

Construction curriculum content and progression

Construction at Totley Primary School is an inherently practical and creative subject. Children make relevant, high-quality products that are for a specific purpose. This knowledge-rich subject teaches children the techniques and skills they need to design, make and evaluate. Children build a critical understanding of the impact of design by evaluating existing designs and products.

Construction is taught as a learning journey. The stages of learning or Inspire, Explore, Discover, Create, Present and Evaluate (as in all areas of the wider curriculum) are used to structure and sequence components of learning.

This document describes the skills and knowledge to be taught in each year group in Construction. Knowledge and skills are differentiated between year groups and are progressive across key stages. Teachers consider the context and purpose of learning, capitalising on opportunities across the curriculum to ensure learning is authentic and purposeful.

	Design	Make	Evaluate
FS2	Can you draw to communicate your plan and ideas for the product you will make, including labels and choices of materials?	Can you use the best method from selotape, split pins, glue (PVA and glue stick), masking tape, string, ribbon and toothpicks to join matierals? Can you balance and place resources to make a strong structure? Do you choose the best materials for the job? Do the products you make do their job well?	Can you explain what works well about your product and what you would improve? Have you bet the brief well? Can you explain whether your choices of materials and joining techniques were the best for the job?
Y1	Can you draw an accurate full size plan of your product in 1:1 scale? Can you accurately label your full scale drawing?	Can you measure and mark out to the nearest cm? Can you cut materials with accuracy using tools safely? Can you hinge materials to make a moving product?	Can you explain how well your product meets the requirements of the intended user? Can you identify thing that worked well and things you would do differently if you repeated the process? Have you bet the brief well?
Y2	Can you use prototype models to test joining methods and strengthening techniques (such as folding or rolling materials) to make them stronger.	Can you use a glue gun safely and combine materials to strengthen them? Can you select the most appropriate cutting and joining techniques for the product you are making? Can you use a glue gun safely and combine materials to strengthen them?	Can you use the design cycle or design, test, evaluate to repeatedly improve your product until it fully meets the design brief?
Υ3	Can you put together a step-by- step plan which shows the sequence of steps you'll take, what equipment you'll need and which tools you'll use?	Can you use tools safely to make cuts and join materials in different ways? Measure and mark out to the nearest millimetre. Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). Cut materials accurately and safely by selecting appropriate tools (including craft knives).	Can you describe what you changed to make your design even better and evaluate how realistic your plan was?
¥4	Can you come up with a range of ideas after collecting information?	Stiff and flexible sheet materials: Do you measure accurately to ensure that everything is precise (measure and cut to the nearest mm)? Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).	Do you use the Design, Prototype, Evaluate process to ensure your products are the best they can be?

		Did you make sure your product looks attractive? Have you presented your products in an interesting and appealing way? Have you thought about others' tastes when designing?	
Y5	Do you understand how key events and individuals in design and technology have helped shape the world? Do you use research and development to design within constraints (such as a limited range of materials)?	Can you build a product that is fit for purpose? Can you strengthen, stiffen or reinforce more complex structures using specific techniques (including triangular bracing)?	Do you always repeatedly ask evaluative questions of your work to redesign and remake in order to improve your work?
Y6	Do you generate, develop, model and communicate your ideas through discussion, annotated sketches, cross- sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design?	Do you select appropriately from a wide range of tools and equipment to perform practical tasks accurately and safely?	Is the iterative design cycle inherent in your working process? Do you use the Design, Prototype, Evaluate process to ensure your products are the best they can be?

Year 1 Design Can you draw an accurate full size plan of your product in 1:1 scale?

Can you accurately label your full scale drawing?

Make

Can you measure and mark out to the nearest cm?



Can you cut materials with accuracy using tools safely?



Hold the scissors in your writing hand.

Use smooth, controlled cuts to cut along the line. If you start going off the line, STOP, pull your scissors back and get them back on the line. The line you cut should be smooth, without any rough bits of paper or card. When carrying scissors, hold them by the closed blades held firmly in your fist with the blade facing you. Always walk when carrying scissors.

Children could complete a 'driving test' with scissors: cut along lines of different shapes and with increasing complexity. Opportunity to record in book.

Can you hinge materials to make a moving product?



A lever is a stiff bar that moves on a pivot. linkage joins the levers together.



Year 2

Design

Can you use prototype models to test joining methods and strengthening techniques (such as folding or rolling materials) to make them stronger.



Which would be the strongest bridge across the River Themes? Why is it stronger?

Make Can you use a glue gun safely and combine materials to strengthen them?





Triangular **bracing** helps to keep the corers strong. The **axel** slides through the **axel holder**. Using a straw means the axel is held in place but can rotate easily.



The wooden **pulley** is connected to the motor using an elastic band. This should be a tight fit.



Like any vehicle, yours should be finished to a high standard so it is road worthy.



Can you select the most appropriate cutting and joining techniques for the product you are making?

Can you use a glue gun safely?

- 1. Always with an adult's help and supervision.
- 2. Only touch the handle and trigger.
- 3. Only hold the glue gun towards your work or pointing at the table.
- 4. Never touch the melted glue.
- 5. Make sure your work area is clear- no distractions.

Evaluate

Can you use the design cycle of design, test, evaluate to repeatedly improve your product until it fully meets the design brief?							
This is what I tried: This is what I'm going to change: This is what happened:							
	(E.g. Bigger triangular bracing.)						
	(E.g. A longer chassis.)						
(E.g. Extra cross-bracing.)							

Year 3

Design

Can you put together a step-by-step plan which shows the sequence of steps you'll take, what equipment you'll need and which tools you'll use?

Make

Can you use tools safely to make cuts and join materials in different ways?



When using a saw, first pull the saw towards you on the line you want to cut to make a small groove. Then, push and pull the saw. Most of the cutting is done when you push the saw down into the wood. Keep your eye on the line you want to cut. If you start to veer off the line, STOP. Pull the saw several times on the line you want to cut to make a new groove and carry on.

Like in Year 2, you could make a frame as a strong structure. Remember to brace your frame using triangles!



Measure and mark out to the nearest millimetre.



Nearest centimeter = 3 cm Nearest millimeter = 34 mm



Marking out is when you measure and draw the lines you'll then cut along.

Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).



Children could make their own joining techniques collage and then annotate to explain where they will use each technique to make a Roman shield and sword.



Use a slot to make a hand guard for your Roman Sword.



A Roman shield could be made using this technique, but using curved supports instead of triangular ones. A flange could be used to form the shield boss.

Children's finished work, including their joining techniques collage, could be judged by Helen Vardy (Head of DT at KES) and Charlotte MacDonald (Head of History at KES).

Cut materials accurately and safely by selecting appropriate tools (including craft knives). <u>https://www.youtube.com/watch?v=q8AghZkkOqc</u>

Craft Knife Safety:

Do you *need* to use a craft knife or could you use scissors?

You need to have a cutting mat, a craft knife and a safety ruler.

Always have an adult's supervision/help. "I'm ready to use a craft knife, can you supervise me please?" The adult will ask you what you have done to make sure you're working safely.

A large, flat, stable table with no distractions or anyone around who could bump into you.

Cut away from your body.

Keep your fingers out of the way.

Position your safety rules carefully.

Always stand up when using a craft knife.

Do repeated cuts rather than one, heavy cut.

Always return the knife as soon as you have finished with it.

Children could complete a craft knife quiz and 'driving test' before being able to use a craft knife in their work.

Evaluate

Can you describe what you changed to make your design even better and evaluate how realistic your plan was?



A **prototype** is a quick, rough model to try out ideas before you make the real thing. Designers always look at what has worked and gone well, and what they could change to improve their product when they make their final design.

Prototypes are never decorated and only need to be as neat as necessary to work out what will work and what needs altering.

This is what I tried:	This is what I'm going to change:	This is what happened:
	(E.g. wider curved supports.)	
	(E.g. longer flong on my flonge)	
	(E.g. Extra cross-bracing.)	

Year 4

Design

Can you come up with a range of ideas after collecting information?

A **design brief** sets out the challenge and purpose of the design project.

E.g. To produce an accurate, scale model of a Viking longship to show others the features of the iconic design that made the Vikings such successful explorers.





Initial research into the features of the longship.



An accurate diagram in proportion demonstrates the thought process.

Prototype sketch models alongside exemplify joining techniques to be used.

Make

Stiff and flexible sheet materials: Do you measure accurately to ensure that everything is precise (measure and cut to the nearest mm)?



Children will be able to apply prior learning of how to use a craft knife safely. See guidance in year 3.

Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).



The project above is a composite of the construction skills children have learnt so far. With greater accuracy, they can use a craft knife to cut out the shape of the longship surround. The frame is similar to that of the moving vehicle in year 2 and the frame of the Roman catapult in year 3. However, children need to experiment with the optimum size of frame. Slits could be used for oars to go through. Challenge children to produce a scale model to demonstrate to viewers the length compared to the narrow width of the body of the ship.

Evaluate

Do you use the Design, Prototype, Evaluate process to ensure your products are the best they can be?

When evaluating, we always return to the design brief and we have to work out to what extent we have met the brief.

Key questions help us to work out how well we met the brief: What has gone well in the construction process?

What could be improved in the construction process?

Does my product teach others about the Viking Longship? How do you know?

What challenges did you face when you were constructing? How did you overcome them? Were there any that you couldn't overcome?

If it is mainly positive, you can say you met the brief!

Year 5 Design

Do you understand how key events and individuals in design and technology have helped shape the world?



The Chicago Home Insurance Building, completed in 1885, is considered to be the world's first steel framed skyscraper. New York may be renowned for its skyline dominated by skyscrapers, however by the time New York had its first skyscraper, Chicago already had 5.

The steel frame provides the main strength and structure. The gaps are then filled in with an appropriate material (in this case, brick) to make it weather proof. The bricks do not help keep the building up, however.





Again, the same steel frame provides the strength, then it is wrapped in a **façade** of glass to protect the occupants from the weather.



The Brief:

London needs a new building, and London City Council want it to be designed by a young person to demonstrate their commitment to the next generation.

The site is $25m \times 32m$, and it can't be taller than the highest building in London. It needs to be a steel framed building, using as little material as possible to save on costs and reduce the impact of its construction on the environment.

Draw inspiration from other iconic London buildings (many have a unique and instantly recognisable shape). This is what makes London's skyline different to many major cities.

Can you strengthen, stiffen or reinforce more complex structures using specific techniques (including triangular bracing)?



Do you always repeatedly ask evaluative questions of your work to redesign and remake in order to improve your work?

Encourage children to generate key questions they can keep asking themselves throughout the design and make process.

E.g. Is my design iconic- is its shape unique and would it be instantly recognisable on the London skyline, without being too radical or structurally impossible?

Is the structure of my building feasible- could it be built using straight sections of steel joined together? How else could I strengthen my structure?

Which buildings am I drawing inspiration from, who were they designed by and when were they built? Does my building fit the design brief?

How has the work of Norman Foster changed the shape of architecture?

Norman Foster gained fame in the early 1970s as the architect of the Willis Faber and Dumas headquarters, in Ipswich, England—an eco-friendly, open-plan building that was radical for its time. He has since built more than 250 works, from the Swiss Re (Gherkin) tower in London to the Beijing Airport; won many of the world's top architectural prizes; and been appointed a British knight and life peer. The founder and chairman of Foster + Partners, he oversees 15 offices with 1,000 employees working on projects in 40 countries.

Interview with Norman Foster: https://hbr.org/2011/03/lifes-work-norman-

foster#:~:text=Norman%20Foster%20gained%20fame%20in,%3B%20won%20many%20of%20%5B%E2%80%A6 %5D

What similarities can you identify in some examples of Foster's work?





Food and cooking curriculum content and progression

The Food and Cooking curriculum at Totley Primary School instils a pro-food attitude in all children, teaches the most useful knowledge and understanding so children can make informed decisions about the food they choose and cook, and teach the necessary skills so children can competently and confidently work with food to prepare balanced, nutritious, tasty and mainly savoury dishes.

Food and Cooking is taught as a learning journey. The stages of learning or Inspire, Explore, Discover, Create, Present and Evaluate (as in all areas of the wider curriculum) are used to structure and sequence components of learning.

