have been made, fit for purpose. Begin to be resourceful with practical problems.	Textiles – Puppets - How can I investigate a range of puppets and their features? - How can I work with fabric to create a finger puppet? - How can I develop and practise my sewing skills? - How can I design a glove puppet? - How can I follow a design to make a puppet? - How can I evaluate my finished product?	• Design • Make • Cut • Fold • Glue • Attach • Sew • Stick • Decorate • Fabric • Material • Running Stitch • Over Stitch • Puppet • Aesthetic • Syringe • Tube • Balloon • Expand • Pneumatic • Air • Hinge • Movement • Recipe • Ingredients • Evaluate • Healthy • Flavour • Texture • Sandwich • Nutrition • Spread • Balanced

Year 3 - Topic 1 – Textiles – Puppets

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Evaluate ▯ 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 Technical knowledge ▯ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▯ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ▯ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▯ apply their understanding of computing to program, monitor and control their products. **Cooking and nutrition** As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves	**Design Criteria** Children understand that a design criteria is set for people to follow and make a particular product. Children should be able to make something following a basic, given design criteria with some independence. **Impact of Technology** Children should begin to understand how researching online can help to generate ideas for a new product. They should use examples from research to help them design their own products. **Mechanical Systems** Children should begin to understand how mechanics can be used when designing and making a product. . Principles of a healthy, varied diet Children should begin to gain a better understanding of what makes up a healthy diet and have discussions about which foods are 'healthy' and which foods should be eaten in small amounts	**Technical** Use simple mechanisms to create movement. Use pneumatics to create movement. Begin to apply a range of finishing techniques with some accuracy. Choose textiles considering appearance and functionality. Begin to understand that a simple fabric shape can be used to make a textiles project. Think about user when choosing textiles. Begin to devise a template for a textiles project. Think about how to make product strong. **Food and Nutrition** Carefully select ingredients. Use equipment safely. Describe how healthy diet= variety/balance of food/drinks. Prepare and cook some dishes safely and hygienically. Grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing and spreading	Textiles – Puppets - How can I investigate a range of puppets and their features? - How can I work with fabric to create a finger puppet? - How can I develop and practise my sewing skills? - How can I design a glove puppet? - How can I follow a design to make a puppet? - How can I evaluate my finished product?	•Design •Make •Cut •Fold •Glue •Attach •Sew •Stick •Decorate •Fabric •Material •Running Stitch •Over Stitch •Puppet •Aesthetic •Syringe •Tube •Balloon •Expand •Pneumatic •Air •Hinge •Movement •Recipe •Ingredients •Evaluate •Healthy •Flavour •Texture •Sandwich •Nutrition •Spread •Balanced

Year 3 - Topic 2 – Construction

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Design ▯ 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 Make ▯ 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	**Innovation** Children begin to understand how design can be used to plan a new product for a given criteria. **Functionality** Children can begin to discuss why a product is made in a certain way, discussing its purpose with their peers. Children begin to problem solve in order to test functionality. **Annotated Sketches** Children know that designs need labels to describe them and start to label their own designs using simple terms. **Prototype** Children should understand how practising a design or skill is necessary to make a good final product. **Tools and Equipment** Children should begin to understand why certain tools and equipment are chosen. They should use these to make and finish their own products. **Materials and Components** Children should be able to name different materials from visual clues and be able to predict what products can be made from it. **Aesthetics** Children should discuss whether they like a chosen design using their 5 senses to guide this discussion	**Design** Show design meets a range of requirements. Describe purpose of product. Follow a given design criteria. Have at least one idea about how to create product. Create a plan which shows order, equipment and tools. Describe design using an accurately labelled sketch and words. Make design decisions. Explain how product will work. Begin to use computers to show design. Select appropriate materials, fit for purpose. **Make** Work through plan in order. Begin to measure, mark out, cut and shape materials/components with some accuracy. #Select suitable tools/equipment, explain choices; begin to use them accurately. Begin to cut materials/components with some accuracy. Begin to assemble, join and combine materials and components with some accuracy. Begin join different textiles in different ways. **Evaluate** Look at design criteria while designing and making. Use design criteria to evaluate finished product. Say what I would change to make design better. Begin to evaluate existing products, considering how well they have been made, materials, whether they work, how they have been made, fit for purpose. Begin to be resourceful with practical problems.	Construction – Moving Monsters - How do I investigate a variety of familiar objects that use air to make them work? - How do I investigate techniques for making simple pneumatic systems? - How do I gather ideas for creating moving monsters? - How can I make a monster with a moving pneumatic part? - How can I make a monster with a moving pneumatic part?	Design •Make •Cut •Fold •Glue •Attach •Sew •Stick •Decorate •Fabric •Material •Running Stitch •Over Stitch •Puppet •Aesthetic •Syringe •Tube •Balloon •Expand •Pneumatic •Air •Hinge •Movement •Recipe •Ingredients •Evaluate •Healthy •Flavour •Texture •Sandwich •Nutrition •Spread •Balanced •Vegetable

Year 3 - Topic 2 - Construction

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Evaluate ▯ 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 Technical knowledge ▯ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▯ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ▯ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▯ apply their understanding of computing to program, monitor and control their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.	**Design Criteria** Children understand that a design criteria is set for people to follow and make a particular product. Children should be able to make something following a basic, given design criteria with some independence. **Impact of Technology** Children should begin to understand how researching online can help to generate ideas for a new product. They should use examples from research to help them design their own products. **Mechanical Systems** Children should begin to understand how mechanics can be used when designing and making a product. . Principles of a healthy, varied diet Children should begin to gain a better understanding of what makes up a healthy diet and have discussions about which foods are 'healthy' and which foods should be eaten in small amounts	**Technical** Use simple mechanisms to create movement. Use pneumatics to create movement. Begin to apply a range of finishing techniques with some accuracy. Choose textiles considering appearance and functionality. Begin to understand that a simple fabric shape can be used to make a textiles project. Think about user when choosing textiles. Begin to devise a template for a textiles project. Think about how to make product strong. **Food and Nutrition** Carefully select ingredients. Use equipment safely. Describe how healthy diet= variety/balance of food/drinks. Prepare and cook some dishes safely and hygienically. Grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing and spreading	Construction – Moving Monsters - How do I investigate a variety of familiar objects that use air to make them work? - How do I investigate techniques for making simple pneumatic systems? - How do I gather ideas for creating moving monsters? - How can I make a monster with a moving pneumatic part? - How can I make a monster with a moving pneumatic part?	•Design •Make •Cut •Fold •Glue •Attach •Sew •Stick •Decorate •Fabric •Material •Running Stitch •Over Stitch •Puppet •Aesthetic •Syringe •Tube •Balloon •Expand •Pneumatic •Air •Hinge •Movement •Recipe •Ingredients •Evaluate •Healthy •Flavour •Texture •Sandwich •Nutrition •Spread •Balanced •Vegetable

