

DT teaching sequences Nursery:

Autu	mn	Spr	ring	Sum	nmer
		Understanding	g the World		
All About Me Creating their own faces	Journeys Making Vehicles in construction area or creative area	Dinosaurs Dinosaur Puppets/box models Flying Dinosaurs	Growing and changing Creating flowers from different materials.	Animals and their Babies Design and make a farm animal mask.	Heroes and Adventurers Junk model space ships Junk Model vehicles for heroes
Children learn to manipulate and play with different materials. Children learn to use their imagination as they consider what they can do with different materials. Children learn to explore a range of different materials in order to develop their ideas about how to use them and what to make. Children learn now to join different materials and explore different textures. Children to learn to use scissors accurately to cut different materials.	Children learn to make simple models which express their ideas. Children learn to develop their ideas and decide which materials to use to express them. Children learn to explore a range of different materials in order to develop their ideas about how to use them and what to make. Children learn now to join different materials and explore different textures.	Children learn to explore different materials freely, develop their own idea about how to use them and what to make. Children learn now to join different materials and explore different textures. Children to learn to use scissors accurately to cut different materials. Children learn to manipulate and play with different materials.	Children learn to use their imagination as they consider what they can do with different materials. Children learn to explore different materials freely, develop their own idea about how to use them and what to make. Children learn to manipulate and play with different materials.	Children learn to use their imagination as they consider what they can do with different materials. Children learn how to use scissors accurately to cut different materials. Children learn to explore a range of different materials in order to develop their ideas about how to use them and what to make.	Children learn to make simple models which express their ideas. Children learn now to join different materials and explore different textures. Children to learn to use scissors accurately to cut different materials.



Making family/people from play dough Building houses/buildings in the construction area. Making Autumn pictures using materials and glue, cutting skills.	In continuous provision Making vehicles on creative table or small world and construction. Making boats and testing them in water tray. Tissue paper to create stained glass windows. (local church)	In continuous provision Creating dinosaurs in junk modelling. Making dinosaurs and dinosaur landscapes on the playdough table. Create fossils using salt dough.	In continuous provision Creating a beanstalk in funky fingers. Creative table investigating joining, cutting. Chopping and tasting a range of fruits and vegetables. Creating butterflies on creative table.	In continuous provision Junk Modelling animals Creating animals and their babies on the play dough table. Create a 3D woodland using various materials.	In continuous provision Create a parachute Creating space stations/rockets with large bricks and crates outside. Small world/construction creating sled to travel across the ice/ boats to travel across the water. Building mountains obstacle course. Creating vehicles for local heroes.
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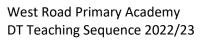


DT teaching sequences Reception:

Auti	umn	Spr	ing	Sum	nmer			
	Understanding the World							
All About Me Create their home using box modelling.	Transport Designing and making boats	Space – Making rockets	Growing and changing- Designing seed packets, creating beanstalks	Kings and Queens Building Castles	Stories from the Past Creating dragon puppets. Anansi the spider from fables			
Learning Process: Children are learning to create collaboratively sharing ideas, resources and skills. Children learn to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture form and function. Children learn to share their creation and explain the process they have used.	Children learn to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture form and function. Children learn return to and build on previous learning. Children are able to refine their ideas.	Children learn to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture form and function. Children learn return to and build on previous learning. Children are able to refine their ideas. Children are learning to create collaboratively sharing ideas, resources and skills.	Children learn return to and build on previous learning. Children learn to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture form and function Children learn to share their creation and explain the process they have used.	Children learn return to and build on previous learning. Children are learning to create collaboratively sharing ideas, resources and skills. Children are able to refine their ideas. Children learn to share their creation and explain the process they have used.	Children learn return to and build on previous learning. Children are able to refine their ideas. Children learn to share their creation and explain the process they have used.			
In continuous provision	In continuous provision	In continuous provision	In continuous provision	In continuous provision	In continuous provision			



Making family/people from	Making vehicles on creative	Creating rockets in	Creating a beanstalk in	Creating castles in small	Creating dragons using junk
play dough	table or small world and	construction.	funky fingers.	world and construction	modelling.
Building houses/buildings in	construction.	Outdoor building	Creative table investigating	areas.	Creating knights in the
the construction area.	Making boats and testing	rockets/space stations with	joining, cutting.	Making crowns on the	playdough
Making Autumn pictures	them in water tray.	large bricks and crates.	Designing/making gardens	creative table.	Creating spiders using plates
using materials and glue,	Tissue paper to create		using the flowers in		and split pins.
cutting skills.	stained glass windows. (local		playdough table.		
	church)				





DT teaching sequences Y1:

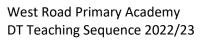
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Food	Mechanisms	Structures	Textiles	Mechanisms	Consolidation
Fruits and Vegetables	Making a moving story book	Constructing a windmill	Puppets	Wheels and Axels	
Key Concepts: User Pu	irpose, Functionality, De	sign Decisions, Innovation	on and Authenticity.		
Teaching sequence: Understanding the difference between fruits and vegetables To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber) To know that a blender is a machine which mixes ingredients together into a smooth liquid To know that a fruit has seeds and a vegetable does not To know that fruits grow on trees or vines To know that vegetables can grow either above or below ground To know that vegetables can come from different parts of the plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber)	Teaching sequence: • To know that a mechanism is the parts of an object that move together • To know that a slider mechanism moves an object from side to side • To know that a slider mechanism has a slider, slots, guides and an object • To know that bridges and guides are bits of card that purposefully restrict the movement of the slider. • To know that in Design and technology we call a plan a 'design'	Teaching sequence: • To understand that the shape of materials can be changed to improve the strength and stiffness of structures • To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses) • To understand that axles are used in structures and mechanisms to make parts turn in a circle • To begin to understand that different structures are used for different purposes • To know that a structure is something that has been made and put together • To know that a client is the person I am designing for • To know that design criteria is a list of points to ensure the product meets the clients needs and wants	Teaching Sequence: • To know that 'joining technique' means connecting two pieces of material together • To know that there are various temporary methods of joining fabric by using staples. glue or pins • To understand that different techniques for joining materials can be used for different purposes • To understand that a template (or fabric pattern) is used to cut out the same shape multiple times • To know that drawing a design idea is useful to see how an idea will look.	To know that wheels need to be round to rotate and move To understand that for a wheel to move it must be attached to a rotating axle To know that an axle moves within an axle holder which is fixed to the vehicle or toy To know that the frame of a vehicle (chassis) needs to be balanced To know some real-life items that use wheels such as wheelbarrows, hamster wheels and vehicles	Opportunity for children to share and talk about previous learning. Children to evaluate what they have learnt throughout the year. Recap main parts of a DT project. (design, make, evaluate)



Di Teaching Sequence 20.	<u> </u>				
		To know that a windmill			
		harnesses the power of			
		wind for a purpose like			
		grinding grain, pumping			
		water or generating			
		electricity			
		To know that windmill			
		turbines use wind to turn			
		and make the machines			
		inside work			
		To know that a windmill is			
		a structure with sails that			
		are moved by the wind			
		To know the three main			
		parts of a windmill are the			
		turbine, axle and structure			
Skills	Skills	Skills	Skills	Skills	
Design	Design	Design	Design	Design	
 Designing smoothie 	 Explaining how to adapt 	 Learning the importance 	 Using a template to create 	 Designing a vehicle that 	
carton packaging by-hand or	mechanisms, using bridges	of a clear design criteria	a design for a puppet	includes wheels, axles	
on ICT software	or guides to control the	 Including individual 		and axle holders, which will	
	movement	preferences and	Make	allow the wheels to	
Make	 Designing a moving story 	requirements in a design	 Cutting fabric neatly with 	move	
Chopping fruit and	book for a given audience		scissors	 Creating clearly labelled 	
vegetables safely to make a		Make	 Using joining methods to 	drawings which	
smoothie	Make	 Making stable structures 	decorate a puppet	illustrate movement	
• Identifying if a food is a	 Following a design to 	from card, tape and glue	Sequencing steps for		
fruit or a vegetable	create moving models that	 Learning how to turn 2D 	construction	Make	
 Learning where and how 	use levers and sliders	nets into 3D structures		 Adapting mechanisms 	
fruits and vegetables grow		 Following instructions to 			
		cut and assemble the			
		supporting structure of a			
Evaluate	Evaluate	windmill	Evaluate	Evaluate	
Tasting and evaluating	 Testing a finished product, 	Making functioning	 Reviewing the success of a 	 Testing mechanisms, 	
different food combinations			_		
	seeing whether it moves as	turbines and axles which are	product by testing it with its	identifying what stops	
Describing appearance,	seeing whether it moves as planned and if not,	assembled into a main	intended audience	wheels from turning,	



Suggesting information to be included on packaging	• Reviewing the success of a product by testing it with its intended audience	Evaluate • Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed		needs an axle in order to move	
Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	
Blender	Assemble	Client	Decorate	Axle	
Carton	Design	Design	Design	Axle holder	
• Fruit	Evaluation	Evaluation	Fabric	Chassis	
Healthy	Mechanism	• Net	• Glue	Design	
 Ingredients 	Model	Stable	Model	Evaluation	
• Peel	• Sliders	Strong	Hand puppet	• Fix	
• Peeler	Stencil	• Test	Safety pin	Mechanic	
• Recipe	Target audience	Weak	Staple	 Mechanism 	
• Slice	Template	Windmill	Stencil	Model	
• Smoothie	• Test		Template	• Test	
Stencil				Wheel	
Template					
 Vegetable 					





DT teaching sequences Y2:

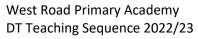
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Mechanisms	Food	Mechanisms	Structures	Textiles	Consolidation
Fairground Wheel	A balanced diet	Making a moving	Baby bear's chair	Pouches	
		monster	,		
Key Concepts: User Pu	rpose, Functionality, De	sign Decisions, Innovation	on and Authenticity.	•	1
Teaching Sequence	Teaching Sequence	Teaching Sequence	Teaching Sequence	Teaching Sequence	Opportunity for children to
To know what a Ferris	• To know that 'diet' means	To know that mechanisms	To know that shapes and	To know that sewing is a	share and talk about
Wheel is.	the food and drink that a	are a collection of	structures with wide, flat	method of joining fabric	previous learning.
To know that different	person or animal usually	moving parts that work	bases or legs are the most	To know that different	
materials have	eats	together as a machine	stable	stitches can be used when	Evaluate their learning from
different properties and are	To understand what	to produce movement	To understand that the	sewing	DT throughout the year.
therefore suitable	makes a balanced diet	 To know that there is 	shape of a structure affects	To understand the	
for different uses	To know where to find the	always an input and	its strength	importance of tying a knot	Recap main parts of a DT
To know the features of a	nutritional information on	output in a mechanism	To know that materials	after sewing the final stitch	project. (design, make,
ferris wheel include	packaging	 To know that an input is 	can be manipulated to	To know that a thimble	evaluate)
the wheel, frame, pods, a	To know that the five main	the energy that is	improve strength and	can be used to protect my	
base an axle and an	food groups are:	used to start something	stiffness	fingers when sewing	
axle holder	Carbohydrates, fruits and	working	To know that a structure is		
To know that it is	vegetables,	 To know that an output is 	something which has been		
important to test my design	protein, dairy and foods	the movement that	formed or made from parts		
as I go along so that I can	high in fat and sugar	happens as a result of the	 To know that a 'stable' 		
solve any problems	To understand that I	input	structure is one which is		
that may occur	should eat a range of	 To know that a lever is 	firmly fixed and unlikely to		
	different foods from each	something that turns	change		
	food group,	on a pivot	or move		
	and roughly how much of	 To know that a linkage 	• To know that a 'strong'		
	each food group	mechanism is made up	structure is one which does		
	To know that nutrients are	of a series of levers	not break easily		
	substances in food that all	 To know some real-life 	• To know that a 'stiff'		
	living things need to make	objects that contain	structure or material is one		
	energy, grow and develop	mechanisms	which does not bend easily		
	 To know that 'ingredients' 				
	means the items in a		To know that natural		
	mixture or recipe		structures are those found		
			in nature		



,	To know that I should only		To know that man-made		
	have a maximum of five		structures are those made		
	teaspoons of sugar a day to		by people		
	stay healthy		by people		
	To know that many food				
	-				
	and drinks we do not expect				
	to contain sugar do; we call				
CUIL	these 'hidden sugar	CL:II-	CL:III-	CL:II-	
Skills	Skills	Skills	Skills	Skills	
Design	Design	Design	Design	Design	
Selecting a suitable linkage	Designing a healthy wrap	 Creating a class design 	Generating and	 Designing a pouch 	
system to produce	based on a food	criteria for a moving	communicating ideas using		
the desired motions	combination which work	monster	sketching and modelling	Make	
 Designing a wheel 	well together	Designing a moving	Learning about different	Selecting and cutting	
Selecting appropriate		monster for a specific	types of structures, found in	fabrics for sewing	
materials based on their	Make	audience in accordance with	the natural world and in	Decorating a pouch using	
properties	Slicing food safely using	a design criteria	everyday objects	fabric glue or running stitch	
	the bridge or claw grip			 Threading a needle 	
Make	Constructing a wrap that	Make	Make	 Sewing running stitch, 	
 Selecting materials 	meets a design brief	 Making linkages using card 	Making a structure	with evenly spaced, neat,	
according to their		for levers and split	according to design criteria	even stitches to join fabric	
characteristics	Evaluate	pins for pivots	 Creating joints and 	 Neatly pinning and cutting 	
 Following a design brief 	 Describing the taste, 	 Experimenting with 	structures from paper/card	fabric using a template	
	texture and smell of fruit	linkages adjusting the	and tape		
Evaluate	and vegetables	widths, lengths and	 Building a strong and stiff 	Evaluate	
 Evaluating different 	Taste testing food	thicknesses of card used	structure by folding paper	 Troubleshooting scenarios 	
designs	combinations and final	 Cutting and assembling 		posed by teacher	
 Testing and adapting a 	products	components neatly	Evaluate	 Evaluating the quality of 	
design	 Describing the information 		 Exploring the features of 	the stitching on others' work	
	that should be included on a	Evaluate	structures	 Discussing as a class, the 	
	label	 Evaluating own designs 	 Comparing the stability of 	success of their stitching	
	 Evaluating which grip was 	against design criteria	different shapes	against the success criteria	
	most effective	 Using peer feedback to 	 Testing the strength of 	 Identifying aspects of their 	
		modify a final design	own structures	peers' work that they	
			 Identifying the weakest 	particularly like and why	
			part of a structure		
			 Evaluating the strength, 		
			stiffness and stability of own		