This document describes the skills and knowledge to be taught in each year group in Food and Cooking.

Knowledge and skills are differentiated between year groups and are progressive across key stages.

Teachers consider the context and purpose of learning, capitalising on opportunities should as religious, cultural, national and international celebrations and links to other areas of learning (in particular Geography and History) in order to enrich learning with cultural capital.

Progression of equipment					
	FS2	KS1		Lower KS2	Upper KS2
Crushing / squeezing	Potato masher	Juicer		Garlic press	
	Fork				
Peeling	Peel by hand	Swivel pe	eler adult s	support	
Shaping	Rolling pin				
Mixing	Mixing spoons	Whisk		Blender	Folding
Measuring	Spoons	Measuring spoons		Measuring jug	Analogue scales
	Cups	of different sizes		Digital scales	
Cutting	Butter knife	Table knife		Vegetable knife	Vegetable knife
	Cutter shapes			adult support	adult supervision
Heating	It may still be appropr	iate to	Hob		Grill
	enable children to pro	duce adult support and		Oven	
	cooked food and dishe	es,	supervisio	on	adult support and
however they would n		ot be			supervision
	responsible for using				
	equipment.				
Snipping		Kitchen s	cissors	Π	
Grating		Grater	Grater		Grater
		adult sup	port	adult support	adult supervision

	Knowledge	Skills
FS2	Which foods are associated with typical meals in the day, and cultural, religious and national events and celebrations.	Smoothies and fruit kebabs Combine fruits to create yoghurt topper and smoothies. Slice soft fruit evenly. Skewer soft fruits neatly and in a repeating pattern. Celebration biscuits Cutter shapes to create a set of uniform biscuits. Rolling pin to roll out dough to a uniform thickness. Handle uncooked dough with care.
Y1	Difference between sweet and savoury flavours. To know the difference between fruit and vegetables and be able to identify whether a given ingredient is a fruit or a vegetable. To know which meat comes from which animal.	Fruit salad Peel and cut fruit with a swivel peeler / table knife safely and with care. Use a juicer to squeeze fruit for its juice.
Υ2	To understand seasons and seasonality in food. To know which foods are grown, caught and reared. Use scissors to snip herbs.	Cheese and vegetable filled omelette pocket To cube butter into evenly sized pieces. Grater to grate cheese to fill omelette sasfely. Whisking to combine wet ingredients before adding to a recipe. Measuring spoons to measure wet ingredients accurately. Table knife to cut firmer vegetables, such as peppers and courgettes, into uniform pieces before adding to the recipe. Swivel peeler to peel vegetables as necessary before adding to recipe.

		Using the hob safely and manipulating food while it
		cooks using non-scratching utensils.
	To understand the elements of a healthy, balanced	Pizza
	diet and the impact an unhealthy diet has on the	Kneading dough to a smooth and stretchy
	body.	consistency.
		Flour the surface to prevent sticking.
		Stretching dough to a uniform thickness.
		Sweating to cook vegetables without browning
Y3		them.
		Measuring using a measuring jug with accuracy.
		Slicing vegetables to a uniform thickness and safely
		using a vegetable knife.
		Simmering at a low, consistent boil without
		ingredients burning or sticking by stirring regularly.
		Grating vegetables and cheese safely.
	Where is the world a reaso of issuediants have	Spreading eveniy using the back of a spoon.
	where in the world a range of ingredients have	Bread
	Come from to reach our supermarket snewes.	
V4	society	Measuring using a measuring ing with accuracy
	Society.	Flour the surface to prevent sticking
		Chocolate
		How to melt chocolate in a bain marie.
	To understand the origins of traditional British	Lavabread
	cuisine and make links to events in history children	Combining and shaping ingredients to uniform
	study.	shapes before cooking for consistency.
		Shallow frying.
		Stargazey Pie
		Rubbing to create a crumb consistency for pastry.
		Boiling ingredients to pre-cook before adding to
		the finished dish.
		Grilling to brown ingredients.
Y5		Parkin
		Greasing and lining a baking tin to prevent sticking.
		Scouse
		Browning meat before adding to the misned dish.
		ingredients and stage of the recipe
		Victoria Sponge
		Folding to combine ingredients while retaining air.
		which is important for a consistent and light
		texture in a sponge.
	To understand the origins of traditional British	WW2 fruitcake
	cuisine and make links to events in history children	Understand how recipes need to be adapted for the
	study.	availability of ingredients.
	Make comparisons between traditional and	Glazing food to create an appealing finish.
	modern British cuisine, and understand the	Goat curry
Y6	reasons for the changing influences in British	Pureeing ingredients to make a paste.
10	cuisine.	Browning meat before adding to the finished dish.
	To apply the concepts of food miles, seasonality,	Simmering at a low, consistent boil without
	Individual preferences and dietary requirements to	ingredients burning or sticking by stirring regularly
	adapt disnes for individuals and groups.	and adjusting the cooking temperature.
	To understand the concept of food miles and the	
	impact on the planet this call have.	

FS2

Knowledge

Which foods are associated with typical meals in the day, cultural, religious and national events and celebrations, and food associated with different regions and countries.

In the Hindu festival of Diwali, special foods are sahred and enjoyed as part of the celenrations.



Mithai (sweets) are often enjoyed throughout the year, but at Diwali there are even more.



Chirote is a light, flaky pastry stuffed with sugary fillings, deep fried and usually drizzled with syrup.



Samosas are eaten all year round, but are also common during Diwali. These small pockets of pastry, usually triangular shaped, are stuffed with minced meat, peas, lentils and other vegetables.









Children taste and experience dishes from different countries and cultures. This is an opportunity to capitalise on the diversity of the cohort and taste dishes associated with the places children and families come from.

Skills

Smoothies and fruit kebabs

Combine fruits to create yoghurt topper and smoothies and using a fork and potato masher to crush fruit. Slice soft fruit evenly.

Skewer soft fruits neatly and in a repeating pattern.

Celebration biscuits

Cutter shapes to create a set of uniform biscuits. Rolling pin to roll out dough to a uniform thickness. Handle uncooked dough with care.