Year 3 - Topic 3 – Sandwhiches

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Design ▯ 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 Make ▯ 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	**Innovation** Children begin to understand how design can be used to plan a new product for a given criteria. **Functionality** Children can begin to discuss why a product is made in a certain way, discussing its purpose with their peers. Children begin to problem solve in order to test functionality. **Annotated Sketches** Children know that designs need labels to describe them and start to label their own designs using simple terms. **Prototype** Children should understand how practising a design or skill is necessary to make a good final product. **Tools and Equipment** Children should begin to understand why certain tools and equipment are chosen. They should use these to make and finish their own products. **Materials and Components** Children should be able to name different materials from visual clues and be able to predict what products can be made from it. **Aesthetics** Children should discuss whether they like a chosen design using their 5 senses to guide this discussion	**Design** Show design meets a range of requirements. Describe purpose of product. Follow a given design criteria. Have at least one idea about how to create product. Create a plan which shows order, equipment and tools. Describe design using an accurately labelled sketch and words. Make design decisions. Explain how product will work. Begin to use computers to show design. Select appropriate materials, fit for purpose. **Make** Work through plan in order. Begin to measure, mark out, cut and shape materials/components with some accuracy. #Select suitable tools/equipment, explain choices; begin to use them accurately. Begin to cut materials/components with some accuracy. Begin to assemble, join and combine materials and components with some accuracy. Begin join different textiles in different ways. **Evaluate** Look at design criteria while designing and making. Use design criteria to evaluate finished product. Say what I would change to make design better. Begin to evaluate existing products, considering how well they have been made, materials, whether they work, how they have been made, fit for purpose. Begin to be resourceful with practical problems.	Food – Sandwiches - How can I understand the information provided by food labels? - How can I explore the variety of sandwiches that can be created? - How can I understand the food preferences of different children in my class? - How can I design a healthy sandwich based on the likes and dislikes of children in my class? - How can I safely prepare the sandwich I have designed?	Design •Make •Cut •Fold •Glue •Attach •Sew •Stick •Decorate •Fabric •Material •Running Stitch •Over Stitch •Puppet •Aesthetic •Syringe •Tube •Balloon •Expand •Pneumatic •Air •Hinge •Movement •Recipe •Ingredients •Evaluate •Healthy •Flavour •Texture •Sandwich •Nutrition •Spread •Balanced •Vegetable

Year 3 - Topic 3 – Sandwiches

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Evaluate ▯ 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 Technical knowledge ▯ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▯ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ▯ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▯ apply their understanding of computing to program, monitor and control their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.	**Design Criteria** Children understand that a design criteria is set for people to follow and make a particular product. Children should be able to make something following a basic, given design criteria with some independence. **Impact of Technology** Children should begin to understand how researching online can help to generate ideas for a new product. They should use examples from research to help them design their own products. **Mechanical Systems** Children should begin to understand how mechanics can be used when designing and making a product. . Principles of a healthy, varied diet Children should begin to gain a better understanding of what makes up a healthy diet and have discussions about which foods are 'healthy' and which foods should be eaten in small amounts	**Technical** Use simple mechanisms to create movement. Use pneumatics to create movement. Begin to apply a range of finishing techniques with some accuracy. Choose textiles considering appearance and functionality. Begin to understand that a simple fabric shape can be used to make a textiles project. Think about user when choosing textiles. Begin to devise a template for a textiles project. Think about how to make product strong. **Food and Nutrition** Carefully select ingredients. Use equipment safely. Describe how healthy diet= variety/balance of food/drinks. Prepare and cook some dishes safely and hygienically. Grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing and spreading	Food – Sandwiches - How can I understand the information provided by food labels? - How can I explore the variety of sandwiches that can be created? - How can I understand the food preferences of different children in my class? - How can I design a healthy sandwich based on the likes and dislikes of children in my class? - How can I safely prepare the sandwich I have designed?	Design •Make •Cut •Fold •Glue •Attach •Sew •Stick •Decorate •Fabric •Material •Running Stitch •Over Stitch •Puppet •Aesthetic •Syringe •Tube •Balloon •Expand •Pneumatic •Air •Hinge •Movement •Recipe •Ingredients •Evaluate •Healthy •Flavour •Texture •Sandwich •Nutrition •Spread •Balanced •Vegetable

Year 4 – Topic 1 – Seasonal foods

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Vocabulary
Design ▯ 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 **Make** ▯ 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	**Innovation** Children can confidently understand that new methods, ideas and products can be designed for a specific design criterion. They can apply this knowledge to designing their own. **Functionality** Children can explore different designs/products in order to determine its intended audience and function. They can use this knowledge to compare and contrast their suitability for an intended audience. Children can problem solve in order to test the functionality of an item with more confidence. **Annotated Sketches** Children can explain why designs need labels and can use this knowledge to label their own designs using simple terms **Prototype** Children are introduced to the term prototype and are able to make a prototype of their own design, before making their own product. **Computer Aided Design** Children should understand that certain graphics can be designed on a computer in order to contribute to the design of a product. **Tools and Equipment** Children should understand why certain tools and equipment are chosen. They should use these to make and finish their own products. **Materials and Components** . Children are able to name different materials with much more confidence from a visual and written clues and be able to select products that are made from them and how they are fit for purpose. Children should be able to begin to select the correct components to make a simple circuit.	**Design** Use research for design ideas. Show design meets a range of requirements and is fit for purpose. Have at least one idea about how to create product and suggest improvements for design. Produce a plan and explain it to others. Say how realistic a plan is. Include an annotated sketch. Make and explain design decisions considering availability of resources explain how product will work. Begin to make a prototype. Select appropriate materials, fit for purpose; explain choices. **Make** Work through plan in order. Measure, mark out, cut and shape materials/components with some accuracy. Select suitable tools and equipment, explain choices in relation to required techniques and use accurately. Grow in confidence when cutting materials/components with some accuracy. Assemble, join and combine materials and components with some accuracy. Explain alterations to product after checking it. Grow in confidence about trying new/different ideas. Apply a range of finishing techniques with some accuracy. **Evaluate** Refer to design criteria while designing and making. Use criteria to evaluate product. Begin to explain how I could improve original design. Evaluate existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose. Develop their ability to be able to be resourceful with practical problems.	Food - Seasonal Food - How can I understand where food comes from? (global & UK) - How can I explore when British food is in season? (grown, reared, caught & processed) - How can I investigate the advantages and disadvantages of eating seasonal food? - How can I design a healthy meal that uses seasonal vegetables? (eat well plate) - How prepare a healthy meal that uses seasonal vegetables? - How can I review the meal that I prepared?	•Design •Make •Cut •Attach •Measure •Decorate •Instructions •Evaluate •Electricity •Circuit •Design criteria •Functional •Material •Technique •Seasonality •Seasonal •eared •Caught •Processed •Design •Recipe •Ingredients •Healthy •Flavour •Aesthetic •Fold •Glue •Stick •Purpose •Material •Nets •Graphics •Font/Type •Attract •Prototype •Eatwell plate •Balanced diet •Packaging

