

# Design and Technology CURRICULUM MAP



**Y6 Textiles: Felt Phone Cases:**  
 To 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 in the context of creating a design criteria for a mobile phone case.  
 To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams in the context of designing a felt phone case.  
 To generate, develop and communicate their ideas through discussion, prototypes and pattern pieces in the context of making a paper template for a mobile phone case.  
 To generate, develop, model and communicate their ideas through prototypes in the context of practising different stitches to inform the final design.  
 To generate, develop, model and communicate their ideas through discussion and annotated sketches in the context of creating a step by step plan to communicate the making process.  
 To select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities in the context of selecting decorative techniques and fastenings for felt phone cases.  
 To evaluate their ideas and products against their own design criteria in the context of evaluating a felt phone case against a design criteria created

Year 6 - Mechanisms: Fairground Ride. Textiles: Felt Phone Cases.

YEAR  
**6**

**Y6 Mechanisms: Fairground Ride – Crumble (linked to CAD)**  
 To know that there are a variety of products which incorporate a pulley and a drive belt and are driven by a motor or a computer.  
 To know how control systems are used in everyday life. To understand and use the appropriate vocabulary related to control systems.  
 To experiment with pulley wheels and drive belts to study rotational movement.  
 To demonstrate how a belt and pulley system can reverse the direction of rotation (by twisting the belt through 180 degrees).  
 To use research and work to date to finalise their design to fit a brief.  
 To select the materials needed to make a frame for holding a rotating mechanism for a model ride.  
 To assemble equipment to make a rotating mechanism for a model ride.  
 To select tools and equipment to construct our final products.  
 To use our designs to evaluate our finished products.

**Y5 Construction: Marble Run**  
 To investigate freestanding structures and explore ways to make structures stable.  
 To select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately in the context of joining cardboard tubes accurately together.  
 To select from and use a wider range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing), accurately in the context of developing practical skills to help make bends in marble runs.  
 To plan a marble run and select from and use a wider range of materials and components according to their functional properties and aesthetic qualities in the context of selecting materials and components to make a marble run.  
 To evaluate their ideas against their own design criteria and consider the views of others to improve their work.

Year 5 - Cooking and Nutrition: Global Food. Construction: Marble Run.

YEAR  
**5**

**Y5 Cooking and nutrition: Global Food**  
 To understand seasonality and know where and how a variety of ingredients are reared, caught and processed and where they come from.  
 To understand and apply the principles of a healthy and varied diet.  
 To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques in the context of cooking rice, preparing Mexican food, cooking Chinese food and cooking pretzels (4 different lessons).

**Y4 Mechanisms: Mechanical Posters**  
 To investigate and analyse a range of existing products, in the context of investigating existing lever and linkage mechanisms.  
 To understand and use mechanical systems in their products (for example levers and linkages), in the context of making a mechanism which uses levers and linkages.  
 To use research and inform the design of innovative, functional and appealing products that are fit for purpose, aimed at individuals or groups, in the context of developing design criteria and design ideas for a moving poster to promote recycling.  
 To generate, develop, model and communicate ideas through discussion, annotated sketches, and prototypes, in the context of generating and developing ideas and creating a prototype.  
 To select from and use a wider range of tools and equipment to perform practical tasks accurately, in the context of selecting and using the correct tools and equipment to make a moving poster.  
 To select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities, in the context of selecting materials to produce a high quality finish on a moving poster.  
 To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work, in the context of evaluating their moving poster.

Year 4 – Textiles: Money Containers. Mechanisms: Mechanical Posters

YEAR  
**4**

**Y4 Mechanisms: Money Containers**  
 To evaluate different money containers and discuss their purpose.  
 To plan and design a suitable money container.  
 To explore different methods to create their products.  
 To select and use appropriate tools when creating their containers.  
 To use a range of tools to create a product to suit a particular purpose.  
 To evaluate a product and suggest improvements.

**Y3 Cooking and Nutrition: Edible Garden.**  
 To understand seasonality and know where and how a variety of ingredients are grown in the context of where and how herbs are grown.  
 To understand and apply the principles of a healthy and varied diet in the context of making a balanced meal made from herbs.  
 To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques in the context of cooking a pesto and pasta dish.  
 To understand seasonality and know where and how a variety of ingredients are grown in the context of where and how strawberries are grown.  
 To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques in the context of making a strawberry smoothie.  
 To select from and use a wider range of tools and equipment to perform practical tasks accurately in the context of kitchen tools.