Caterpillar salad

Cut fruits and vegetables evenly.

Year 1 Knowledge

Difference between sweet and savoury flavours.

Through tasting, children differentiate between sweet and savoury flavours. There is also the potential o stretch to the four tastes we can experiences – salty, bitter, sweet and sour. Provide opportunity to evaluate which flavours would be pleasant to mix together and express preferences.

To know the difference between fruit and vegetables and be able to identify whether a given ingredient is a fruit or a vegetable.

A fruit develops from the flower of a plant. Children could take part in growing tomatoes to show this transformation.

A vegetable is any other part of the plant. Children could take part in growing salad crops and potatoes to demonstrate how we harvest different parts of the plant.

To know which meat comes from which animal.



Skills

Fruit salad

Peel and cut fruit with a swivel peeler / table knife safely and with care. Use a juicer to squeeze fruit for its juice.



Children should have the opportunity to explore which shape peeler they prefer to use for which type of fruit and vegetable. Peel away from your finger and fold the fruit or vegetable in your non-writing hand.



Hold the fruit or vegetable in your non-writing hand firmly. You don't want it to slip on the chopping board. Cut away from yourself. Keep the slices the same width. Children should learn how to form their hand into a claw to keep fingertips out of danger.



Year 2				
		Knowledge		
be able to give examp	les of seasonal food	ls in the UK.		
Spring	Summer	Autumn	Winter	
strawberries	tomatoes	apples	apples	
pears	pears	strawberries	pears	
tomatoes	strawberries	raspberries	cranberries	
artichoke	cherries	cranberries	Brussels sprouts	
asparagus	raspberries	pears	cabbage	
Brussels sprouts	asparagus	broccoli	carrots	
cabbage	broccoli	Brussels sprouts	onions	
carrots	cabbage	cabbage	mushrooms	
cucumber	carrots	carrots	pumpkin	
lettuce	cauliflower	cauliflower	turnips	
mushrooms	cucumber	cucumber		
peas	lettuce	lettuce		
peppers	mushrooms	mushrooms		
rhubarb	onions	onions		
	peas	peas		
	peppers	peppers		
	rhubarb	pumpkin		
	sweetcorn	rhubarb		
	turnips	sweetcorn		
		turnips		

To know which foods are processed, caught and reared.

Reared: Where an animal has been brought up from young by humans to be eaten later.

Caught: Where an animal is taken from its natural environment to be eaten either by being caught on a line or a net, or shot.

Processed: Where food has been changed from the way it was, either for safety reasons (e.g. pasteurised milk) or to make them easier to store or eat.

Children could sort a range of given produce into the three categories.





Skills

Cheese and vegetable filled omelette pocket

To cube butter into evenly sized pieces.



Grate cheese to fill omelette safely.



Hold the grater firmly in your non-writing hand. Push the block of cheese down the grater away from you. Keep checking how much cheese you've grater by lifting the grater. Keep the tips of your fingers well away from the edge of the cheese as you grate. Whisking to combine wet ingredients before adding to a recipe.



Pour in the measured milk slowly, whisking al the time.

Measuring spoons to measure wet ingredients accurately.



Table knife to cut firmer vegetables, such as peppers and courgettes, into uniform pieces before adding to the recipe.



Hold the vegetable in your non-writing hand firmly. You don't want it to slip on the

chopping board. Cut away from yourself. Keep the slices the same width. Children should learn how to form their hand into a claw to keep fingertips out of danger.



Swivel peeler to peel vegetables as necessary before adding to recipe.



Children should have the opportunity to explore which shape peeler they prefer to use for which type of fruit and vegetable. Peel away from your finger and fold the fruit or vegetable in your non-writing hand.

Using the hob safely and manipulating food while it cooks using non-scratching utensils.

- Use a stool so you can see clearly what is happening on the hob.
- Only use wooden or the correct type of plastic utensils.
- Never put your fingers into cooking food.
- Turn pan handles away from the edge of the cooker and towards the back.
- Use as low a heat as you can to cook your food.
- Don't lean over a hot pan.



Pizza

Kneading dough to a smooth and stretchy consistency. Flour the surface to prevent sticking.











Lift, fold, push, repeat. Once the dough starts to become smooth, knead faster until the surface you are working on appears completely clean and there are no streaks of flour visibl in the dough. The dough should be stretchy.

Stretching dough to a uniform thickness.



Sweating to cook vegetables without browning them.



Diced vegetables are added to a warm pan with oil.



Once the vegetables are gently sizzling over a low heat, add the lid

to the pan. Stir regularly to prevent the vegetables sticking or browning and adjust the temperature appropriately.

Put your prepped vegetables in a pan on low heat. Keep the lid on, and let them cook slowly. By keeping the lid on, you use their own liquid to "sweat" (aka steam) them. The technique is called à l'étouffée in French cooking. **Measuring using a measuring jug with accuracy.**



Give children the opportunity to explore measuring with different measuring jugs in different scales. Coloured liquid, such as water dyed with food colouring, may be easier to work with as it has a greater contrast.

Slicing and diving vegetables to a uniform thickness and safely using a vegetable knife.

Knife Safety in the Working Kitchen

- Do... • Use a knife only for its intended
- purpose.Use the appropriate knife for the
- job. • Carry knives with the cutting edge slightly away from your
- body and its blade facing down
 Store knives in the correct rack.
 Wash knives thoroughly when preparing raw food and
- especially before using on other foods. • Use the correct colour chopping
- board when preparing food using knives.
- Touch knife blades. Try to catch a falling knife. Let it fall. Hand a knife to someone, put it on a surface and let them pick it up correctly. Leave a knife soaking in a sink of water. Talk to people while using a knife.



To slice, make cuts through the

vegetable in the same direction with the same gap between cuts. To dice, then turn the vegerate by a right angle to make perpendicular cuts the same distance apart.

Simmering at a low, consistent boil without ingredients burning or sticking by stirring regularly.

Simmering is one way to cook ingredients that are mainly liquid. Use a low heat to keep the ingredients gently bubbling with only small bubbles. Stir the ingredients regularly and, if the boil becomes too vigorous or the ingredients begin to stick, turn the heat down.



Grating vegetables and cheese safely.