Year 4 – Topic 1 – Seasonal foods

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Vocabulary
Evaluate ▯ 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 Technical knowledge ▯ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▯ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ▯ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▯ apply their understanding of computing to program, monitor and control their products. **Cooking and nutrition** As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.	**Aesthetics** Children should discuss whether they like a chosen design using their 5 senses to guide this discussion, whilst understanding how this relates to the term 'aesthetics' **Design Criteria** Children understand that a design criteria is set for people to follow and make a particular product. They should be able to describe why this is important when designing a product, considering different audiences. Children should be able to design their own product based on a chosen design criteria with some adult guidance**.** **Impact of Technology** Children should know that technology can be used to research different design ideas when brainstorming a new idea/product. **Electrical Systems** Children should begin to understand how simple circuits can be used within certain products to make sounds, light or movement. They should use their knowledge to complete their own simple circuits within a product using sound. **Principles of a healthy varied diet** Children should be able to describe what makes up a healthy diet and should refer to the eatwell plate within their discussions. They should use this knowledge to design a meal that is balanced and could contribute to a healthy diet. **Seasonality** Children should begin to describe where food comes from, understanding which foods are grown, caught and reared. Children should begin to understand that different foods are at their best at certain times of year. They should use this knowledge to plan their own dish using vegetables that are grown in the UK.	**Technical** Plan to use a simple circuit in product. Use simple circuits in a product with confidence and begin to use more components in a circuit. Begin to use different techniques to strengthen a product. **Food and Nutrition** Explain how to be safe/hygienic. Begin to understand about food being grown, reared or caught in the UK or wider world. Describe eat well plate and how a healthy diet=variety / balance of food and drinks. Begin to understand seasonality of foods understand food can be grown, reared or caught in the UK and the wider world. Prepare and cook some dishes safely and hygienically. Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Food - Seasonal Food - How can I understand where food comes from? (global & UK) - How can I explore when British food is in season? (grown, reared, caught & processed) - How can I investigate the advantages and disadvantages of eating seasonal food? - How can I design a healthy meal that uses seasonal vegetables? (eat well plate) - How prepare a healthy meal that uses seasonal vegetables? - How can I review the meal that I prepared?	•Design •Make •Cut •Attach •Measure •Decorate •Instructions •Evaluate •Electricity •Circuit •Design criteria •Functional •Material •Technique •Seasonality •Seasonal •eared •Caught •Processed •Design •Recipe •Ingredients •Healthy •Flavour •Aesthetic •Fold •Glue •Stick •Purpose •Material •Nets •Graphics •Font/Type •Attract •Prototype •Eatwell plate •Balanced diet •Packaging

Year 4 – Topic 2 - Construction and electrical design

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Design ▯ 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 Make ▯ 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	**Innovation** Children can confidently understand that new methods, ideas and products can be designed for a specific design criterion. They can apply this knowledge to designing their own. **Functionality** Children can explore different designs/products in order to determine its intended audience and function. They can use this knowledge to compare and contrast their suitability for an intended audience. Children can problem solve in order to test the functionality of an item with more confidence. **Annotated Sketches** Children can explain why designs need labels and can use this knowledge to label their own designs using simple terms **Prototype** Children are introduced to the term prototype and are able to make a prototype of their own design, before making their own product. **Computer Aided Design** Children should understand that certain graphics can be designed on a computer in order to contribute to the design of a product. **Tools and Equipment** Children should understand why certain tools and equipment are chosen. They should use these to make and finish their own products. **Materials and Components** . Children are able to name different materials with much more confidence from a visual and written clues and be able to select products that are made from them and how they are fit for purpose. Children should be able to begin to select the correct components to make a simple circuit.	**Design** Use research for design ideas. Show design meets a range of requirements and is fit for purpose. Have at least one idea about how to create product and suggest improvements for design. Produce a plan and explain it to others. Say how realistic a plan is. Include an annotated sketch. Make and explain design decisions considering availability of resources explain how product will work. Begin to make a prototype. Select appropriate materials, fit for purpose; explain choices. **Make** Work through plan in order. Measure, mark out, cut and shape materials/components with some accuracy. Select suitable tools and equipment, explain choices in relation to required techniques and use accurately. Grow in confidence when cutting materials/components with some accuracy. Assemble, join and combine materials and components with some accuracy. Explain alterations to product after checking it. Grow in confidence about trying new/different ideas. Apply a range of finishing techniques with some accuracy. **Evaluate** Refer to design criteria while designing and making. Use criteria to evaluate product. Begin to explain how I could improve original design. Evaluate existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose. Develop their ability to .	Construction – Electrical game - How can I research and analyse a range of children's toys? - How can I explore how some toys can be programmed using a computer? - How can I plan and design an electric loop game? - How can I make my electric loop game? - How can I make my electric loop game?	•Design •Make •Cut •Attach •Measure •Decorate •Instructions •Evaluate •Electricity •Circuit •Design criteria •Functional •Material •Technique •Seasonality •Seasonal •eared •Caught •Processed •Design •Recipe •Ingredients •Healthy •Flavour •Aesthetic •Fold •Glue •Stick •Purpose •Material •Nets •Graphics •Font/Type •Attract •Prototype •Eatwell plate •Balanced diet •Packaging •Vegetable

Year 4 – Topic 2 – Construction and electrical design

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Evaluate ▯ 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 Technical knowledge ▯ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▯ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ▯ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▯ apply their understanding of computing to program, monitor and control their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.	**Aesthetics** Children should discuss whether they like a chosen design using their 5 senses to guide this discussion, whilst understanding how this relates to the term 'aesthetics' **Design Criteria** Children understand that a design criteria is set for people to follow and make a particular product. They should be able to describe why this is important when designing a product, considering different audiences. Children should be able to design their own product based on a chosen design criteria with some adult guidance**.** **Impact of Technology** Children should know that technology can be used to research different design ideas when brainstorming a new idea/product. **Electrical Systems** Children should begin to understand how simple circuits can be used within certain products to make sounds, light or movement. They should use their knowledge to complete their own simple circuits within a product using sound. **Principles of a healthy varied diet** Children should be able to describe what makes up a healthy diet and should refer to the eatwell plate within their discussions. They should use this knowledge to design a meal that is balanced and could contribute to a healthy diet. **Seasonality** Children should begin to describe where food comes from, understanding which foods are grown, caught and reared. Children should begin to understand that different foods are at their best at certain times of year. They should use this knowledge to plan their own dish using vegetables that are grown in the UK.	**Technical** Plan to use a simple circuit in product. Use simple circuits in a product with confidence and begin to use more components in a circuit. Begin to use different techniques to strengthen a product. **Food and Nutrition** Explain how to be safe/hygienic. Begin to understand about food being grown, reared or caught in the UK or wider world. Describe eat well plate and how a healthy diet=variety / balance of food and drinks. Begin to understand seasonality of foods understand food can be grown, reared or caught in the UK and the wider world. Prepare and cook some dishes safely and hygienically. Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Construction – Moving Monsters - How do I investigate a variety of familiar objects that use air to make them work? - How do I investigate techniques for making simple pneumatic systems? - How do I gather ideas for creating moving monsters? - How can I make a monster with a moving pneumatic part? - How can I make a monster with a moving pneumatic part?	••Design •Make •Cut •Attach •Measure •Decorate •Instructions •Evaluate •Electricity •Circuit •Design criteria •Functional •Material •Technique •Seasonality •Seasonal •eared •Caught •Processed •Design •Recipe •Ingredients •Healthy •Flavour •Aesthetic •Fold •Glue •Stick •Purpose •Material •Nets •Graphics •Font/Type •Attract •Prototype •Eatwell plate •Balanced diet •Packaging