Year 3 – Cooking and Nutrition: Edible Garden. Electronics: Night Lights

YEAR  
**3**

**Y3 - Electronics: Night Lights**  
 To understand how key events and individuals in design and technology have helped shape the world in the context of looking at technological developments in the way we light our homes.  
 To recount and discuss the safety issues when using electricity.  
 To make simple circuit using a variety of metal components.  
 To explore a range of light sources to generate ideas for products.  
 To create realistic and effective plans.  
 To use labelled sketches effectively.  
 To create a light designed for a specific audience.  
 To evaluate each their work against the original design criteria.

**Y2 Mechanisms: Moving Pictures – Traditional Tales**  
 To explore and evaluate a range of existing products in the context of exploring existing moving books.  
 To explore and use mechanisms (sliders) in their products in the context of using a slider to make a picture move.  
 To explore and use mechanisms (levers) in their products in the context of using a lever to make a picture move.  
 To design purposeful, functional and appealing products for themselves and other users based on design criteria.  
 To select from and use a wider range of materials and components in the context of selecting materials to produce a high quality finish on a moving picture.  
 To generate, develop, model and communicate their ideas through talking, drawing, templates and mock-ups in the context of drawing an annotated sketch to show their ideas about a moving picture.  
 To evaluate their ideas against design criteria in the context of evaluating a moving picture

Year 2 – Textiles: Coat for Teddy. Mechanisms: Moving Pictures – Traditional Tales.

YEAR  
**2**

**Y2 - Textiles - Coat for Santa - (linked to Science - materials)**  
 To plan and design purposeful, functional, appealing product using a suitable material using simple computing software.  
 To consider which materials would be suitable for a coat for Santa  
 To create a coat for Santa using appropriate materials.  
 To evaluate my design looking at the strengths and areas of improvement.

**Y1 - Cooking and Nutrition: Sensational Salads**  
 To understand where food comes from in the context of looking at different fruits and vegetables.  
 To explore and evaluate a range of existing products in the context of testing salads made mainly from root vegetables.  
 To use the basic principles of a healthy and varied diet to prepare dishes.  
 To understand where food comes from in the context of the fish we eat.  
 To use the basic principles of a healthy and varied diet to prepare dishes in the context of preparing a salad made from root vegetables.  
 Select from and use a range of tools and equipment to perform practical tasks in the context of preparing fruit salads.  
 To understand where food comes from.

Year 1 – Cooking and nutrition: Sensational Salads. Construction: Pirate Paddy's Packed lunch box.

YEAR  
**1**

**Y1 Construction: Pirate Paddy's Packed Lunch (linked to Science - materials).**  
 To explore and evaluate a range of existing products in the context of evaluating the basket used to transport the pirates' lunch.  
 To explore and evaluate a range of existing products in the context of evaluating existing lunch boxes.  
 To select from and use a wider range of materials according to their characteristics in the context of exploring materials that could be used to make the lunch box.  
 To design purposeful, functional, appealing products for themselves and other users based on design criteria in the context of designing a new lunch box that can move between the pirates ships.  
 To select from and use a wider range of materials according to their characteristics in the context of selecting and using the correct tools and equipment to make a lunch box.  
 To explore their ideas and products against design criteria in the context of testing the lunch box and then evaluating it against the design criteria.  
 To explore their ideas and products against design criteria in the context of testing the lunch box and then evaluating it against the design criteria.  
 To build structures, exploring how they can be made stronger, stiffer and more stable in the context of making improvements to my product

KEY  
STAGE  
**1**

**Reception: Expressive Arts and Design (Creating with materials - Su)**  
 Come up with their own design briefs to solve problems including making props and scenery for imaginative play.  
 Be able to talk through from designing to building what they have used and why they have chosen to use that resource or technique.

**Reception: Expressive Arts and Design (Creating with materials - Sp)**  
 Begin to follow a 'design brief' given by the teacher to create models and pictures using a range of resources.  
 Choose the most appropriate way to make their idea following a 'design' that they have produced to meet a given purpose.  
 Go back to their designs and improve these building on their previous learning.  
 Explore ways of joining materials for different purposes.

**Reception: Fine Motor Skills (Sp)**  
 Begin to use a range of tools with more accuracy e.g. pencils, paintbrushes, scissors, tweezers - beginning to use a dominant hand.

**Reception: Fine Motor Skills (Au)**  
 Make snips with scissors.

**EYFS NURSERY & RECEPTION**

**Nursery: Expressive Arts and Design**  
 Develop finger strength and control in order to be able to manipulate and use tools independently and effectively.  
 Use a range of resources to build with a purpose or meaning, e.g. junk modeling, Lego, loose parts, wooden blocks etc.

**Reception: Expressive Arts and Design (Creating with materials - Au)**  
 Create pictures and models using a range of resources from their own ideas.  
 Be able to talk about what they have made and why they have made it.