Hold the grater firmly in your non-writing hand. Push the block of cheese down

the grater away from you. Keep checking how much cheese you've grater by lifting the grater. Keep the tips of your fingers well away from the edge of the cheese as you grate.

Spreading evenly using the back of a spoon.



The back, rounded face of a spoon is a good way to spread wet ingredients onto delicate surfaces, like a pizza base. Don't press on too hard and spread the ingredients out so they are in an equally-thick layer all over the surface.

Year 4

Knowledge

Where in the world a range of ingredients (pertinent to study) have come from to reach our supermarket shelves.



Children produce a choropleth map to present the distribution of global cocoa production. They are taught the relationship between the countries where cocoa grows and their proximity to the Equator.

Begin to understand the role that food can play in society.



Children learn about the history of chocolate as an example of a how a food product has different roles in different societies and how products develop over time.



In England and Wales, the staple food, before potatoes became commonplace in the seventeenth century, was bread, which might be made from wheat, barley or rye.

The quality of bread eaten varied according to rank. The very wealthy ate fine, milled white bread, known as "wastel". For the very rich, there were also "manchets" which were small loaves,

about the size of a hand, and often sweetened. The lower down the social scale, the coarser the bread, with peasants consuming the heavy, dark, grainy breads, that to the modern palate are the more sophisticated. There were at least seven grades of bread, down to the lowest "clap-bread" made of barley or oats.

Skills

Bread

Kneading dough to a smooth and stretch consistency. Flour the surface to prevent sticking.





Lift, fold, push, repeat. Once the dough starts to become smooth, knead faster until the surface you are working on appears completely clean and there are no streaks of flour visibl in the dough. The dough should be stretchy.

Measuring using a measuring jug with accuracy.



Give children the opportunity to explore measuring with different measuring jugs in different scales. Coloured liquid, such as water dyed with food colouring, may be easier to work with as it has a greater contrast.

Chocolate

How to melt chocolate in a bain marie.





Year 5

Knowledge

To understand the origins of traditional British cuisine and make links to events in history that children study. Children should develop an understanding of regional dishes and that British cuisine is a mixture of many varied influences, that it has changed over time and be able to give examples of the origin of typically British dishes. *Victoria Sponge Cake*

Victoria sponge cake, is the UK's most popular cakes! History

During the time of Queen Victoria's reign, many changes occurred and she was probably the first monarch to have enjoyed delicious cakes created using modern rising agents, baking powder and baking soda. These were only invented in the first half of the 19thcentury, so the Victoria Sponge is a good example of how food has developed as inventions were made. Baking powder and soda are crucial for encouraging light and fluffy cakes, as without it was significantly harder to produce light sponges.

Originally the Victoria sponge was thought to have started in the nursery, as early Victorian afternoon tea consisted of seed and fruit cake. For the safety of children, it was suggested children should not eat cake with fruit or seed. Victoria sponge cakes were created as a result to be a harmless teatime specialty for just the children. The Victoria Sponge is good example of how food needs to be developed to make is suitable for those who are eating it.

Skills

Laverbread Shallow frying



Add 1-2mm of oil across the entire surface of the pan. Use a medium-high heat. After a short while, you will be able to reduce the heat to a medium heat. Be careful: oil may splatter so keep your hands well away and use the right plastic utensil to move your food around the pan. Lay cooked food on kitchen paper to absorb excess oil.

Stargazey Pie

Rubbing to create a crumb consistency for pastry.



First cube the butter, as you learn tin Year 2. Then, rub the flour and butter between your finger tips. Work lightly: don't squash the pastry mix. Keep rubbing until there is no flour left unmixed and no lumps of butter. It should look like breadcrumbs.

Boiling ingredients to pre-cook before adding to the finished dish. Grilling to brown ingredients.

Parkin Greasing and lining a baking tin to prevent sticking.



Rubbing butter over the surface of the tin helps the greaseproof paper to

stick and not flap about.



The greaseproof paper shouldn't have any creases or wrinkles in it. Make

sure there are no gaps or exposed baking tin.

Scouse

Browning meat before adding to the finished dish.



Pieces of meat are shallow fried in a hot pan so all surfaces are browned. The

centre of the meat won't be cooked yet, so the meat needs to then continue to be cooked by an alternative method, such as in a casserole.

Altering cooking temperature depending on the ingredients and stage of the recipe.

Adapting the cooking temperature of the hob is an important skill for every cook. For example, lowering the temperature on frying vegetables will mean they sweat instead of brown.

Victoria Sponge

Creaming ingredients to capture air that will later ensure a sponge rises.



Creaming butter and sugar helps to make a light sponge. Butter (at room

temperature) is beaten rapidly with sugar until it is pale and fluffy. Eggs that are added after need to be adde slowly, or the mixture will curdle (separate).

Folding to combine ingredients while retaining air, which is important for a consistent and light texture in a sponge.



Flour is often the last ingredient to be added to a sponge. Folding involves gently

mixing in the flour by scraping around the edge of the bowl followed by on 'cut' through the sponge mixture. You should work slowly and gently to prevent air bubbles from being flattened.

Year 6

Knowledge

To understand the origins of traditional British cuisine and make links to events in history children study. Make comparisons between traditional and modern British cuisine, and understand the reasons for the changing influences in British cuisine.

https://www.vice.com/en_uk/article/8xk7xx/british-food-wouldnt-be-the-same-without-the-windrush-generation

British food wouldn't be the same without the Windrush Generation. When the Empire Windrush brought hundreds of migrant workers to the UK after WW2, they brought their ideas and knowledge of food and cooking with them. Missing family and home, they recreated the elements of island life in the UK, which often involved food. As time went on, many enterprising British Caribbeans used food as a way to start a business. The popularity of Caribbean flavours grew in the UK and many dishes and flavours are among British favourites.



Although a new restaurant in Sheffield, *Turtle Bay* has many Caribbean dishes with the ingredients and flavours brought to Britain by the Windrush Generation.



Caribbean Spice on London Road, Sheffield is a family owned business. The current

owners great grandparents emigrated from the Caribbean and brought their heritage of cooking with them.