			structure		
Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	
• Axle	Alternative	Evaluation	Function	Accurate	
Decorate	• Diet	● Input	Man-made	• Fabric	
Evaluation	 Balanced diet 	• Lever	Mould	Knot	
• Ferris wheel	Evaluation	Linear motion	Natural	Pouch	
 Mechanism 	Expensive	◆ Linkage	Stable	 Running-stitch 	
• Stable	Healthy	Mechanical	Stiff	• Sew	
• Strong	Ingredients	 Mechanism 	Strong	• Shape	
• Test	Nutrients	Motion	Structure	• Stencil	
 Waterproof 	Packaging	 Oscillating motion 	• Test	Template	
• Weak	 Refrigerator 	Output	• Weak	• Thimble	
	• Sugar	• Pivot			
	• Substitute	 Reciprocating motion 			
		Rotary motion			
		• Survey			





DT teaching sequence Cycle A Y3/4:

diagrams can be used to communicate design ideas • To know that imported food is food which has been brought into the country diagrams are used to show how different parts of a product fit together • To know that imported food is food which has been brought into the country each of the seam of the fabric for the seam of the fabric for the seam electric product uses an electrical system to work out after sewing so the stitching is hidden • To know that imported food is food which has been brought into the country electrical system to work out after sewing so the stitching is hidden • To understand that an electric product uses an electrical system to work (function) • To know that a fashing LED algorithm • To know what the 'Digita out after sewing so the stitching is hidden • To understand that an electrical system to work (function) • To know that a fashing LED algorithm • To know what the 'Digita out after sewing so the stitching is hidden • To know that a fashing the fabric for the seam • To understand that an electrical system to work (function) • To know that an electrical system to work out after sewing so the stitching is hidden • To know that an electric product uses an electrical system to work (function) • To know that an electric product uses an electrical system to work (function) • To know the name and appearance of a bulb,	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Teaching Sequence To understand how pneumatic systems work To understand that pneumatic systems work To know that that pneumatic systems operate by drawing in, releasing and compressing air To understand how sketches, drawings and diagrams can be used a spart of a mechanism To know that eyedables can be communicate design idaes To know that imported food is food which has been brought into the country To know that tendends food is food which has been product fit together To know that thumbnail sketches are small drawings in product fit together To know that thumbnail sketches are small drawings in product foods travel from To know that thumbnail sketches are small drawings in product foods travel from To know that thumbnail sketches are small drawings in product foods travel from To know that thumbnail sketches are small drawings To know that a paper net To know that a paper net Teaching Sequence To understand that wide and flat based objects are more stable To understand that wide and flat based objects are more stable To know that disade and flat based objects are more stable To know that disade and flat based objects are more stable To know that disade and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are more stable To know that twide and flat based objects are mo	Mechanical	Food	Structures	Textiles	Electrical Systems	Digital World
Preumatic toys	Systems	Eating seasonally	Constructing a castle	Cushions	Electric Poster	Electronic charm
Teaching Sequence • To understand how pneumatic systems work pneumatic systems can be used as part of a mechanism of the first systems operate by drawing in, releasing and compressing air • To know that cooking instructions are known as a sketches, drawings and diagrams can be used to communicate design ideas • To know that electric product sea and product fit together • To know that tumbnail stetches are small drawings • To understand that in of lall fruits and vegetables can be understand that in and flat based objects are more stable • To understand that wide and flat based objects are more stable • To understand that wide and flat based objects are more stable • To know that climate and flat based objects are more stable • To know that climate and flat based objects are more stable • To know that dead objects are more stable • To know that absed objects are more stable • To know that climate and flat based objects are more stable • To know that climate affects food growth • To know that climate affects food growth • To know that climate affects food growth • To know that cooking instructions are known as a food is food which has been brought into the country whow different parts of a product fit together • To know that tumphail sketches are small drawings • To understand that wide and flat based objects are more stable • To understand the work together to transport decorating a textile by applying smaller pieces of fabric smorture affects food growth that tumporated importance of strength and stiffness in structures • To know that cooking instructions are known as a features of a castle: flags, towers, battlements, turrets, curtain walls, moat, drawings and diagrams are used to show how different parts of a product fit together • To know that timported food is food which has been sent to another country. • To know that a facade is the front of a structure • To know that a facade is the front of a structure • To know that a facade is the front of a structure • To know that tim import	_					
