

DT Knowledge Progression Framework

Disciplinary Knowledge

	F2	Year 1	Year 2	Year 3
Designing	<ul style="list-style-type: none"> Explore and use a range of resources and effects to express their ideas and feelings. Communicate ideas both verbally and through simple drawings. 	<ul style="list-style-type: none"> Use their own ideas to design a product. Describe how their own ideas work. Draw simple designs, labelling key parts of their product. 	<ul style="list-style-type: none"> Understand and explain the purpose of their product. Draw simple designs, labelling key parts of their product and the tools and materials they will use to make it. Explain why they have chosen specific materials to use. 	<ul style="list-style-type: none"> Consider the audience and purpose of products they design. Prove that their design meets a set design brief. Draw labelled designs which detail material choices and the suitability of them.
Making	<ul style="list-style-type: none"> Explore and use a range of resources and effects to express their ideas and feelings. Use small tools safely and competently. Develop their fine motor skills when using a range of small tools to shape, assemble, join and finish. 	<ul style="list-style-type: none"> Use a range of tools safely. Use their own ideas to make a product. Use simple templates. Assemble and join different materials using a variety of methods. Use simple finishing techniques modelled by the teacher. 	<ul style="list-style-type: none"> Choose tools and materials, explaining why they have chosen them. Use simple templates to ensure materials are of uniform size. Select the most appropriate method to join materials together when making simple products. Use simple sewing techniques. Use a range of finishing techniques to improve the appearance of a product. 	<ul style="list-style-type: none"> Follow a step-by-step plan choosing the most appropriate equipment, materials and tools. Work accurately to measure, make cuts and make holes. Select their own finishing technique using a range of equipment including ICT.

Evaluating	<ul style="list-style-type: none"> • Share their creations. • Begin to talk about the process they have used and changes made during this process. 	<ul style="list-style-type: none"> • Describe how something works. • Explain what they like and dislike about existing products. • Explain what they like and dislike in their own models and products. • Begin to explain what works well in their products. 	<ul style="list-style-type: none"> • Explain what works well and not so well in existing products as well as their own. • Simply explain what they might change/how they improve their product if they made it again. 	<ul style="list-style-type: none"> • Explain how a finished product could be improved. • Understand why a model or product has or has not been successful.
Technical Knowledge	<ul style="list-style-type: none"> • Explore what products are, how they are used and how they work. 	<ul style="list-style-type: none"> • Explore ways to make a model stronger. • Explore ways to make a model move. 	<ul style="list-style-type: none"> • Explain which product would be stronger and more stable from a given selection. • Know what a simple mechanism is and understand that it creates movement. 	<ul style="list-style-type: none"> • Understand how mechanisms create movement. • Select the most appropriate mechanism to use when making a product.

Food Technology

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| <ul style="list-style-type: none">• Use small tools safely, including cutlery.• Explore some of the process involved in food preparation.• Understand that fruits and vegetables are grown. | <ul style="list-style-type: none">• Know where fruit and vegetables come from.• Understand how to handle and prepare food safely and hygienically. | <ul style="list-style-type: none">• Follow basic food handling and hygiene principles when preparing food.• Develop an awareness of what makes a healthy balanced diet. | <ul style="list-style-type: none">• Weigh out ingredients to use in a recipe.• Know when food is ready for harvesting.• Demonstrate hygienic food preparation and handling. |
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Substantive Knowledge

