



DT – Key Knowledge

	Food & Nutrition	Classroom Kitchen	Mechanisms	Structures	Electrical Systems Year 4 and Year 6	Artificial Intelligence and App Control Year 3 and Year 6	Textiles
Nursery	I can chop soft food (bananas and strawberries). I can peel food using fingertips (bananas and tangerines).		I can use construction materials (mobilo) I can use split pins to make moving wheels.	I can build a house using different materials I can make a nest (weaving) I can make enclosures to build a farm. I can make 3D vehicles			I can start to weave using fingers with fine and gross motor movements to create a Christmas decoration.
Reception	I can use the bridge method I can tear ingredients I can arrange ingredients I can use the claw method I can chop hard food (apples, pears, pineapple and watermelon). I can grate with an adult's help I can spread (with a spoon or knife) I can count a spoonful I can measure with a scale I can rub (with fingertips) fat into flour I can mix ingredients together		I can use lego and construction materials. I can join pieces to create a marble run. I can use cogs and gears.	I can create a forest Den building (3 Bears) I can create 3D rockets I can design and make a home/shelter for an animal I can make 3D transport with moving wheels, linked to people who help us			I can weave using an in and out motion, indoors and outdoors. I can explore using large needles.

Year 1	I can take inspiration from other designers I can select and use a range of tools I can make food products, refining the design as work progresses I can suggest improvements to existing designs. I can sort food in to healthy and unhealthy. I can name food that comes from plants and animals.	I can explain where food comes from. I can measure ingredients. I can measure with spoons (careful counting). I can use scales (Balancing to zero/resetting). I can beat eggs. I can divide/pour mixture into tins/cases. I can use the bridge cut method. I can use the claw cut method. I can peel hard foods.	I can make a simple slider mechanism (with a guide bridge) I can cut materials safely using scissors. I can demonstrate a range of cutting techniques. I can use materials to practise gluing materials to make and strengthen products. I can design products that have a clear purpose and an intended user.	I can cut materials safely using scissors I can demonstrate a range of cutting techniques I can demonstrate joining techniques using glue I can use materials to practise gluing materials to make and strengthen products I can design products that have a clear purpose and an intended user. I can suggest improvements to existing designs.			I can create a running stitch. I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses. I can suggest improvements to existing designs.
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	Key Vocabulary: Healthy, unhealthy, fork, knife, product, plants, animals, improvements	Key Vocabulary: Caught, ingredients, measure, scales, beat, pour, bridge cut, claw cut, peel	Key Vocabulary: Slider mechanism, rod, push, pull, guide bridge, design sheet, materials, features, purpose	Key Vocabulary: Structure, stable, strength, joining, design sheet, scissors, materials, glue, cut			Key Vocabulary: Running stitch, needle
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	Food & Nutrition	Classroom Kitchen	Mechanisms	Structures			Textiles
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Year 2	I can design food products that have a clear purpose and an intended user. I can suggest improvements to existing designs. I can cut, peel or grate ingredients safely and hygienically I can assemble ingredients I can explain where couscous comes from	I can explain where food comes from. I can measure ingredients. I can measure with spoons (tsp and tbsp). I can use scales (Balancing to zero/resetting). I can use jugs to measure liquid. I can mix to form a dough. I can knead and shape. I can use the bridge cut method. I can use the claw cut method. I can snip herbs in a jug using scissors.	I can make a simple wheel and Axle mechanism. I can cut materials safely using scissors. I can demonstrate a range of cutting techniques. I can design products that have a clear purpose and an intended user.	I can cut materials safely using scissors I can demonstrate a range of cutting techniques I can demonstrate joining techniques using tape I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses I can suggest improvements to existing designs.			I can create a running stitch. I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses. I can suggest improvements to existing designs. I can cut materials safely using scissors.
	Key Vocabulary: Design, inspiration, cut, chop, snip, evaluate, improve, fork, couscous, secure	Key Vocabulary: Ingredients, measure, scales, bridge cut, claw cut, knead, snip	Key Vocabulary: Mechanism, push pull, design sheet, materials, product, wheel, axle	Key Vocabulary: Stronger, stable, safe, A frame, structure, joining, design sheet, materials			Key Vocabulary: Needle, thread, running stitch, template