Teaching Sequence • To understand how pneumatic systems work or to understand that grown in the UK pneumatic systems can be used as part of a mechanism or To know that climate systems operate by drawing in, releasing and compressing air or To understand how sketches, drawings and diagrams can be used to communicate design ideas or To know that exported diagrams are used to show how different parts of a product fit together • To know that tumbnail sketches are small drawings • To understand that wide and flat based objects are more stable • To understand that wide and flat based objects are more stable • To understand that wide and flat based objects are more stable • To understand that wide and flat based objects are more stable • To understand that wide and flat based objects are more stable • To know that climate and flat based objects are more stable • To know that difficit sond growth • To know that climate affects food growth • To know that climate affects food growth • To know that climate affects food growth • To know that cooking instructions are known as a food is food which has been brought into the country whow different parts of a product fit together • To know that tumponail sketches are small drawings • To understand that wide and flat based objects are more stable • To understand that wide and flat based objects are work tastable work together to transport decorating a textile by applying smaller pieces of fabric smportant to leave space of fabric stable objects are work that experted important to leave space on the fabric for the seam • To know that imported food is food which has been brought into the country. • To know that exported food is food which has been brought into the country. • To know that tocoking instructions are known as a food is food which has been brought into the country. • To know that a facade is the front of a structure • To know that to conting information flat wide and flat based objects are work to town that the imported in flat wide and flat based	Key Concepts: User Pur	rpose, Functionality, De	l sign Decisions, Innovatio	l on and Authenticity.		
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• To understand that pneumatic systems can be used as part of a mechanism of the token that pneumatic systems operate by drawing in, releasing and compressing air of understand how sketches, drawings and diagrams can be used to communicate design ideas of To know that exploded diagrams are used to show how different parts of a product fit together of To know that thumbnail sketches are small drawings of the suggestion of the together to transport electricity around a circuit of the together of the together to transport electricity around a circuit of to work that the mported features of a castle: flags, towers, battlements, turrets, curtain walls, moat, drawbridge and gatehouse of to know that it is important to leave space on the fabric of the together it is called a seam of to know that it is important to leave space on the fabric for the seam of the product same turned inside out after sewing so the stitching is hidden of the				'''	, , ,	
• To know that climate affects food growth • To know that pneumatic systems operate by drawing in, releasing and compressing air • To know that cooking diagrams can be used to communicate design ideas • To know that exploded-diagrams are used to show how different parts of a product fit together • To know that thumbnail sketches are small drawings • To know that thumbnail sketches are small drawings • To know that climate affects food growth • To know that climate affects food growth • To know that climate affects food growth • To know that pneumatic saffects food growth • To know that pneumatic systems operate by drawing in, releasing and compressing air • To know that cooking instructions are known as a 'recipe' • To know that exploded-diagrams are used to show how different parts of a product fit together • To know that thumbnail sketches are small drawings • To know that thumbnail sketches are small drawings • To know that colking importance of strength and stiffness in structures • To know the following features of a castle: flags, towers, battlements, torsing and gatehouse - To know that twhen two edges of fabric together it is called a seam • To know that it is important to leave space on the fabric for the seam • To understand that a castle refuse, to work to leave space on the fabric for the seam • To know that twent two edges of fabric • To know that it is called a seam • To know that ta spode on the fabric for the seam • To know that cessi	1 '	_	•			
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to get ideas down on far away and this can is a flat 2D shape that can simple circuits • To means a programmed		•	· ·			0,
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paper quickly negatively impact the become a 3D shape once understand the importance product	paper quickly		•		•	'
environment assembled and purpose of information of the house of the house of the house and purpose of information of the house and the house of the					· •	
• To know that each fruit and vegetable gives us specification is a list of estimated between analogue and specification is a list of estimated between analogue and design estimated between analogue and estimated between analog			_		<u> </u>	
nutritional benefits because success criteria for a product material choices (such as • To understand what is			· ·			
they contain vitamins, since some a product they contain vitamins, mounting paper to meant by 'point of sale			success criteria for a product		•	
minerals and fibre corrugated display'						