To apply the individual preferences and dietary requirements to adapt dishes for individuals and groups. To understand the concept of food miles and the impact on the planet this can have.

Food miles: The distance that foodstuffs travel from its point of production on a farm to the consumer. Teams could be given a bag of ingredients for children to study the labels for the country of origin. Plot this on a world map. Debate whether greater choice or the impact on the environment should decide the food we eat.



WW2 fruitcake

Understand how recipes need to be adapted for the availability of ingredients.

The traditional fruitcake recipe was adapted during WW2 as rationing meant people didn't have access to a wide range of ingredients. It was also cooked in a pan on the hob as this was quicker and so used less fuel (gas or wood/coal in a range cooker).

Glazing food to create an appealing finish.

Glazing a sweet, baked item is a traditional way to make it look more appealing. Bakers often glaze their products so they look more delicious is a shop window. A glaze is usually a sweet liquid, which is heated and spread over the cooked item. When cooled, it sets firmer into a high shine.

Goat curry

Pureeing ingredients to make a paste.

A curry paste is a traditional way to start making curry. It ensures there are the right flavours in your curry. Many families have their own recipe, which they keep secret and pass down the generations. Flavours in the curry paste are released when it is cooked gently right at the start fo the cooking process before anything else is added.

Browning meat before adding to the finished dish.



Pieces of meat are shallow fried in a hot pan so all surfaces are browned. The centre of the meat won't be cooked yet, so the meat needs to then continue to be cooked by an alternative method, such as in a casserole.

Simmering at a low, consistent boil without ingredients burning or sticking by stirring regularly and adjusting the cooking temperature.



Simmering is one way to cook ingredients that are mainly liquid. Use a low heat to keep the ingredients gently bubbling with only small bubbles. Stir the ingredients regularly and, if the boil becomes too vigorous or the ingredients begin to stick, turn the heat down.

Cooking and food essentials			
Wash our hands with soap and water for 20 seconds	Make sure long hair is tied back.		
Wear an apron.	Move slowly in the kitchen- never run.		
Wash all fruit and vegetables before eating and	Use oven mitts to remove hot food and dishes from the		
preparing.	oven, grill and hob.		
	Make sure you have a clear area to put the hot tray or dish before you take it out of the oven. Make sure your own mitts are dry and have no holes.		
Be careful when using sharp knives and utensils.	Clean our work area before and after use and clean up		
Use a claw grip to hold ingredients firmly and to keep your fingers out of the way.	Spray the area. Wait a minute. Wipe dry with kitchen roll.		

This document describes the skills and knowledge to be taught in each year group in Textiles.

Design, make and evaluate is differentiated between year groups and is progressive across key stages.

The ideas are intended to act as supporting material, but are not the only ways to teach the powerful knowledge and necessary skills children need to be expert designers when working with textiles.

Teachers should consider the context and purpose of learning, capitalising on opportunities should as national and international celebrations, festivals and events without diluting the intended learning.

Essential vocabulary when teaching textiles:				
Texture	The feel of a material. Rough, smooth, silky, soft, fluffy, delicate etc.			
Product	The intended outcome to be made.			
Joining	Felting Mat together fibres of wool using kneading.			
	Running	A simple needlework stitch consisting of a line of small even		
	stitch	stitches which run back and forth through the cloth without		
	overlapping.			
	Blanket	A buttonhole stitch used on the edges of fabric to prevent fraying.		
	stitch			
	Pinning	Using dressmakers pins to attach a pattern to a piece of fabric, or		
		join two pieces of fabric together before sewing.		
Manipulating	Shaping, ben	ding and altering a material to suit the purpose and design.		
Experiment	Trial and imp	rovement to practise and perfect a given skill or technique. Or,		
	experiment w	experiment with different colours, texture and materials to decide on a final		
	choice.			
Select	Choose with a specific intention and with a clear rationale for the choice.			
Finish	Any final steps to ensure a neat, accurate product.			
	This could include cutting away loose threads, using a blanket stitch to			
	cut edges of fabric, removing loose fabric, ironing to remove creases from			
	product, atta	ching final decorations such as beads or sequins, attaching final		
	pieces that m	ake the product useful (such as a lop to hang) etc.		
Evaluate	Identify the s	trengths and areas for development. What would I do better or		
	differently ne	xt time?		
Describe	Make a point	with an example from your product, a prototype or from research.		
Improvement	Identify the s	trengths and areas for development. What alterations can I make to		
	ensure my pro	oduct meets the brief and is of high quality?		
Mock-up and prototype	Made in the e	early stages of design and make. Rough models and practise to find		
out what works well and what to improve. Evaluation is an important				
	mock-ups and prototypes.			
Embroidered	Pattern sewn	onto fabric using thread.		
Compare	Identify similarities and differences between two or more products during			
	research and/or evaluation.			
Kneed	When felting, manipulate the fibres to fuse them together during the joining			
process.				

1:1 drawing	A drawing of the product at life-size.
Template	The shape of the fabric drawn onto paper or card to cut out and draw around.
Pattern	A repeated decorative design. An arrangement or design in sequence.
Critique	A detailed evaluation of a product, citing specific areas of strength and weakness
	with examples and reference to the research phase.
Market research When in the design process, through questions, finding out what ap	
	target audience and intended user.
Pad	Using a soft fibre between layers of fabric to make a soft product.
Dye	A natural or synthetic substance used to add a colour to or change the colour of
	something.
Seam	The sewn joint between two pieces of fabric.