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						and App Control	
Year 3	I can cut ingredients safely and hygienically using a knife I can design food products that have a clear purpose and an intended user I can make products, by choosing the correct ingredients and tools, refining the design as work progresses I can evaluate my work and make suggestions for improvement I can explain what nutrition is I can explain where different vegetables come from		I can cut materials safely using scissors I can use split pins to create joins I can design products that have a clear purpose and an intended user. I can suggest improvements to existing designs. I can create a mood board I can assemble linked levers following instructions	I can cut materials safely using scissors I can demonstrate a range of cutting techniques I can demonstrate joining techniques using tape I can use materials to practise gluing materials to make and strengthen products I can design products that have a clear purpose and an intended user I can suggest improvements to existing designs. I can use a hand saw safely to make a straight cut		BoltonSICT deliver this session and is continued in Computing I can use LEGO kits, to make a variety of robots that I will then program to follow a set of instructions. I can program external devices	I can create a running stitch. I can join two pieces of fabric using a running stitch. I can use applique to attach fabric on my design. I can embellish my work with beads and sequins. I can design products that have a clear purpose and an intended user. I can suggest improvements to existing designs. I can cut materials safely using scissors.

	Key Vocabulary: S afe, hygiene, design, inspiration, chop, peel, stir, product, improve, evaluate, nutritious, vegetables	Key Vocabulary:	Key Vocabulary: Design technology, lever, linkage, linked lever, mood board, split pins, annotate, cutting, assembling, joining, design, inspiration, evaluate	Key Vocabulary: Strength, stability, rigid, structure, safety, sawing block, saw, reinforce, purpose, materials, techniques, cutting		Key Vocabulary:	Key Vocabulary: Embellish, attach, running stitch, applique
	Food & Nutrition	Classroom Kitchen		Structures	Electrical Systems		Textiles
Year 4	I can take inspiration from other designers I can select and use a range of tools I can design food products that have a clear purpose and an intended user. I can cut, peel or grate ingredients safely and hygienically I can explain where bolognaise comes from I can name food that fits	I can explain where food comes from. I can measure ingredients. I can measure with spoons (tsp and tbsps). I can use scales (Balancing to zero/resetting). I can use jugs to measure liquid. I can handling/rolling pastry and dough. I can use the bridge cut method. I can use the claw cut method. I can snip herbs in a jug using scissors.		I can demonstrate a range of CAD techniques I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses I can suggest improvements to existing designs. I can create a shell structure using CAD.	I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses I can incorporate a switch and a bulb into my circuit I can make a parallel circuit I can suggest improvements to existing designs. I can draw an exploded diagram.		I can create a running stitch. I can join two pieces of fabric using a running stitch. I can use applique to attach fabric on my design. I can embellish my work. I can add a fastening to my work. I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses.

	into each food group I can explain what a balanced diet is						I can suggest improvements to existing designs.
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		I can fine chop of herbs using a knife.					
	Key Vocabulary: P roduct, design, hygiene, safety, ingredients, design features, balanced diet, bolognaise, reared	Key Vocabulary: Ingredients, measure, scales, bridge cut, claw cut, knead, snip, fine chop		Key Vocabulary: Structure, stable, rigid, CAD, computer aided design, design, shell structure, product	Key Vocabulary: Exploded diagram, switch circuit, paper circuit, design, bulb		Key Vocabulary: Attach, applique, Motif, fastening, embellish
	Food & Nutrition	Classroom Kitchen	Mechanisms	Structures			Textiles