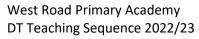
	To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health To know safety rules for using, storing and cleaning a knife safely To know that similar coloured fruits and vegetables often have similar nutritional benefits			card) can improve a product to serve its purpose (remain rigid without bending when the electrical circuit is attached).	To know that CAD stands for Computer-aided design
Skills	Skills	Skills	Skills	Skills	Skills
Design	Design	Design	Design	Design	Design
 Designing a toy which uses 	 Creating a healthy and 	 Designing a castle with key 	 Designing and making a 	 Carry out research based 	 Problem solving by
a pneumatic system	nutritious recipe for a	features to appeal to a	template from an existing	on a given topic (e.g. The	suggesting potential
 Developing design criteria 	savoury tart using seasonal	specific person/purpose	cushion and applying	Romans) to develop a	features on a Micro: bit and
from a design brief	ingredients, considering the	 Drawing and labelling a 	individual design criteria	range of initial ideas	justifying
Generating ideas using	taste, texture, smell and	castle design using 2D		 Generate a final design for 	my ideas
thumbnail sketches and	appearance of the dish	shapes, labelling: -the 3D		the electric poster with	 Developing design ideas
exploded diagrams		shapes that will create the	Make	consideration to the	for a technology pouch
Learning that different	Make	features - materials needed	Following design criteria to	client's needs and design	Drawing and manipulating
types of drawings are used	Knowing how to prepare	and colours	create a cushion	criteria	2D shapes, using computer-
in design to explain ideas	themselves and a work	Designing and/or	Selecting and cutting	Design an electric poster	aided design, to produce a
clearly	space to cook safely in,	decorating a castle tower on	fabrics with ease using	that fits the requirements of	point of sale badge
Make	learning the basic rules to	CAD software	fabric scissors	a given brief	Maka
MakeCreating a pneumatic	avoid food contaminationFollowing the instructions	Make	 Threading needles with greater independence 	 Plan the positioning of the bulb (circuit component) 	MakeUsing a template when
system to create a desired	within a recipe	Constructing a range of 3D	Tying knots with greater	and its purpose	cutting and assembling the
motion	within a recipe	geometric shapes using nets	independence	Make	pouch
Building secure housing	Evaluate	Creating special features	Sewing cross stitch to join	Create a final design for	Following a list of design
for a pneumatic system	Establishing and using	for individual designs	fabric	the electric poster	requirements
Using syringes and	design criteria to help test	Making facades from a	Decorating fabric using	Mount the poster onto	Selecting and using the
balloons to create different	and review dishes	range of recycled materials	appliqué	corrugated card to improve	appropriate tools and
types of pneumatic systems	Describing the benefits of	3-2-1-2-1-2-1-2-1-2-1-2-1-2-1-2-1-2-1-2-	Completing design ideas	its strength and	equipment for cutting,
to make a functional and	seasonal fruits and	Evaluate	with stuffing and sewing the	withstand the weight of the	joining,
appealing pneumatic toy			edges	circuit on the rear	



Selecting materials due to	vegetables and the impact	Evaluating own work and	Evaluate	Measure and mark	shaping and decorating a
their functional and	on	the work of others based on	Evaluating an end product	materials out using a	foam pouch
aesthetic characteristics	the environment •	the aesthetic of the	and thinking of other ways	template or ruler	Applying functional
 Manipulating materials to 	Suggesting points for	finished product and in	in which to create	Fit an electrical	features such as using foam
create different effects by	improvement when making	comparison to the original	similar items	component (bulb)	to create soft buttons
cutting, creasing,	a seasonal tart	design		 Learn ways to give the 	
folding, weaving		Suggesting points for		final product a higher	Evaluate
, and the same		modification of the		quality finish (e.g. framing	 Analysing and evaluating
Evaluate		individual designs		to	an existing product
Using the views of others				conceal a roughly cut edge)	Identifying the key
to improve designs				, , , , , , , , , , , , , , , , , , , ,	features of a pouch
 Testing and modifying the 				Evaluate	The second secon
outcome, suggesting				 Learning to give and 	
improvements				accept constructive criticism	
Understanding the				on own work and the	
purpose of exploded-				work of others	
diagrams through the eyes				Testing the success of	
of a designer and their client				initial ideas against the	
or a designer and their sherr				design criteria and justifying	
				opinions	
				Revisiting the	
				requirements of the client	
				to review developing design	
				ideas and check that they	
				fulfil their needs	
				raini circii riccas	



Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
 Exploded-diagram 	Climate	• 2D shapes	Accurate	Battery	 Analogue
Function	Dry climate	• 3D shapes	 Applique 	Bulb	Badge
• Input	• Exported	• Castle	Cross-stitch	• Circuit	• CAD
• Lever	Imported	 Design criteria 	Cushion	 Circuit component 	Control
Linkage	 Mediterranean climate 	Evaluate	Decorate	 Crocodile wires 	 Design requirements
 Mechanism 	Nationality	• Facade	Detail	 Electrical product 	Develop
Motion	Nutrients	Feature	• Fabric	 Electrical system 	Digital
• Net	 Polar climate 	● Flag	Patch	Final design	 Digital revolution
Output	Recipe	• Net	 Running-stitch 	 Information design 	Digital world
• Pivot	 Seasonal food 	 Recyclable 	• Seam	Initial ideas	Display
 Pneumatic system 	Seasons	Scoring	Stencil	 Peer assessment 	Electronic
 Thumbnail sketch 	 Temperate climate 	 Stable 	Stuffing	Research	 Electronic products
	 Tropical climate 	Strong	 Target audience 	 Self assessment 	Fasten
		 Structure 	 Target customer 	Sketch	• Feature
		● Tab	 Template 		Function
		• Weak			Initiate
					 Key features
					Layers
					• Loops
					Micro: bit
					Monitor
					• Net
					Point of sale
					Product
					 Product design
					Program
					• Sense
					Simulator
					 Smart wearables
					Stand
					Technology
					Template
					• Test
					• User