Year 4 – Topic 3 – Design and Packaging

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Design 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 Make 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	**Innovation** Children can confidently understand that new methods, ideas and products can be designed for a specific design criterion. They can apply this knowledge to designing their own. **Functionality** Children can explore different designs/products in order to determine its intended audience and function. They can use this knowledge to compare and contrast their suitability for an intended audience. Children can problem solve in order to test the functionality of an item with more confidence. **Annotated Sketches** Children can explain why designs need labels and can use this knowledge to label their own designs using simple terms **Prototype** Children are introduced to the term prototype and are able to make a prototype of their own design, before making their own product. **Computer Aided Design** Children should understand that certain graphics can be designed on a computer in order to contribute to the design of a product. **Tools and Equipment** Children should understand why certain tools and equipment are chosen. They should use these to make and finish their own products. **Materials and Components** . Children are able to name different materials with much more confidence from a visual and written clues and be able to select products that are made from them and how they are fit for purpose. Children should be able to begin to select the correct components to make a simple circuit.	**Design** Use research for design ideas. Show design meets a range of requirements and is fit for purpose. Have at least one idea about how to create product and suggest improvements for design. Produce a plan and explain it to others. Say how realistic a plan is. Include an annotated sketch. Make and explain design decisions considering availability of resources explain how product will work. Begin to make a prototype. Select appropriate materials, fit for purpose; explain choices. **Make** Work through plan in order. Measure, mark out, cut and shape materials/components with some accuracy. Select suitable tools and equipment, explain choices in relation to required techniques and use accurately. Grow in confidence when cutting materials/components with some accuracy. Assemble, join and combine materials and components with some accuracy. Explain alterations to product after checking it. Grow in confidence about trying new/different ideas. Apply a range of finishing techniques with some accuracy. **Evaluate** Refer to design criteria while designing and making. Use criteria to evaluate product. Begin to explain how I could improve original design. Evaluate existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose. Develop their ability to	Design – Packaging - How can I investigate a range of packaging? - How can I construct nets for 3-D shaped packages? - How can I explore the use of graphics on packaging? - How can I design a packaging box for a particular purpose? - How can I make a packaging box by following a design?	•Design •Make •Cut •Attach •Measure •Decorate •Instructions •Evaluate •Electricity •Circuit •Design criteria •Functional •Material •Technique •Seasonality •Seasonal •eared •Caught •Processed •Design •Recipe •Ingredients •Healthy •Flavour •Aesthetic •Fold •Glue •Stick •Purpose •Material •Nets •Graphics •Font/Type •Attract •Prototype •Eatwell plate •Balanced diet •Packaging

Topic 3 – Sandwiches

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Evaluate • 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 Technical knowledge • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] • apply their understanding of computing to program, monitor and control their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.	**Aesthetics** Children should discuss whether they like a chosen design using their 5 senses to guide this discussion, whilst understanding how this relates to the term 'aesthetics' **Design Criteria** Children understand that a design criteria is set for people to follow and make a particular product. They should be able to describe why this is important when designing a product, considering different audiences. Children should be able to design their own product based on a chosen design criteria with some adult guidance. **Impact of Technology** Children should know that technology can be used to research different design ideas when brainstorming a new idea/product. **Electrical Systems** Children should begin to understand how simple circuits can be used within certain products to make sounds, light or movement. They should use their knowledge to complete their own simple circuits within a product using sound. **Principles of a healthy varied diet** Children should be able to describe what makes up a healthy diet and should refer to the eatwell plate within their discussions. They should use this knowledge to design a meal that is balanced and could contribute to a healthy diet. **Seasonality** Children should begin to describe where food comes from, understanding which foods are grown, caught and reared. Children should begin to understand that different foods are at their best at certain times of year. They should use this knowledge to plan their own dish using vegetables that are grown in the UK.	**Technical** Plan to use a simple circuit in product. Use simple circuits in a product with confidence and begin to use more components in a circuit. Begin to use different techniques to strengthen a product. **Food and Nutrition** Explain how to be safe/hygienic. Begin to understand about food being grown, reared or caught in the UK or wider world. Describe eat well plate and how a healthy diet=variety / balance of food and drinks. Begin to understand seasonality of foods understand food can be grown, reared or caught in the UK and the wider world. Prepare and cook some dishes safely and hygienically. Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Design – Packaging - How can I investigate a range of packaging? - How can I construct nets for 3-D shaped packages? - How can I explore the use of graphics on packaging? - How can I design a packaging box for a particular purpose? - How can I make a packaging box by following a design?	•Design •Make •Cut •Attach •Measure •Decorate •Instructions •Evaluate •Electricity •Circuit •Design criteria •Functional •Material •Technique •Seasonality •Seasonal •eared •Caught •Processed •Design •Recipe •Ingredients •Healthy •Flavour •Aesthetic •Fold •Glue •Stick •Purpose •Material •Nets •Graphics •Font/Type •Attract •Prototype •Eatwell plate •Balanced diet •Packaging

Year 5 – Topic 1 – Fashion and Textiles

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Vocabulary
Design □ 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 **Make** □ 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	**Innovation** Children can discuss a range of different audiences and how you would create a new product that is fit for intended audience. They can apply this knowledge to designing their own new product **Functionality** Children can confidently explain a product's purpose and evaluate whether it is suitable for the intended function. They can begin to use this knowledge to design their own products, fit for purpose, for multiple different audiences. **Annotated Sketches** Children can explain why designs need labels and can use this knowledge to label their designs with more detail. **Prototype** Children are introduced to the term pattern piece and are able to make a pattern piece of their own design, before making their own product. **Tools and Equipment** Children should understand why certain tools and equipment are chosen and use this knowledge to select their own equipment when designing and making a product. **Materials and Components** Children are able to confidently name different materials from visual and written clues and be able to select appropriate materials for their own designs. Children should be able to describe the different fabrics and materials used in their textiles unit.	**Design** Take a user's view into account when designing. Begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose. Have a range of ideas. Produce a logical, realistic plan and explain it to others. Use annotated sketches. Clearly explain how parts of product will work. Model and refine design ideas by making prototypes and using pattern pieces. Select appropriate materials, fit for purpose; explain choices, considering functionality. Explain how product will appeal to an audience. **Make** Create and follow detailed step-by-step plan. Mainly accurately measure, mark out, cut and shape materials/components. Use selected tools/equipment with good level of precision. Produce suitable lists of tools, equipment/materials needed. Use techniques that involve a small number of steps. Cut materials/components with accuracy. Explain how to join things in a different way. Mainly accurately assemble, join and combine materials and components. Refine products after testing. Grow in confidence about trying new/different ideas. Mainly accurately apply a range of finishing techniques **Evaluate** Evaluate quality of design while designing and making. Evaluate ideas and finished product against specification, considering purpose and appearance. Test and evaluate final product. Evaluate and discuss existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose. Mostly be able to independently be resourceful with practical problems.	Textiles – Fashion and textiles - How can I investigate and analyse items made using textiles, the materials used and how they are made? - How can I explore some ways in which textiles are joined and decorated? - How can I design an item made using textiles, and draw pattern pieces? - How can I use pattern pieces to measure, mark and cut fabric, to sew design elements according to a design? - How can I join fabric pieces by hand sewing to add detail to my designs?	• Design • Make • Cut • Join • Sew • Hem • Textiles • Pattern • Fashion • Fabric • Attach • Decorate • Material • Running stitch • Research • Evaluate • Aesthetic • Instructions • Thread • Needle • Glue • Planet • Solar system • Size • Proportion • Technique • Paint • Cook • Weigh • Ingredients • Recipe • Measure • Proving • Sift • Wheat • Processed • Yeast • Gluten • Bake • Temperature • Healthy • Texture • Hollow • Balanced diet • Fold • Knead