	Design	Cutting fabric	Joining fabric	Evaluate
FS2	 Choose colours for a specific purpose and explain why these colours are the most suitable. Choose fabrics based on their texture to suit the purpose of the product. Use pattern in design to create an appealing product. 	Cut fabric to equal lengths and identify length.	 By weaving fabric, children Manipulate materials to achieve a planned effect Experiments to create different textures Selects tools and techniques needed to assemble and join fabric. 	 Talk to others to get feedback on my product and identify points for improvement and what has gone well Describe the texture of fabrics to suit the purpose of the product
Y1	 Design an embroidered / felt shape, picture or pattern that is appealing to others and suits the intended purpose By making mock-ups, practise a running stitch to experiment with colour and stitch length 	Cut pieces of fabric to the nearest centimetre. Cut appropriate lengths of thread for sewing with	 By embroidering with a running stitch, children Make an embroidered pattern that uses a neat, consistent running stitch Finish their product by tying off threads neatly to ensure a high quality finish By creating a hot water felting story mat Select, shape, join and finish using wool 	• By comparing their own product to a high quality example, children can identify strengths and ways to improve their work
Y2	Design a product to meet a set of design criteria through 1:1 drawings. Design an embroidered product by drawing the shapes they will need as a pattern to use later as templates for the pieces of fabric.	Cut pieces of fabric using fabric scissors with precision and care. Draw around pattern pieces onto fabric before	 By joining and embroidering with a running stitch, children Thread their own needle Make an embroidered pattern that uses a neat, consistent running stitch Finish their product by adding further decoration (beads, sequins etc.) 	 Critique their product by evaluating it against a the design criteria to identify strengths and ways to improve their work

Y3	Research by investigating and researching existing products to identify appropriate elements to incorporate into own design.cutting the incorporate into own design.Design a product to meet a set of design criteria through 1:1 drawings.besign an embroidered product by drawing the shapes they under the shape they	cutting them out.	 By joining and embroidering with a running stitch, children Make an embroidered pattern that uses a neat, consistent running stitch Finish their product by adding further decoration (beads, sequins etc.) Pad a sewn product 		•	As in the design stage, research and investigate existing products to identify elements to incorporate and evaluate against Critique their product by evaluating it against a the design criteria to identify strengths and ways to improve their work Consider the views of others to improve their work
Y4	pattern to use later as templates for the pieces of fabric. Practise the skills that will be used to select the most appropriate and appealing techniques.		By joining and embroidering with a running stitch and blanket stitch, children • Make a wall hanging that using Shibori dyeing technique • Select a Shibori dyeing technique that is aesthetically pleasing • Finish their product by preventing fraying using a blanket stitch	 By making a Shibori wall hanging, children Learn about the heritage and culture of fabric decoration Make an aesthetically pleasing product How to use seam allowance to give spare material to seams or hems 	•	
Y5	Design and evaluate by critiquing existing products to identify appropriate elements to incorporate into own design.	Cut pieces of fabric using fabric scissors with precision and care. Pin pattern	Children are given at least two opportunities in the year to master the skills they have learnt so far in order to become experts. They are presented with a design brief and use the design, make and	 By using stencil dyeing/screen printing, children Cut using a craft knife safely and with precision Practise their skills by making 		
Y6	Use market research to design a product that suits	pieces onto fabric before	evaluate process to create high quality products that are fit for	 prototypes Recognise that repetition and 		

the context and	cutting	purpose, meet the	practise is	
purpose and	them out	intended design criteria	inherent in the	
appeals to the	to improve	and appeal to the	design, make	
intended audience.	accuracy.	intended audience.	and evaluate	
Design a product to			process	
meet a set of				
design criteria				
through 1:1				
drawings.				
Design a textiles				
product by drawing				
the shapes they				
will need as a				
pattern to use later				
as templates for				
the pieces of fabric.				
Practise the skills				
that will be used to				
select the most				
appropriate and				
appealing				
techniques.				
Communicate their				
ideas through				
discussion and				
presentation.				



• Use pattern in design to create an appealing product.

Make

Cutting:

Cut fabric to equal lengths and identify length.

Joining:

- Manipulate materials to achieve a planned effect
- Experiments to create different textures
- Selects tools and techniques needed to assemble and join fabric.

By creating a warm water felting necklace/bracelet ...

• Select, shape, join and finish using wool https://www.chicagoparent.com/learn/crafts/wet-felting-kids_2/



Evaluate

Talk to others to get feedback on my product and identify points for improvement and what has gone well
Describe the texture of fabrics to suit the purpose of the product

Just expressing an interest in the process a child has gone through is often enough or asking open questions such as 'Can you tell me about it – that looks interesting' may be all that is required to help a child hold on to their remarkable creativity.

Year 1 Design

- **Design** an embroidered / felt shape, picture or pattern that is appealing to others and suits the intended purpose
- By making **mock-ups**, practise a running stitch to experiment with colour and stitch length



Make

Cutting:

- Cut pieces of fabric to the nearest centimetre. (Maths curriculum knowledge)
- Cut appropriate lengths of thread for sewing with

Joining:

By embroidering with a running stitch, children...

- Make an embroidered pattern that uses a neat, consistent running stitch
- Finish their product by tying off threads neatly to ensure a high quality finish



Create a loop, put the needle through the loop (twice), and pull the thread tight. Then cut the thread leaving a neat finish.

Running stitch: <u>https://www.youtube.com/watch?v=i1-B01FB56s</u>





By creating a hot water felting story mat...
Select, shape, join and finish using wool <u>https://mericherry.com/2015/12/22/wet-felting-with-kids/</u>

Evaluate

• By **comparing** their own product to a high quality example, children can **identify** strengths and ways to **improve** their work

Questions:

Did you use enough wool when felting to create desired thickness? In the joining process did you knead the felt enough to make it hold? How could you improve you design? Make the colours stand out more/less?



E.g. Austin's butterfly is evidence to suggest, how a child can evaluate their work along with peer feedback to improve a design.

Year 2

Design

Design a product to meet a set of design criteria through 1:1 drawings.

Design an embroidered product by drawing the shapes they will need as a pattern to use later as templates for the pieces of fabric.



Children designing before making is immensely important. It teaches them valuable skills in persistence, perseverance and clarity in their understanding when designing.

"It's through mistakes that you actually can grow. You have to get bad in order to get good." -- Paula Scher, graphic designer and painter



Having a design template creates that understanding and visual interpretation of one person's creative mind then applying to create a product.

Make

Cutting:

Cut pieces of fabric using fabric scissors with precision and care. Draw around pattern pieces onto fabric before cutting them out.



Joining:

By joining and embroidering with a running stitch, children...

- Thread their own needle
- Make an embroidered pattern that uses a neat, consistent running stitch
- Finish their product by adding further decoration (beads, sequins etc.)



Evaluate

Critique their product by evaluating it against the design criteria to **identify** strengths and ways to **improve** their work.