	Year 1	Year 2
Food (Cooking and Nutrition)	<ul style="list-style-type: none"> • Know that food comes from plants and animals. • Know that different fruits and vegetables come from different types of plants. • Know that fruits and vegetables are edible parts of a plant. • Know that vegetables can grow above or below ground. • Know that fruits have seeds and vegetables do not. • Know that blenders are used to mix ingredients together into a smooth liquid. • Know that the 'bridge' method can be used to cut food safely. 	<ul style="list-style-type: none"> • Know that a 'diet' refers to the food and drink that a person or animal usually eats. • Know what the 5 main food groups are <ul style="list-style-type: none"> ○ Carbohydrates ○ Fruits and Vegetables ○ Proteins ○ Dairy ○ Foods high in fat/sugar • Know that we should eat the correct amount of a range of foods to maintain a balanced diet. • Know that ingredients are the items in a mixture or recipe
Structures	<ul style="list-style-type: none"> • Know that a structure is something which has been made and put together. • Know that the shape of materials can be changed to improve a structure's strength and stiffness. • Begin to know that different structures can be used for different purposes. • Know that cylindrical shapes are a strong type of structure. 	<ul style="list-style-type: none"> • Know that a structure can be made from different parts. • Know that shapes and structures with wider and flatter bases/legs are the most stable. • Know that the shape of a structure affects its strength. • Know that a stable structure has been fixed and is unlikely to change or move. • Know that strong and stable structures do not easily break or bend.
Textiles	<ul style="list-style-type: none"> • Know that 'joining technique' means connecting 2 pieces of material together. • Know that there are different methods of joining fabric. <ul style="list-style-type: none"> ○ staples ○ glue ○ pins • Know that a template can be used to cut out the same shape multiple times. 	<ul style="list-style-type: none"> • Know that sewing is a method of joining fabric. • Know how to perform a running stitch. • Know that it is important to tie a knot after the final stitch to secure the sewing. • Know that templates can be used to ensure materials are cut to the same size.
Mechanisms	<ul style="list-style-type: none"> • Know that a mechanism is a moving part of a product. • Know that a slider mechanism moves an object from side to side. • Know that a slider mechanism has: 	<ul style="list-style-type: none"> • Know that a mechanism is a collection of moving parts which work together as a machine to produce movement. • Know that a wheel must be round to rotate and move successfully.

- a slider
- slots
- guides
- an object
- Know that bridges and guides are bits of card which restrict the movement of a slider.

- Know that a wheel must be attached to a rotating axel for it to move.
- Know that an axel must be fixed to a vehicle for it to move.
- Know that the frame of a vehicle must be balanced.

Key Vocabulary

F2

blade – the sharp part of a knife which is used to cut
chop – to cut food into smaller pieces using a knife
chopping board – a board used for cutting foods
handle – the part of a knife that you hold
join/fix – to fasten 2 items together
knife – a tool used for cutting, slicing and chopping
mix – to put different things together so they become one
safely – working carefully to avoid harm
taste – to recognise the flavour of a food by eating it
threading – to pass thread through a hole or slit
weaving – to pass thread or strips over and under each other

Year 1

In addition to F2...

blender – a machine which mixes ingredients together into a smooth liquid
design – a plan of something you intend to make (often a drawing).
evaluate – to reflect on whether a product meets the original design brief or could have been improved
fabric – cloth or material made by knitting or weaving fibres
flavour – the way something tastes
fruit – a part of a plant containing seeds which can be eaten
glove puppet – a puppet which fits over the hand so your fingers can operate its head and arms
healthy – foods which are high in nutrients and low in fats/sugars
ingredients – the items needed to make a food dish
mechanism – the part of a product that creates movement
net – what a 3D shape would look like if it was opened up and laid flat
nutrients – Substances in foods which living things need to make energy, develop and grow
purpose – how the product is going to be used
recipe – a list of ingredients and instructions to make a food dish
seed – a small part of a plant from which new plants can grow
sliders – a strong bar which moves forwards and backwards in a straight line
smoothie – a combination of fruit and vegetables blended together to make a smooth drink
stable/strong – something which stays standing when weight or force is put on it

structure – a building or object made from more than one part
template – a piece of card/paper in the shape of your final product which is placed on the fabric and cut around
test – a trial to see if a product means a design brief and is fit for purpose
vegetable – a part of a plant which can be eaten
vine – plants with long stems which climb up walls or lie on the ground
weak – something which is likely to fall or break when weight or force is put on it

Year 2

In addition to F2 and Y1...

axle – a rod which enables a wheel to rotate
axle holder – a hollow tube attached to a vehicle which the axle goes through
appearance – what a product looks like
balanced diet – eating a variety of foods from all 5 food groups
carbohydrates – foods which give our body its main source of energy (eg: bread, potatoes, pasta)
chassis – the frame/base on which a vehicle is built
dairy – foods containing calcium which help our bones and teeth to grow stronger
design brief – a list of what a product must have/do
diet – the food that a person eats
fats/sugars – foods which give us a short burst of energy
grate – to shred food into smaller pieces using a grater
man-made – things which have been made by humans
natural – things which have been made as a result of nature
needle – a thin piece of metal with a point which has an eye at one end for a piece of thread to pass through
peel – to remove the skin from a fruit or vegetable
proteins – foods which help our body to repair itself and build muscles (eg: fish, meat, beans, nuts)
running stitch – a line of evenly spaced stitches which go straight along a piece of fabric without overlapping
sew – to join 2 pieces of fabric with stitches
thread – a long thin strand of cotton