



See: National curriculum in England - Design and technology programmes of study: key stage 3

**Perfect Pitta's - Food and Nutrition**  
 Why are unleavened breads common in Mediterranean and Middle Eastern regions of the world? (Remembering)  
 Why is it important to know how to handle and store ingredients correctly? (Remembering)  
 Create (and refine) own recipe for a pitta bread with a balanced and healthy filling. (Knowing)  
 Demonstrate how to measure accurately and calculate ratios of ingredients to scale up or down from a recipe. (Knowing)

## YEAR 6

**All the fun of the fair - Mechanisms and Mechanical Systems (inc. electrical motors)**  
 How are pulleys / drive belts connected to a motor? (Remembering)  
 Copy an example of a simple exploded diagram (Remembering)  
 Experiment to combine electronics and mechanics to create a working model of a fairground ride. (Knowing)  
 Explain how you would adapt your model to change the speed or direction of movement. (Reasoning)

**Funky Furnishings:- (Textiles)**  
 Describe the technique of 'applique'. (Remembering)  
 Experiment with, then apply joining textiles with a combination of stitching techniques. (Knowing)  
 Imagine your cushion has won a design award. How will you advertise it for sale? (Reasoning)

**KS3**  
 Pupils work within a much wider range of domestic, local & industrial contexts. Pupils will access more specialist tools and equipment; more complex materials / components etc

**BBC micro:bit - Programming and Electronics**  
 Identify and label the purpose of the buttons and sensors on a micro:bit. (Remembering)  
 Give examples of specific coding terminology and their definitions. (Remembering)  
 Design and program a counting device using a micro:bit, with the aim to record data. (Knowing)

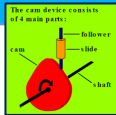
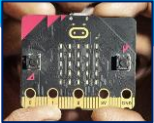


**Moving toys - Mechanisms and Mechanical systems (cams)**  
 What is a 'cam mechanism'? (Remembering)  
 Label a cross-sectional drawing of a model of a moving toy including a cam mechanism. (Remembering)  
 Design, construct and evaluate a working moving toy which includes a cam mechanism. (Knowing)

## YEAR 5

**I say courgette, you say zucchini (American Food) - Food and Nutrition**  
 What is the corn belt? (Remembering)  
 Explain why many of the foods we associate with the USA started to become popular during the 1950s. (Knowing)  
 Explain how the diverse climate regions across North America affect the foods that are grown in there? (Knowing)  
 Always, sometimes, never Native American peoples preserved foods by pickling and freezing. Clarify your response. (Reasoning)

**Money, Money, Money - (Textiles) Materials and Techniques, Construction**  
 Describe a 'seam allowance' and explain why it is needed? (Knowing)  
 Select and implement an appropriate device for fastening a sewn money container. (Knowing)  
 Justify own choice of fastening device for sewn money container. (Reasoning)

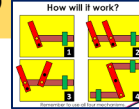


**Moving Monsters:- Mechanisms and Mechanical Systems (pneumatics)**  
 What is the name for the science of using air to transmit force and energy to make things move called? (Remembering)  
 Assemble simple pneumatic systems by fixing components together. (Remembering)  
 Compare the effectiveness of different simple pneumatic systems. (Knowing)  
 Experiment using a pneumatic system in conjunction with simple lever to control movement. (Knowing)

**What is seasonal food? - Cooking and Nutrition**  
 What makes foods 'seasonal'? (food that is readily available at certain times of the year in the area we you live) (Remembering)  
 Give examples of foods (fruits/vegetables) and say when they are seasonal in the UK. (Remembering)  
 Explain/promote the three benefits of eating seasonal foods: they contain fewer preservatives; they travel less food miles; our diet is more varied. (Knowing)

## YEAR 4

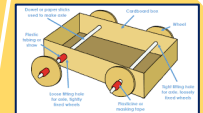
**Levers (Egyptian Shaduf) - Mechanisms and Mechanical systems**  
 Explain how the invention of the shaduf (an early lever system) by the Ancient Egyptians, helped to resolve farming needs. (Knowing)  
 Design and create a working linked lever system, evaluating its effectiveness. (Knowing)  
 Present information about the four different types of motion (linear, rotary, reciprocating and oscillating) (Reasoning)



**Bridges - (linking to the work of I. K. Brunel) Materials and Techniques, Construction**  
 Identify and name the six types of bridge structures: Beam/Girder, Suspension, Cantilever, Arch, Truss, Cable Stayed bridges. (Remembering)  
 Give examples of the many engineering achievements of I.K. Brunel. (Remembering)  
 Explain the impact of Brunel's engineering on the lives of people at that time. (Knowing)  
 Select appropriate techniques to join and strengthen materials. (Knowing)

## YEAR 3

**Perfect Pizzas- Food and Nutrition**  
 Where do some of the typical ingredients needed to make a pizza come from? (Remembering)  
 Apply techniques to cut, peel or grate ingredients safely and hygienically. (Knowing)  
 Do you agree - pizzas are a healthy meal option and should be eaten every day? (Reasoning)



**Senside Snacks - Food and Nutrition**  
 Why are some foods healthier than others? (Remembering)  
 Describe the different flavours, textures and colours of a variety of foods (fruits/salad) using appropriate vocabulary. (Remembering)  
 Consider how important the appearance of food is and assemble own ingredients in an appealing way. (Knowing)

## YEAR 2



**Puppets - (Textiles) Materials and Techniques, Construction**  
 Copy and practise the technique of sewing using running stitch (or overstitch). (Remembering)  
 Shape textiles using a template. (Remembering)  
 Design and construct own glove puppet applying learnt techniques to join two pieces of fabric together. (Knowing)  
 Suggest ways to improve the appearance /finish of own glove puppet. (Reasoning)

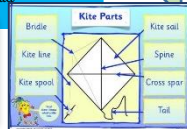
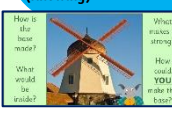


**Moving Vehicles - Mechanisms and Mechanical Systems (wheels, axles and chassis)**  
 Describe the terms axle, wheel and chassis (Remembering)  
 Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen) (Knowing)  
 Investigate the effects of adding more load, to a model vehicle (Reasoning)

**Wacky Windmills - Mechanisms and Mechanical Systems**  
 Label the different parts of a windmill (sail/blade, base, axle, rotor, post/shaft). (Remembering)  
 What can windmills be used for? (grinding grain, pumping water and generating electricity to power different machines). (Remembering)  
 Find out which shapes help structures to become stronger and more stable. (Knowing)  
 Consider how windmills link to when you made kites. (Knowing)

**Flying Kites - Materials and Techniques, Construction**  
 Label the different parts of a kite (wing, tether/line, anchor, sail, bridle, tail, spars, spine, spool). (Remembering)  
 What three things were kites originally used for? (to measure distances, wind direction and to send messages). (Remembering)  
 Experiment using different materials to make the 'sail' of your kite and explain your findings. (Knowing)  
 What joining techniques did you use to build your kite? (Knowing)

## YEAR 1



"Safely explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.  
 "Share their creations, explaining the processes they have used.

**Advent - Let's explore superheroes** - Investigate, design and make own superhero mask, constructing fruit skewers for superheroes.

**Lent - Let's explore dinosaurs** - Investigate, design and make an enclosure for a dinosaur

**Pentecost - Let's explore pirates** - Investigate existing devices for magnifying - initially telescopes that pirates would use. Children supported to construct a periscope for exploring the world around them.

## FS2