When evaluating the product ensure children understand the purpose of their product. Can children **analyse** their design against

Year 3 and Year 4

Design

Research by investigating and researching existing products to identify appropriate elements to incorporate into own design.



The designer has used a similar technique to create different effects. They are colourful and bright. The designer must have left the dark one in the dye for longer to make it that dark.



The green felt pieces have been padded. The designer has added sequins and beads to make it look like baubles and tinsel.

People could hang it on their tree at Christmas.

Children identify how the designer has created the product and some of the techniques they have used. Children should think about what it would be used for, who would like to it and, if appropriate, when it would be used.

Design a product to meet a set of design criteria through 1:1 drawings. **Design** an embroidered product by drawing the shapes they will need as a pattern to use later as templates for the pieces of fabric.



Children draw a 1:1 scale drawing of their design. By photocopying it, they can use this as the template to draw around onto fabric to cut out the correct size pieces of fabric. 1:1 helps to ensure the design is realistic and feasible: children can lay over decoration and compare the size of materials to the product. It is a helpful strategy is addressing the common misconception of creating overly intricate designs. It sets children up for success by avoiding having to increase or decrease the scale of their design onto fabric, and teaches the important skill of creating a pattern.

Practise the skills that will be used to select the most appropriate and appealing techniques.

It is important that children take time to acquire and refine their new skills. When a new stitch is taught, practise is important to achieve a neat and accurate result. Equally, retrieving previous techniques deepens prior learning.



Make

Cut pieces of fabric using fabric or dressmakers scissors with precision and care.

It is important that children use the right tools for the job, but must do so with care.

- Lay the fabric on a clear table
- Cut away from your body
- Follow the line you've drawn with care
- Be aware of others around you: they might bump or distract you
- Fabric scissors must only be used to cut fabric

Draw around pattern pieces onto fabric before cutting them out.

It may help to use a pin to hold the pattern piece in place while drawing around it. Draw onto the back of the fabric so you don't see any of the drawn lines ono the finished product.



Make an embroidered pattern that uses a neat, consistent running stitch.



Use a running stitch to add pattern and join pieces of fabric.

Finish their product by adding further decoration (beads, sequins etc.).



Pad a sewn product.

Teach children to sew two pieces together inside out, leaving a hole large enough to turn the product the correct way around. This prevents the stitching being visible. Stuffing can be inserted through the hole before being stitched closed. Children could position the stuffing hole carefully, so it can be hidden later, such as where the hanging ribbon will be placed or extra decoration added.





Finish their product by preventing fraying using a blanket stitch

Blanket stitch it used on raw, cut edges to prevent the fabric from fraying. It can also be used to join two pieces of fabric together along their edges.



Use seam allowance to give spare material to seams or hems



Seam allowance can be used to join two pieces of fabric together.

Start by laying the pieces face to face. Sew a line parallel line 1cm from the edge of the fabric. Open out the fabric.

Blanket stitch could be used to prevent the raw cut edges from fraying on the back.



Year 5 and Year 6

Design

Design and **evaluate** by **critiquing** existing products to identify appropriate elements to incorporate into own design.

Critique- a detailed analysis and assessment to identify aspects to emulate in children's own products.

The tie at the top shows that it could be hung around the house or on a Christmas tree.

The simple shape and pattern is appealing, but simple to emulate.

By adding extra decoration, the designer has improved the aesthetic appeal.



The designer's choice of colours and fabrics makes the product appealing to customers during the Christmas period.

The stitching is very neat and accurate.

The product could be used to store Christmas candy cones. Children comment on the way the product has been made, such as the stitching techniques, fabric choices and decoration used.

Children identify how the designer is appealing to the intended market. Children identify how the product has been made useful and the features it has that would appeal to the customer.

Use market research to design a product that suits the context and purpose and appeals to the intended

Select which Easter decoration you would choose for your own home from the selection below..

audience.

Children select from a range of product ideas that incorporate their existing skills. A simple survey is used to focus their design on what they can demonstrate will prove popular.

Which colour combination would you prefer? Select up to three colours.



Design a textiles product by drawing the shapes they will need as a pattern to use later as templates for the pieces of fabric.

At 1:1 scale, children draw and cut their fabric pattern pieces.

Practise the skills that will be used to select the most appropriate and appealing techniques.



Children need the opportunity to practise their intended techniques as part of the design process. This will inherently involve evaluation: what worked successfully, what needs to be improved, which techniques and materials are the most appropriate?

Communicate their ideas through discussion and presentation.

When children have a completed design, they should present their intentions to their peers and invite critique as part of the design, make and evaluate process. By providing a talk frame, children could offer constructive advice specific to their product.

What are you pleased about in your design?

Why did you choose this range of colours?

Why are the stitches you've chosen the best ones?

How did you improve your design as you went along?

What do you think will be the trickiest parts to make?

Which techniques do you need to practise more before starting your final design?

Make

Cut pieces of fabric using fabric scissors with precision and care. Pin pattern pieces onto fabric before cutting them out to improve accuracy.



Ensure that...

The point of the pin is facing away from the direction of cut to avoid hurting yourself

There are enough pins, especially near the edges off the pattern, to ensure a secure hold so the pattern and fabric don't slip

The area of the fabric you want to use is in the correct place on the pattern, without wasting fabric

Practise their skills by making prototypes.

Children need the chance to make small-scale mock ups of their product. This could be practising a stitch type onto thin card to experiment with stitches and colour combinations.

Cut using a craft knife safely and with precision



Only use a craft knife when you have to- scissors are a safer option if you can. Keep the blade retracted when not in use. Draw an accurate line where you intend to cut. Keep your body away from the cutting line. Only cut on a cutting mat. Secure your work with pins or masking tape.

If possible, cut against the edge of a metal ruler. Be aware of others in the area- they may bump or distract you.

Stencil dyeing



After cutting a simple stencil from thick card or plastic (you could use clear sheets of laminator pouches), lay the stencil over the fabric. As in screen printing, paste a little dye onto the stencil, then run a flat, strong edge over the stencil to spread the dye over the cut away area.

Alternatively, use a lino printing roller to spread the dye over the cut away area.



Evaluate



their work.