Year 5 - Topic 1 – Fashion and Textiles

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Vocabulary
Evaluate ▯ 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 Technical knowledge ▯ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▯ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ▯ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▯ apply their understanding of computing to program, monitor and control their products. **Cooking and nutrition** As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.	**Aesthetics** Children should compare and contrast the aesthetics of different products. **Design Criteria** Children understand that a design criteria is set for people to follow and make a particular product. They should be able to describe why this is important when designing a product, considering different audiences Children should be able to design their own product based on a chosen design criteria independently. **Impact of Technology** Children should describe the advantage of using technology to brainstorm ideas for a new product. With adult guidance, they should use a computer/iPad to research different products that are made using textiles. **Principles of a healthy varied diet** Children should be able to describe what makes up a healthy diet and should refer to the eatwell plate within their discussions. Children should be able to discuss why certain foods are important in a balanced diet and then be able to design a product that use certain ingredients that are important for a healthy diet.	**Technical** Think about user and aesthetics when choosing textiles. Use own template/pattern. Think about how to make product strong and look better. Think of a range of ways to join things. Begin to understand that a single textiles project can be made from a combination of fabric shapes. Think carefully about what would improve the final product **Food and Nutrition** Explain how to be safe / hygienic and follow own guidelines. Present product well - interesting, attractive, fit for purpose. Describe how recipes can be adapted to change appearance, taste, texture, aroma. Explain how there are different substances in food / drink needed for health. Prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source. Use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	Textiles – Fashion and textiles - How can I investigate and analyse items made using textiles, the materials used and how they are made? - How can I explore some ways in which textiles are joined and decorated? - How can I design an item made using textiles, and draw pattern pieces? - How can I use pattern pieces to measure, mark and cut fabric, to sew design elements according to a design? - How can I join fabric pieces by hand sewing to add detail to my designs?	• Design • Make • Cut • Join • Sew • Hem • Textiles • Pattern • Fashion • Fabric • Attach • Decorate • Material • Running stitch • Research • Evaluate • Aesthetic • Instructions • Thread • Needle • Glue • Planet • Solar system • Size • Proportion • Technique • Paint • Cook • Weigh • Ingredients • Recipe • Measure • Proving • Sift • Wheat • Processed • Yeast • Gluten • Bake • Temperature • Healthy • Texture • Hollow • Balanced diet • Fold • Knead

Year 5 – Topic 2 – Construction – The Solar System					
National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)	
Design 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 Make 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	**Innovation** Children can discuss a range of different audiences and how you would create a new product that is fit for intended audience. They can apply this knowledge to designing their own new product **Functionality** Children can confidently explain a product's purpose and evaluate whether it is suitable for the intended function. They can begin to use this knowledge to design their own products, fit for purpose, for multiple different audiences. **Annotated Sketches** Children can explain why designs need labels and can use this knowledge to label their designs with more detail. **Prototype** Children are introduced to the term pattern piece and are able to make a pattern piece of their own design, before making their own product. **Tools and Equipment** Children should understand why certain tools and equipment are chosen and use this knowledge to select their own equipment when designing and making a product. **Materials and Components** Children are able to confidently name different materials from visual and written clues and be able to select appropriate materials for their own designs. Children should be able to describe the different fabrics and materials used in their textiles unit.	**Design** Take a user's view into account when designing. Begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose. Have a range of ideas. Produce a logical, realistic plan and explain it to others. Use annotated sketches. Clearly explain how parts of product will work. Model and refine design ideas by making prototypes and using pattern pieces. Select appropriate materials, fit for purpose; explain choices, considering functionality. Explain how product will appeal to an audience. **Make** Create and follow detailed step-by-step plan. Mainly accurately measure, mark out, cut and shape materials/components. Use selected tools/equipment with good level of precision. Produce suitable lists of tools, equipment/materials needed. Use techniques that involve a small number of steps. Cut materials/components with accuracy. Explain how to join things in a different way. Mainly accurately assemble, join and combine materials and components. Refine products after testing. Grow in confidence about trying new/different ideas. Mainly accurately apply a range of finishing techniques **Evaluate** Evaluate quality of design while designing and making. Evaluate ideas and finished product against specification, considering purpose and appearance. Test and evaluate final product. Evaluate and discuss existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose. Mostly be able to independently be resourceful with practical problems.	Construction – Solar system - How do I research the different planets? - How do I plan and design my mini solar system? - How do I create my own mini solar system? - How do I create my own mini solar system? - How do I complete my own mini solar system?	• Design • Make • Cut • Join • Sew • Hem • Textiles • Pattern • Fashion • Fabric • Attach • Decorate • Material • Running stitch • Research • Evaluate • Aesthetic • Instructions • Thread • Needle • Glue • Planet • Solar system • Size • Proportion • Technique • Paint • Cook • Weigh • Ingredients • Recipe • Measure • Proving	• Sift • Wheat • Processed • Yeast • Gluten • Bake • Temperature • Healthy • Texture • Hollow • Balanced diet • Fold • Knead

Year 4 – Topic 2 – Construction and electrical design

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)	
Evaluate ▯ 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 Technical knowledge ▯ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▯ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ▯ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▯ apply their understanding of computing to program, monitor and control their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.	**Aesthetics** Children should compare and contrast the aesthetics of different products. **Design Criteria** Children understand that a design criteria is set for people to follow and make a particular product. They should be able to describe why this is important when designing a product, considering different audiences Children should be able to design their own product based on a chosen design criteria independently. **Impact of Technology** Children should describe the advantage of using technology to brainstorm ideas for a new product. With adult guidance, they should use a computer/iPad to research different products that are made using textiles. **Principles of a healthy varied diet** Children should be able to describe what makes up a healthy diet and should refer to the eatwell plate within their discussions. Children should be able to discuss why certain foods are important in a balanced diet and then be able to design a product that use certain ingredients that are important for a healthy diet.	**Technical** Think about user and aesthetics when choosing textiles. Use own template/pattern. Think about how to make product strong and look better. Think of a range of ways to join things. Begin to understand that a single textiles project can be made from a combination of fabric shapes. Think carefully about what would improve the final product **Food and Nutrition** Explain how to be safe / hygienic and follow own guidelines. Present product well - interesting, attractive, fit for purpose. Describe how recipes can be adapted to change appearance, taste, texture, aroma. Explain how there are different substances in food / drink needed for health. Prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source. Use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	Construction – Solar system - How do I research the different planets? - How do I plan and design my mini solar system? - How do I create my own mini solar system? - How do I create my own mini solar system? - How do I complete my own mini solar system?	• Design • Make • Cut • Join • Sew • Hem • Textiles • Pattern • Fashion • Fabric • Attach • Decorate • Material • Running stitch • Research • Evaluate • Aesthetic • Instructions • Thread • Needle • Glue • Planet • Solar system • Size • Proportion • Technique • Paint • Cook • Weigh • Ingredients • Recipe • Measure • Proving	• Sift • Wheat • Processed • Yeast • Gluten • Bake • Temperature • Healthy • Texture • Hollow • Balanced diet • Fold • Knead