DT teaching sequences Cycle B Y3/4:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Mechanical	Food	Structures	Textiles	Electrical Systems	Digital World
Systems Slingshot car	Adapting a recipe	Pavilions	Fastenings	Torches	Mindful moments timer
Key Concepts: User Pu	urpose, Functionality, De	sign Decisions, Innovati	on and Authenticity.		
Teaching Sequence To understand that all moving things have kinetic energy To understand that kinetic energy is the energy that something (object/person) has by being in motion To know that air resistance is the level of drag on an object as it is forced through the air To understand that the shape of a moving object will affect how it moves due to air resistance. To understand that products change and evolve over time To know that aesthetics means how an object or product looks in design and technology To know that a template is a stencil you can use to help you draw the same shape accurately	Teaching Sequence To know that the amount of an ingredient in a recipe is known as the 'quantity' To know that it is important to use oven gloves when removing hot food from an oven To know the following cooking techniques: sieving, creaming, rubbing method, cooling To understand the importance of budgeting while planning ingredients for biscuits.	Teaching Sequence To understand what a frame structure is To know that a 'freestanding' structure is one which can stand on its own. To know that a pavilions is a decorative building or structure for leisure activities To know that cladding can be applied to structures for different effects. To know that aesthetics are how a product looks To know that a product's function means its purpose To understand that the target audience means the person or group of people a product is designed for To know that architects consider light, shadow and patterns when designing	Teaching Sequence To know that a fastening is something which holds two pieces of material together for example a zipper, toggle, button, press stud and velcro To know that different fastening types are useful for different purposes To know that creating a mock up (prototype) of their design is useful for checking ideas and proportions.	Teaching Sequence • To understand that electrical conductors are materials which electricity can pass through • To understand that electrical insulators are materials which electricity cannot pass through • To know that a battery contains stored electricity that can be used to power products • To know that an electrical circuit must be complete for electricity to flow • To know that a switch can be used to complete and break an electrical circuit To know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens	Teaching Sequence To understand what variables are in programming To know some of the features of a Micro:bit To know that an algorithm is a set of instructions to be followed by the computer To know that it is important to check my code for errors (bugs) To know that a simulator can be used as a way of checking your code works before installing it onto an electronic device Understand the terms 'ergonomic' and 'aesthetic' Know that a prototype is a 3D model made out of cheap materials, that allows us To test design ideas and make better decisions about size, shape and materials.



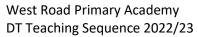
Skills			To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison	
Design Designing a shape that reduces air resistance Drawing a net to create a structure from Choosing shapes that increase or decrease speed as a result of air resistance Personalising a design Make Measuring, marking, cutting and assembling with increasing accuracy Making a model based on a chosen design Evaluate Evaluating a recipe, considering: taste, smell texture and appearance the budget on the select of ingredients Evaluating and compara a range of products Suggesting modification	aesthetically pleasing and selecting materials to create a desired effect • Building frame structures designed to support weight Make • Creating a range of different shaped frame structures • Making a variety of free standing frame structures of different shapes and sizes • Selecting appropriate	Skills Design Writing design criteria for a product, articulating decisions made Designing a personalised book sleeve Make Making and testing a paper template with accuracy and in keeping with the design criteria Measuring, marking and cutting fabric using a paper template Selecting a stitch style to join fabric, working neatly	Skills Design Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas Make Making a torch with a working electrical circuit and switch Using appropriate equipment to cut and attach materials Assembling a torch according to the design and success criteria	Design Writing design criteria for a programmed timer (Micro:bit) Exploring different mindfulness strategies Applying the results of my research to further inform my design criteria Developing a prototype case for my mindful moment timer Using and manipulating shapes and clipart, using computer-aided design (CAD), to produce a logo Following a list of design requirements



Di Teaching Sequence 20.	22/25				
		 Learning to create 	 Testing and evaluating an 		 Programming a micro:bit
		different textural effects	end product against the		in the Microsoft micro:bit
		with materials	original design criteria		editor, to time a set number
			 Deciding how many of the 		of seconds/minutes upon
		Evaluate	criteria should be met for		button press
		 Evaluating structures 	the product to be		
		made by the class	considered		Evaluate
		 Describing what 	successful • Suggesting		 Investigating and analysing
		characteristics of a design	modifications for		a range of timers by
		and construction made it	improvement		identifying and comparing
		the most effective	Articulating the		their advantages and
		Considering effective and	advantages and		disadvantages
		ineffective designs	disadvantages of different		Evaluating my micro:bit
			fastening types		program against points on
			<i>5 7.</i>		my design criteria and
					amending them to include
					any changes I made
					Documenting and
					evaluating my project
					Understanding what a logo
					is and why they are
					important in the world of
					design and business
					Testing my program for
					bugs (errors in the code)
					 Finding and fixing the bugs
					(debug) in my code
					Testing and evaluating the
					success of a final product
					and taking inspiration from
					the wider world.
Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
• Aesthetic	• Adapt	Aesthetic	Aesthetic	• Battery	• 2D
Air resistance	Budget	Cladding	Assemble	• Bulb	Advantage
• Chassis	Cooling rack	Design criteria	Book sleeve	Buzzer	Assemble
• Design	• Creaming	• Evaluation	Design criteria	• Cell	Block
Design criteria	• Equipment	Frame structure	• Evaluation	• Component	Brand identity
• Function	• Evaluation	• Function	• Fabric	• Conductor	Branding
• Graphics	• Flavour	• Inspiration	• Fastening	• Copper	• Bug
					0



