

Y1 Cooking and Nutrition











Beating

Mixing

Sieving

Vocabulary

pouring	To tip liquid out of a container.
beating	To mix/stir quickly. This helps to
	mix the ingredients together and
	add some air to the mixture.
mixing	To combine ingredients together.
sieving	Sieving is when we drain away
	the water. The sieve catches the
	food and lets the water pass
	through small holes.
pastry	To brush a liquid, like milk or a
brushing	beaten egg, over pastry. This
	helps to make the pastry look
	shiny and helps to close up any
	edges.

Healthy eating

To make sure we stay healthy, we should eat lots of different foods. Fruit and vegetables are an important part of a healthy diet. You should aim to eat at least five portions of fruit and vegetables every day.

Some foods aren't as healthy for us like chocolate, crisps and sweets. We should only have a small amount of these foods.

Where does food come from?

All food comes from plants or animals.

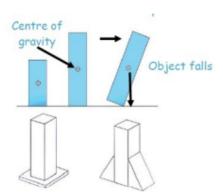
Some food is grown. Fruit grows on trees, bushes and plants. Some fruits need hot weather to grow, such as mangoes, oranges and pineapples. Other fruits, such as apples, pears and plums, do not need hot weather and can be grown in the UK. Some vegetables grow above ground and others grow underground. Potatoes grow under the ground.

Some food comes from animals like eggs, milk and meat.

Y2 Structures

<u>Skill development: Increasing stability in</u> <u>freestanding structures</u>

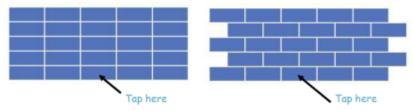
As a freestanding structure becomes taller its centre of gravity rises. Stability in a structure can generally be increased by making the base wider, making the base heavier or adding buttresses.





If you look closely structures, you will notice that they often have triangles in their design. That is because triangles are stronger than squares When you push hard on a square, the whole thing collapses. But when you push on a triangle, it keeps its shape.

Build walls with these different patterns. Tap away the centre brick in the bottom row of each wall in turn. What happens? Which wall is the strongest?



We can stack materials to make our structures stronger. Laying bricks so they are not directly on top of each other makes a structure stronger. This is a good way to make a strong structure that won't collapse. By changing the way the blocks are laid in each row, the weight is spread out more evenly.

Existing products

The Burj Khalifa in Dubai is currently the world's tallest building. The second tallest building is the Shanghai Tower in China.





Vocabulary

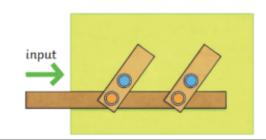
freestanding structure	A structure that stands on its own foundation or base without attachment to anything else.
stability	How likely the structure is to fall over if a force is applied. The stronger the structure the more stable it will become.
buttress	A structure added to a wall, tower or framework to make it more stable and/or reinforce it.
mock up	A 3D model of a product.

Y3 Moving Pictures

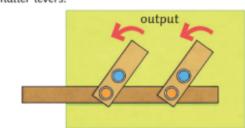
Exploring Mechanical Systems

Many mechanisms take one type of input motion, and output it as a different type of motion. In lever and linkage mechanisms:

Input - The movement of the main lever by the user.

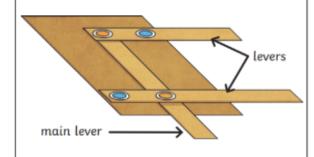


Output - The movement that is made by the smaller levers.



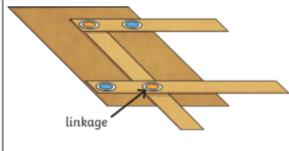
Lever

The simplest type of mechanism. A lever is a stiff bar which moves around a pivot.



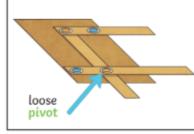
Linkage

The part of the mechanism used to join one or more levers to produce the type of movement required.



Loose Pivot

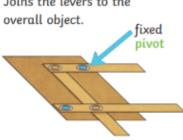
Joins the levers together.



Design, make and evaluate a moving mechanical picture (product) for myself (user) to retell a story (purpose).