Year 5 – Topic 3 – Food and Bread					
National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)	
Design □ 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 Make □ 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	**Innovation** Children can discuss a range of different audiences and how you would create a new product that is fit for intended audience. They can apply this knowledge to designing their own new product **Functionality** Children can confidently explain a product's purpose and evaluate whether it is suitable for the intended function. They can begin to use this knowledge to design their own products, fit for purpose, for multiple different audiences. **Annotated Sketches** Children can explain why designs need labels and can use this knowledge to label their designs with more detail. **Prototype** Children are introduced to the term pattern piece and are able to make a pattern piece of their own design, before making their own product. **Tools and Equipment** Children should understand why certain tools and equipment are chosen and use this knowledge to select their own equipment when designing and making a product. **Materials and Components** Children are able to confidently name different materials from visual and written clues and be able to select appropriate materials for their own designs. Children should be able to describe the different fabrics and materials used in their textiles unit.	**Design** Take a user's view into account when designing. Begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose. Have a range of ideas. Produce a logical, realistic plan and explain it to others. Use annotated sketches. Clearly explain how parts of product will work. Model and refine design ideas by making prototypes and using pattern pieces. Select appropriate materials, fit for purpose; explain choices, considering functionality. Explain how product will appeal to an audience. **Make** Create and follow detailed step-by-step plan. Mainly accurately measure, mark out, cut and shape materials/components. Use selected tools/equipment with good level of precision. Produce suitable lists of tools, equipment/materials needed. Use techniques that involve a small number of steps. Cut materials/components with accuracy. Explain how to join things in a different way. Mainly accurately assemble, join and combine materials and components. Refine products after testing. Grow in confidence about trying new/different ideas. Mainly accurately apply a range of finishing techniques **Evaluate** Evaluate quality of design while designing and making. Evaluate ideas and finished product against specification, considering purpose and appearance. Test and evaluate final product. Evaluate and discuss existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose. Mostly be able to independently be resourceful with practical problems.	Food – Bread - How can I investigate and evaluate bread products according to their characteristics? - How can I explain that bread is an important part of a balanced diet and that it can be eaten in different ways? - How can I research and compare which different ingredients are needed to make different bread products? - How can I design a bread product for a particular person or event? - How can I make a bread product?	• Design • Make • Cut • Join • Sew • Hem • Textiles • Pattern • Fashion • Fabric • Attach • Decorate • Material • Running stitch • Research • Evaluate • Aesthetic • Instructions • Thread • Needle • Glue • Planet • Solar system • Size • Proportion • Technique • Paint • Cook • Weigh • Ingredients • Recipe • Measure • Proving	• Sift • Wheat • Processed • Yeast • Gluten • Bake • Temperature • Healthy • Texture • Hollow • Balanced diet • Fold • Knead

Year 5 – Topic 3 – Food and Bread

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)
Evaluate 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 Technical knowledge apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] apply their understanding of computing to program, monitor and control their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.	**Aesthetics** Children should compare and contrast the aesthetics of different products. **Design Criteria** Children understand that a design criteria is set for people to follow and make a particular product. They should be able to describe why this is important when designing a product, considering different audiences Children should be able to design their own product based on a chosen design criteria independently. **Impact of Technology** Children should describe the advantage of using technology to brainstorm ideas for a new product. With adult guidance, they should use a computer/iPad to research different products that are made using textiles. **Principles of a healthy varied diet** Children should be able to describe what makes up a healthy diet and should refer to the eatwell plate within their discussions. Children should be able to discuss why certain foods are important in a balanced diet and then be able to design a product that use certain ingredients that are important for a healthy diet.	**Technical** Think about user and aesthetics when choosing textiles. Use own template/pattern. Think about how to make product strong and look better. Think of a range of ways to join things. Begin to understand that a single textiles project can be made from a combination of fabric shapes. Think carefully about what would improve the final product **Food and Nutrition** Explain how to be safe / hygienic and follow own guidelines. Present product well - interesting, attractive, fit for purpose. Describe how recipes can be adapted to change appearance, taste, texture, aroma. Explain how there are different substances in food / drink needed for health. Prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source. Use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	Food – Bread - How can I investigate and evaluate bread products according to their characteristics? - How can I explain that bread is an important part of a balanced diet and that it can be eaten in different ways? - How can I research and compare which different ingredients are needed to make different bread products? - How can I design a bread product for a particular person or event? - How can I make a bread product?	• Design • Make • Cut • Join • Sew • Hem • Textiles • Pattern • Fashion • Fabric • Attach • Decorate • Material • Running stitch • Research • Evaluate • Aesthetic • Instructions • Thread • Needle • Glue • Planet • Solar system • Size • Proportion • Technique • Paint • Cook • Weigh • Ingredients • Recipe • Measure • Proving • Sift • Wheat • Processed • Yeast • Gluten • Bake • Temperature • Healthy • Texture • Hollow • Balanced diet • Fold • Knead

Year 6 – Topic 1 – Global Food

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Vocabulary	
Design ▯ 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 **Make** ▯ 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	**Innovation** Children can explain confidently why a new product should be designed for a particular audience. They can use subject specific vocabulary in their discussion. **Functionality** Children understand the function of trusses, arches and beams in supporting a bridge structure. They can confidently design what criteria is required ensure a product is suitable for its intended purpose. Use their knowledge of functionality to evaluate whether their design works and meets the user's needs. **Annotated Sketches** Children confidently explain why and how labels are used on designs and label their own designs with detail and technical vocabulary, noting different materials, design elements and tool required **Prototype** Children are able to explain why a prototype/pattern piece is needed and are able to start problem solving design faults from their own prototypes. **Tools and Equipment** Children should confidently explain why they have chosen certain tools to create a product of their own choosing **Materials and Components** Children should confidently name and describe different materials. They should pick suitable materials for their products dependent upon their functionality and how appropriate they are for their intended use. They should consider which materials work better in order to make a structure strong and secure.	**Design** Use research of user's individual needs, wants, requirements for design. Identify features of design that will appeal to the intended user. Create own design criteria and specification. Come up with innovative design ideas. Follow and refine a logical plan. Use annotated sketches. Clearly explain how parts of design will work, and how they are fit for purpose. Independently model and refine design ideas by making prototypes. Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics. Explain how product will appeal to audience; make changes to improve quality. **Make** Create, follow, and adapt detailed step-by-step plans. Accurately measure, mark out, cut and shape materials/components. Use selected tools and equipment precisely. Produce suitable lists of tools, equipment, materials needed, considering constraints. Cut materials/components with accuracy and confidence. Accurately assemble, join and combine materials and components. Refine product after testing, considering aesthetics, functionality and purpose. Be confident to try new/different ideas. Accurately apply a range of finishing techniques. Use techniques that involve a number of steps. **Evaluate** Evaluate quality of design while designing and making; is it fit for purpose? Keep checking design is best it can be. Evaluate ideas and finished product against specification, stating if it's fit for purpose. Test and evaluate final product; explain what would improve it and the effect different resources may have had. Securely be able to independently be resourceful with practical problems.	Food – Global food - How can I understand where in the world ingredients come from? - How can I explain that diets around the world are based on similar food groups? - How can I explain why rice is a good table food? How can I cook rice? - How can I demonstrate a range of food skills and techniques? (Mexican food) - How can I demonstrate a range of basic and advanced food skills and cooking techniques? (Chinese food)	Design Make Cook Taste Recipe Ingredients Global Texture Flavour Nutrition Technique National Prepare Healthy Balanced diet Eatwell plate Locality Seasonality Food groups Evaluate Join Glue Tools Equipment Aesthetic Cam Mechanism Mechanics Join Movement Victorian Cut Measure Material	Bridge Linear Design Criteria Join Joints Purpose Trusses Arches Suspension Pillars Beams Three-dimensional Prototype Analyse Structure Functional