Year 5	I can select and use a range of tools I can design food products that have a clear purpose and an intended user. I can prepare ingredients hygienically using appropriate utensils. I can evaluate the design of my product and suggest improvements to the user experience I can generate and develop my ideas using the internet and a mood board I can explain where and how a	I can explain where food comes from. I can measure ingredients. I can measure with spoons (tsp and tbsp). I can use scales (Balancing to zero/resetting). I can use jugs to measure liquid. I can mix to form a dough. I can knead and shape. I can glaze/brush pastry and dough. I can use the bridge cut method. I can use the claw cut method. I can peel hard foods.	I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses. I can suggest improvements to existing designs. I can look at different cam mechanisms and choose which is the most suitable. I can create different cams to change the speed of the follower. I can use a glue gun safely.	I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses I can make joins with string and glue. I can create a mood board with annotations. I can suggest improvements to existing designs.			I can create a running stitch. I can join two pieces of fabric using a running stitch. I can use applique to attach fabric on my design. I can embellish my work. I can design products that have a clear purpose and an intended user. I can suggest improvements to existing designs. I can cut materials safely using scissors. I can sew safely using a needle.
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	variety of ingredients are grown, caught and processed I can demonstrate a range of baking and cooking techniques.						
	Key Vocabulary: Design, product, mood board, design, safety, hygiene, originates, source, nutrition, nutritious	Key Vocabulary: Ingredients, measure, scales, bridge cut, claw cut, knead, snip, peel, glaze, dough	Key Vocabulary: Evaluate, design diagram, cutting, assembling, joining, followers, cam, mechanism, design technology, improved, automata, axle	Key Vocabulary: Product, purpose, inspiration, design, mood board, strength, stability, shell, assemble, cutting, joining, assembling, evaluate, existing design			Key Vocabulary: Finish, decorative, fibres, applique
	Food & Nutrition	Classroom Kitchen		Structures	Electrical System	Artificial Intelligence and App Control	Textiles

Year 6	I can design food products that have a clear purpose and an intended user. I can demonstrate a range of baking and cooking techniques safely and hygienically I can evaluate the design of my product and suggest improvements to the user experience I can generate and develop my ideas using the	'Come Dine with me' I can prepare a three course meal using all previous skills		I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses I can create a mood board with annotations for an Anderson Shelter I can suggest improvements to existing designs. I can use a saw safely when cutting wood I can create a strong join with a glue gun and cardboard triangles to reinforce	I can design products that have a clear purpose and an intended user. I can attach wires and battery to a motor. I can attach axles and wheels to a propeller attached to a motor. I can attach motors to fans. I can add a switch to a design. I can annotate an exploded diagram. I can suggest improvements to existing designs.	BoltonSICT deliver this session and is continued in Computing I can create a simulation for a Microbit (showing temperature, animation, welcome message, playing music, waving arm), writing a program using Blockly and debug I can program a microbit to control the model robot (showing temperature, animation, welcome message, playing music, waving arm), evaluate the effectiveness and debug I can write a program using basic blocks, repeat (loops) blocks, events blocks, input	I can create a running stitch. I can join two pieces of fabric using a running stitch. I can use applique to attach fabric on my design. I can embellish my work. I can design products that have a clear purpose and an intended user. I can make products, refining the design as work progresses.
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	internet and a mood board I can explain where and how a variety of ingredients are grown, caught and processed I can describe how to keep safe and hygienic in the kitchen I can explain what processed means			I can create a cross sectional drawing		blocks, strings blocks and extensions (Strawbees) I can create a control panel which works correctly I can use a search engine to find BBC Microbit web page, choosing the correct web page from the results	I can suggest improvements to existing designs. I can cut materials safely using scissors. I can sew safely using a needle.
	Key Vocabulary: Safe, hygienic, design, inspiration, product, mood board, evaluate, originates, source, processed	Key Vocabulary:		Key Vocabulary: Evaluate, product, cutting, frame, strong, reinforce, safely, stable, structure, mood board, materials, cross-sectional	Key Vocabulary: Electronics, pulley, gears, axles, battery, wire, motor, mood board, design, joining, evaluate, product, switch, exploded diagram	Key Vocabulary: Algorithm, program, sequence, repeat, debugging/deglitching, input, output, event blocks	Key Vocabulary: Interlacing, product, trends, prototype