Fixed Pivot

Joins the levers to the



Design brief

When we make our moving pictures, we need to follow a design brief. A design brief is a planning document that clearly explains what the project has to achieve, how it will be achieved, and how long you have to do it.

Vocabulary

motion	Movement from one place to another	linear motion	Moving in a straight line, e.g. paper trimmer
pivot	To turn on a central point.	, ,	Moving forwards and backwards in a straight line, e.g. cutting with a saw.
rotary motion	Turning round in a circle, e.g. a wheel.	•	Swinging from side to side in an arc, e.g. a pendulum in a clock

Y4 Textiles—Pencil Cases

Existing products

Pencil cases can be made from lots different materials, including: fabric, wood, leather, metal and plastic. Fabric pencil cases are usually fastened with a zip but they can also be fastened with buttons, Velcro or poppers.



A fabric pencil case that closes with a zip.



A leather pencil case that fastens with poppers.



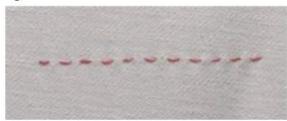
A fabric pencil case that folds closed and is fastened with Velcro.



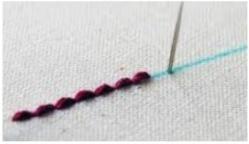
A plastic pencil case with multiple compartments.

Skill development

Running stitch: A simple stitch consisting of a line of small even stitches which run back and forth through the cloth without overlapping.



Back stitch: A method of sewing in which each stitch overlaps or doubles back on the one before.



Key vocabulary			
threading a nee- dle	To insert thread through the hole (the eye) of the needle.		
eye of the needle	The small hole at the top of the needle that the thread goes through.		
functional	If a product is functional, it is designed for a function or a purpose and has a job to do.		
aesthetic	Aesthetics are all about how the product looks.		
intended user	Products are designed with an intended user in mind. This is who you think will use your product.		

Y5—Cooking and Nutrition

In this unit, we will learn all about the main food groups and the different nutrients that are important for health. We will find out how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable / tasty to eat. We will also begin to become more independent when selecting appropriate ingredients and use a wide range of techniques to combine them.

Nutrient	Found in (examples)	What it does/they do
carbohydrates	BUDGET GRAIN UNICLENTIAL EVEND	provide <mark>energy</mark>
protein	YOGHURT	helps growth and repair
fibre	PREMIUM WHOLEMEAL	helps you to digest the food that you have eaten
fats	PLAIN NUTS COCONUT OIL	provide <mark>energy</mark>
vitamins	PLAIN NUTS	keep you <mark>healthy</mark>
minerals		keep you <mark>healthy</mark>
water		moves nutrients around your body and helps to get rid of waste

Key Vocabulary		
healthy	in a good physical and mental condition	
nutrients	substances that animals need to stay alive and healthy	
energy	strength to be able to move and grow	
types of fats, considered to be less saturated fats healthy, that should only be eater in small amounts		
fats that give you energy, vitamins and minerals		



Existing products

A keyring is a metal ring used to keep keys together. They are often decorative to help someone be able to recognise the keys as theirs. They are also a way to show your interests or something about your identity by having a design that means something to you.













Key vocabulary

CAD: Computer Aided Design.

Annotated sketch: A labelled drawing.

Prototype: An experimental model.

Align: To place or arrange things in a straight line.

Dimensions: Something you can measure such as length, width or height. On Tinkercad, these measurements are in millimetres.

Duplicate: To make an exact copy of.

Group: To combine two or more shapes into a single part.

Workplane: The large, blue grid on Tinkercad where you can

create your design.

Y6—3D Printing and CAD design

To design, make and evaluate a keyring (product) for myself (user) to use to hold my keys together when I go to secondary school (purpose).

Skill development

CAD

Computer Aided Design (CAD) is the use of computer software to create designs. CAD software is frequently used by engineers and designers. CAD software can be used to create 2D drawings or 3D models of your design.





Tinkercad

Tinkercad is an online, free 3D modelling program that runs in a web browser.

3D printing

3D printing is a process in which a digital model is turned into a real life 3D object. 3D printers typically work by laying down thin layers of a material.