Year 6 – Topic 1 – Global food

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Vocabulary	
Evaluate ▯ 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 Technical knowledge ▯ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▯ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ▯ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▯ apply their understanding of computing to program, monitor and control their products. **Cooking and nutrition** As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.	**Aesthetics** Children should discuss aesthetics of different products, compare and contrast these products using the word aesthetics in their discussions**.** **Design Criteria** Children understand that design criterion are set for people to follow and make a particular product. They should be able to confidently explain why this is important when designing a product, considering different audiences. Children should design and make their own product that is fit for purpose, based upon a design criteria that they have decided upon given the intended audience of their product**.** **Impact of Technology** Children can confidently use technology for research purposes. Children should be able to discuss the advantages of using technology when designing a new product. They should refer to how technology can help to problem solve when problems arise with prototypes. **Mechanical Systems** Children should know that products can be made using mechanics. They should understand how these improve a product and effect the structure and movement of a product. They should apply their knowledge to creating an effect cams system. **Principles of a healthy varied diet** Children should be able to explain what makes up a healthy, balanced diet whilst referring to the eatwell plate. They should begin to understand how seasonality and locality of foods can impact the availability of a varied and healthy diet. They should compare different diets from different countries and apply their knowledge to preparing something from each location. **Seasonality** Children should describe where food comes from and explain where in the world food grown, caught and reared. They should begin to understand how locality of certain ingredients contributes to different countries having different diet choices to the UK. They should apply this knowledge to preparing food from around the world.	**Technical** Confidently know how to make product strong and look better. Securely use different techniques to strengthen a product. Use cams to create movement. **Food and Nutrition** Understand a recipe can be adapted by adding / substituting ingredients. Explain seasonality of foods. Name some types of food that are grown, reared or caught in the UK or wider world. Adapt recipes to change appearance, taste, texture or aroma. Prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	Food – Global food - How can I understand where in the world ingredients come from? - How can I explain that diets around the world are based on similar food groups? - How can I explain why rice is a good table food? How can I cook rice? - How can I demonstrate a range of food skills and techniques? (Mexican food) - How can I demonstrate a range of basic and advanced food skills and cooking techniques? (Chinese food)	Design Make Cook Taste Recipe Ingredients Global Texture Flavour Nutrition Technique National Prepare Healthy Balanced diet Eatwell plate Locality Seasonality Food groups Evaluate Join Glue Tools Equipment Aesthetic Cam Mechanism Mechanics Join Movement Victorian Cut Measure Material	Bridge Linear Design Criteria Join Joints Purpose Trusses Arches Suspension Pillars Beams Three-dimensional Prototype Analyse Structure Functional

Year 6 – Topic 2 –Construction – Victorian Toys					
National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)	
Design • 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 Make • 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	**Innovation** Children can explain confidently why a new product should be designed for a particular audience. They can use subject specific vocabulary in their discussion. **Functionality** Children understand the function of trusses, arches and beams in supporting a bridge structure. They can confidently design what criteria is required ensure a product is suitable for its intended purpose. Use their knowledge of functionality to evaluate whether their design works and meets the user's needs. **Annotated Sketches** Children confidently explain why and how labels are used on designs and label their own designs with detail and technical vocabulary, noting different materials, design elements and tool required **Prototype** Children are able to explain why a prototype/pattern piece is needed and are able to start problem solving design faults from their own prototypes. **Tools and Equipment** Children should confidently explain why they have chosen certain tools to create a product of their own choosing **Materials and Components** Children should confidently name and describe different materials. They should pick suitable materials for their products dependent upon their functionality and how appropriate they are for their intended use. They should consider which materials work	**Design** Use research of user's individual needs, wants, requirements for design. Identify features of design that will appeal to the intended user. Create own design criteria and specification. Come up with innovative design ideas. Follow and refine a logical plan. Use annotated sketches. Clearly explain how parts of design will work, and how they are fit for purpose. Independently model and refine design ideas by making prototypes. Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics. Explain how product will appeal to audience; make changes to improve quality. **Make** Create, follow, and adapt detailed step-by-step plans. Accurately measure, mark out, cut and shape materials/components. Use selected tools and equipment precisely. Produce suitable lists of tools, equipment, materials needed, considering constraints. Cut materials/components with accuracy and confidence. Accurately assemble, join and combine materials and components. Refine product after testing, considering aesthetics, functionality and purpose. Be confident to try new/different ideas. Accurately apply a range of finishing techniques. Use techniques that involve a number of steps. **Evaluate** Evaluate quality of design while designing and making; is it fit for purpose? Keep checking design is best it can be. Evaluate ideas and finished product against specification, stating if it's fit for purpose. Test and evaluate final product; explain what would improve it	Construction – Victorian toys - How do I research Victorian Toys? - How do I research cam mechanisms? - How do I plan and design my Victorian toy? - How do I create my Victorian toy with a Cam mechanism? - How do I create my Victorian toy with a Cam mechanism?	Design Make Cook Taste Recipe Ingredients Global Texture Flavour Nutrition Technique National Prepare Healthy Balanced diet Eatwell plate Locality Seasonality Food groups Evaluate Join Glue Tools Equipment Aesthetic Cam Mechanism Mechanics Join Movement Victorian Cut Measure Material	Bridge Linear Design Criteria Join Joints Purpose Trusses Arches Suspension Pillars Beams Three-dimensional Prototype Analyse Structure Functional

