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| Year Group | Textiles | Cooking | Building |
| Year 1 | **Key question:** How can we make our classroom beautiful?**Idea/concept:** Create bunting for the classroom (tearing, cutting, folding, curling, sewing - Binca)**NC links:** * Design appealing products for others and themselves based on design criteria.
* Select and use a range of materials, tools and equipment to perform practical tasks.
 | **Key question:** How exciting can sandwiches be?**Idea/concept:** Sensational Sandwiches! Create healthy sandwiches.**NC links:*** Explore and evaluate a range of existing products.
* Design purposeful products based on criteria.
* Use the basic principles of a healthy and varied diet.
* Select from and use a wide range of ingredients.
 | **Key question:** Can we make a toy move?**Idea/concept:** Make a moveable toy.Link to history - How have toys changed over time?**NC links:*** Explore and evaluate a range of existing products.
* Explore how they can use mechanisms (levers, sliders, wheels, axles) in their products.
* Evaluate their ideas and products against design criteria.
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| Year 2 | **Key question:** Why are poppies important?Link to history - Remembrance Day.**Idea/concept:** Poppy brooches.**NC links:*** Design purposeful products for themselves and others based on design criteria.
* Evaluate their ideas and products against design criteria.
 | **Key question:** What ingredients can we use to make dips?**Idea/concept:** Delicious dips! Design a recipe and use it to make their own dip.**NC links:*** Explore and evaluate a range of existing products.
* Understand where food comes from.
* Design appealing products based on design criteria.
* Select from a range of tools and equipment to perform practical tasks - cutting, chopping, mixing etc.
 | **Key question:** Why do ships need to be waterproof?Link to history - The Titanic.**Idea/concept:** Waterproof models of The Titanic.**NC links:*** Generate, develop, model and communicate their ideas through talking, drawing, templates, models and ICT.
* Select from and use a wide range of materials according to their characteristics (ie. Waterproof, strong)
* Build structures, exploring how they can be made stronger, stiffer and more stable.
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| Year 3 | **Key question:** How can we use stitching to make a pattern?**Idea/concept:** Cross stitch book marks (Make a gift).**NC links:*** Use research and develop design criteria to inform the design of functional, appealing products that are fit for purpose and aimed at particular individuals.
* Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work,
 | **Key question:** What makes Bara Brith fantastic?**Idea/concept:** Welsh Bara Brith and packaging using ICT.Links to geography - Wonderful Wales.**NC links:** * Investigate and analyse a range of existing products.
* Use research and develop design criteria to inform the design of functional, appealing products.
* Prepare and cook a variety of dishes using a range of cooking techniques.
 | **Key question:** Did the Egyptian pyramids have secret chambers and traps?**Idea/concept:** 3D Egyptian pyramid and sarcophagus with chambers and levers.Links to history - Ancient Eqyptians.**NC links:** * Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes and computer-aided design.
* Understand and use mechanical systems in their products eg. pulleys/levers/linkages).
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| Year 4 | **Key question:** Do pillows have to be rectangular?**Idea/concept:** Create a pillow for a particular individual.**NC links:*** Use research to develop design criteria to inform the design of products that are fit for purpose.
* Develop ideas through annotated sketches, pattern pieces and computer aided design.
* Select from and use a wide range of materials, tools and equipment needed to perform practical tasks.
* Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
 | **Key question:** What do we eat that comes from Greece?**Idea/concept:** Design a Greek banquet.Links to history and geography - Greece.**NC links:** * Investigate and analyse a range of existing products that originate from Greece.
* Know where and how a variety of ingredients are grown.
* Understand and apply the principles of a healthy and varied diet.
* Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.
 | **Key question:** How did the Romans build their chariots?**Idea/concept:** Design and make a Roman chariot.Links to history - Ancient Rome.**NC links:*** Use research to develop design criteria to inform the design of products.
* Understand how key events in design and technology have helped shape the world.
* Select from and use a wide range of tools and equipment to perform practical tasks accurately.
* Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
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| Year 5 | **Key question:** Who created the first teddy bear? (Richard Steiff)**Idea/concept:** Stuffed toys - Victorian teddy bears.**NC links:*** Understand how key individuals in design and technology have helped shape the world.
* Use research to inform the design of innovative, functional and appealing products that are fit for purpose.
* Generate, develop, model and communicate their ideas through discussion, annotated sketches, pattern pieces and computer aided design.
* Select from and use a wider range of materials and components, including construction materials and textiles according to their functional properties and aesthetic qualities.
* Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
* Evaluate their ideas and products against design criteria and consider the views of others to improve their work.
 | **Key question:** Which recipe makes the best bread?**Idea/concept:** Great British bread off.**NC links:*** Understand seasonality and know where and how a variety of ingredients are grown and processed.
* Investigate and analyse a range of existing products.
* Select from and use a wider range of materials and components, including ingredients, according to their properties and aesthetic qualities.
* Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.
* Evaluate their ideas and products and consider the views of others to improve their work.
 | **Key question:** How effective was Viking transport to England?**Idea/concept:** Viking longboat model with levers/mechanisms.Links to history - The Vikings.**NC links:*** Research, generate, develop, model and communicate ideas through use of ICT, discussion, annotated sketches, cross-sectional and exploded diagrams and prototypes.
* Select from and use a wider range of materials and components for constructions according to their properties.
* Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].
* Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
* Test and evaluate their ideas and products and consider the views of others to improve their work.
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| Year 6 | **Key question:** Can we turn old clothes into treasure?**Idea/concept:** Make do and mend patchwork bag. Links to history - WW2.**NC links:** * Use research to inform the design of innovative, functional and appealing products that are fit for purpose.
* Generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes, pattern pieces and computer aided design.
* Select from and use a wider range of materials and components, including textiles according to their functional properties and aesthetic qualities.
* Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
* Evaluate their ideas and products against design criteria and consider the views of others to improve their work.
 | **Key question:** Which food is Mexico famous for?**Idea/concept:** Design and create a Mexican banquet.Links to geography - Mexico**NC links:*** Investigate and analyse a range of existing products that originate from Mexico.
* Research, design and develop a product (banquet and accompanying menu) using computer aided design.
* Know where and how a variety of ingredients are grown, reared, caught and processed.
* Understand and apply the principles of a healthy and varied diet.
* Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.
 | **Key question:** Can we use a simple circuit to create a torch?**Idea/concept:** Create a torch for Oaklands.Links to science - electricity and circuits.**NC links:** * Investigate and analyse a range of existing products.
* Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams and computer-aided design.
* Understand and use electrical systems in their products.
* Select from and use a wider range of materials and components, including textiles according to their functional properties and aesthetic qualities.
* Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
* Evaluate their ideas and products against design criteria and consider the views of others to improve their work.
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| **Year 6 stand alone unit.** | **NC link:** Apply their understanding of computing to program, monitor and control their products.Support from Hi-Impact. |