Year 6 – Topic 2 – Construction – Victorian toys

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)	
Evaluate ⍰ 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 Technical knowledge ⍰ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ⍰ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ⍰ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ⍰ apply their understanding of computing to program, monitor and control their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how	**Aesthetics** Children should discuss aesthetics of different products, compare and contrast these products using the word aesthetics in their discussions. **Design Criteria** Children understand that design criterion are set for people to follow and make a particular product. They should be able to confidently explain why this is important when designing a product, considering different audiences. Children should design and make their own product that is fit for purpose, based upon a design criteria that they have decided upon given the intended audience of their product. **Impact of Technology** Children can confidently use technology for research purposes. Children should be able to discuss the advantages of using technology when designing a new product. They should refer to how technology can help to problem solve when problems arise with prototypes. **Mechanical Systems** Children should know that products can be made using mechanics. They should understand how these improve a product and effect the structure and movement of a product. They should apply their knowledge to creating an effect cams system. **Principles of a healthy varied diet** Children should be able to explain what makes up a healthy, balanced diet whilst referring to the eatwell plate. They should begin to understand how seasonality and locality of foods can impact the availability of a varied and healthy diet. They should compare different diets from different countries and apply their knowledge to preparing something from each location. **Seasonality** Children should describe where food comes from and explain where in the world food grown, caught and reared. They should begin to understand how locality of certain ingredients contributes to different countries having different diet choices to the UK. They should apply this knowledge to preparing food from around the world.	**Technical** Confidently know how to make product strong and look better. Securely use different techniques to strengthen a product. Use cams to create movement. **Food and Nutrition** Understand a recipe can be adapted by adding / substituting ingredients. Explain seasonality of foods. Name some types of food that are grown, reared or caught in the UK or wider world. Adapt recipes to change appearance, taste, texture or aroma. Prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	Construction – Victorian toys - How do I research Victorian Toys? - How do I research cam mechanisms? - How do I plan and design my Victorian toy? - How do I create my Victorian toy with a Cam mechanism? - How do I create my Victorian toy with a Cam mechanism?	Design Make Cook Taste Recipe Ingredients Global Texture Flavour Nutrition Technique National Prepare Healthy Balanced diet Eatwell plate Locality Seasonality Food groups Evaluate Join Glue Tools Equipment Aesthetic Cam Mechanism Mechanics Join Movement Victorian Cut Measure Material	Bridge Linear Design Criteria Join Joints Purpose Trusses Arches Suspension Pillars Beams Three-dimensional Prototype Analyse Structure Functional

Year 6 – Topic 3 – Construction – Bridges					
National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)	
Design 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 Make 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	**Innovation** Children can explain confidently why a new product should be designed for a particular audience. They can use subject specific vocabulary in their discussion. **Functionality** Children understand the function of trusses, arches and beams in supporting a bridge structure. They can confidently design what criteria is required ensure a product is suitable for its intended purpose. Use their knowledge of functionality to evaluate whether their design works and meets the user's needs. **Annotated Sketches** Children confidently explain why and how labels are used on designs and label their own designs with detail and technical vocabulary, noting different materials, design elements and tool required **Prototype** Children are able to explain why a prototype/pattern piece is needed and are able to start problem solving design faults from their own prototypes. **Tools and Equipment** Children should confidently explain why they have chosen certain tools to create a product of their own choosing **Materials and Components** Children should confidently name and describe different materials. They should pick suitable materials for their products dependent upon their functionality and how appropriate they are for their intended use. They should consider which materials work better in order to make a structure strong and secure.	**Design** Use research of user's individual needs, wants, requirements for design. Identify features of design that will appeal to the intended user. Create own design criteria and specification. Come up with innovative design ideas. Follow and refine a logical plan. Use annotated sketches. Clearly explain how parts of design will work, and how they are fit for purpose. Independently model and refine design ideas by making prototypes. Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics. Explain how product will appeal to audience; make changes to improve quality. **Make** Create, follow, and adapt detailed step-by-step plans. Accurately measure, mark out, cut and shape materials/components. Use selected tools and equipment precisely. Produce suitable lists of tools, equipment, materials needed, considering constraints. Cut materials/components with accuracy and confidence. Accurately assemble, join and combine materials and components. Refine product after testing, considering aesthetics, functionality and purpose. Be confident to try new/different ideas. Accurately apply a range of finishing techniques. Use techniques that involve a number of steps. **Evaluate** Evaluate quality of design while designing and making; is it fit for purpose? Keep checking design is best it can be. Evaluate ideas and finished product against specification, stating if it's fit for purpose. Test and evaluate final product; explain what would improve it and the effect different resources may have had. Securely be able to independently be resourceful with practical	Construction – Bridges - How can I explore ways in which pillars and beams are used to span gaps? - How can I explore ways in which bridges are strengthened? (trusses and arches) - How can I understand how suspension bridges are able to span long distances? - How can I develop criteria and design a prototype bridge for a purpose? - How can I make a bridge from my design and prototype?	Design Make Cook Taste Recipe Ingredients Global Texture Flavour Nutrition Technique National Prepare Healthy Balanced diet Eatwell plate Locality Seasonality Food groups Evaluate Join Glue Tools Equipment Aesthetic Cam Mechanism Mechanics Join Movement Victorian Cut Measure Material	Bridge Linear Design Criteria Join Joints Purpose Trusses Arches Suspension Pillars Beams Three-dimensional Prototype Analyse Structure Functional

Year 6 – Topic 3 – Construction – Bridges

National Curriculum statements	Key Concepts	Key Skills	Topic specific knowledge	Essential vocabulary (Use and define)	
Evaluate ▯ 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 Technical knowledge ▯ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▯ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ▯ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▯ apply their understanding of computing to program, monitor and control their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and	**Aesthetics** Children should discuss aesthetics of different products, compare and contrast these products using the word aesthetics in their discussions**.** **Design Criteria** Children understand that design criterion are set for people to follow and make a particular product. They should be able to confidently explain why this is important when designing a product, considering different audiences. Children should design and make their own product that is fit for purpose, based upon a design criteria that they have decided upon given the intended audience of their product**.** **Impact of Technology** Children can confidently use technology for research purposes. Children should be able to discuss the advantages of using technology when designing a new product. They should refer to how technology can help to problem solve when problems arise with prototypes. **Mechanical Systems** Children should know that products can be made using mechanics. They should understand how these improve a product and effect the structure and movement of a product. They should apply their knowledge to creating an effect cams system. **Principles of a healthy varied diet** Children should be able to explain what makes up a healthy, balanced diet whilst referring to the eatwell plate. They should begin to understand how seasonality and locality of foods can impact the availability of a varied and healthy diet. They should compare different diets from different countries and apply their knowledge to preparing something from each location. **Seasonality** Children should describe where food comes from and explain where in the world food grown, caught and reared. They should begin to understand how locality of certain ingredients contributes to different countries having different diet choices to the UK. They should apply this knowledge to preparing food from around the world.	**Technical** Confidently know how to make product strong and look better. Securely use different techniques to strengthen a product. Use cams to create movement. **Food and Nutrition** Understand a recipe can be adapted by adding / substituting ingredients. Explain seasonality of foods. Name some types of food that are grown, reared or caught in the UK or wider world. Adapt recipes to change appearance, taste, texture or aroma. Prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	Construction – Bridges - How can I explore ways in which pillars and beams are used to span gaps? - How can I explore ways in which bridges are strengthened? (trusses and arches) - How can I understand how suspension bridges are able to span long distances? - How can I develop criteria and design a prototype bridge for a purpose? - How can I make a bridge from my design and prototype?	Design Make Cook Taste Recipe Ingredients Global Texture Flavour Nutrition Technique National Prepare Healthy Balanced diet Eatwell plate Locality Seasonality Food groups Evaluate Join Glue Tools Equipment Aesthetic Cam Mechanism Mechanics Join Movement Victorian Cut Measure Material	Bridge Linear Design Criteria Join Joints Purpose Trusses Arches Suspension Pillars Beams Three-dimensional Prototype Analyse Structure Functional