Kinetic energy	• Ingredients	Pavilion	Mock-up	Design criteria	• CAD
 Mechanism 	Method	Reinforce	• Net	 Electrical item 	◆ Cheap
• Net	• Net	Stable	 Running-stitch 	Electricity	Clipart
• Structure	Packaging	Structure	• Stencil	 Electronic item 	Coding
	Prototype	 Target audience 	 Target audience 	Function	Criteria
	Quantity	Target customer	 Target customer 	Insulator	• Debug
	• Recipe	Texture	 Template 	 Series circuit 	Design
	Rubbing	Theme		Switch	Develop
	Sieving			• Test	 Disadvantage
	 Target audience 			Torch	Ergonomic
	 Unit of measurement 			 Wire Key Vocabulary 	Evaluate
	Utilities				• Form
					Function
					Instructions
					• Join
					● Logo
					● Loop
					 Mindfulness
					Model
					• Net
					• Pause
					Process
					Program
					 Prototype
					Research
					 Sketchpad
					Template
					• Test
					• Timer
					• User
					Variable





DT teaching sequences Cycle A Y5/6:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Textiles	Electrical Systems	Structures	Food	Digital World	Mechanical
Waistcoats	Steady hand game	Playgrounds	Come Dine with me	Navigating the world	Systems
					Automata Toys
Key Concepts: User Pu	rpose, Functionality, De	sign Decisions, Innovation	on and Authenticity.		
Teaching Sequence • To understand that it is important to design clothing with the client/ target customer in mind • To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric • To understand the importance of consistently sized stitches	Teaching Sequence Teaching Sequence To know that batteries contain acid, which can be dangerous if they leak To know the names of the components in a basic series circuit including a buzzer To know that 'form' means the shape and appearance of an object To know the difference between 'form' and 'function' To understand that 'fit for purpose' means that a product works how it should and is easy to use To know that form over purpose means that a product looks good but does not work very well To know the importance of 'form follows function' when designing: the product must be designed primarily	Teaching Sequence • To know that structures can be strengthened by manipulating materials and shapes • To understand what a 'footprint plan' is • To understand that in the real world, design, can impact users in positive and negative ways • To know that a prototype is a cheap model to test a design idea	Teaching Sequence • To know that 'flavour' is how a food or drink tastes • To know that many countries have 'national dishes' which are recipes associated with that country • To know that 'processed food' means food that has been put through multiple changes in a factory • To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides • To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork)	Teaching Sequence To know that accelerometers can detect movement To understand that sensors can be useful in products as they mean the product can function without human input To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request To know that 'multifunctional' means an object or product has more than one function To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing	Teaching Sequence • To understand that the mechanism in an automata uses a system of cams, axles and followers • To understand that different shaped cams produce different outputs • To know that an automata is a hand powered mechanical toy • To know that a cross-sectional diagram shows the inner workings of a product • To understand how to use a bench hook and saw safely • To know that a set square can be used to help mark 90° angles
	with the function in mind • To understand the diagram perspectives 'top			-	



	view', 'side view' and 'back'				
Skills	Skills	Skills	Skills	Skills	Skills
Design	Design	Design	Design	Design	Design
 Designing a waistcoat in 	 Designing a steady hand 	 Designing a playground 	Writing a recipe,	Writing a design brief from	•Experimenting with a range
accordance to specification	game - identifying and	featuring a variety of	explaining the key steps,	information submitted by a	of cams, creating a design
linked to set of design	naming the components	different structures, giving	method and ingredients	client	for an automata toy based
criteria	required	careful consideration to how	Including facts and	 Developing design criteria 	on a choice of cam to create
to fit a specific theme	Drawing a design from	the structures will be used,	drawings from research	to fulfil the client's request	a desired movement
 Annotating designs 	three different perspectives	considering effective and	undertaken	Considering and	Understanding how
7 timotating designs	Generating ideas through	ineffective designs	andertaken	suggesting additional	linkages change the
Make	sketching and discussion	ee designs	Make	functions for my navigation	direction of a force
Using a template when	Modelling ideas through	Make	 Following a recipe, 	tool	 Making things move at the
pinning panels onto fabric	prototypes	Building a range of play	including using the correct	 Developing a product idea 	same time
 Marking and cutting fabric 	 Understanding the 	apparatus structures	quantities of each ingredient	through annotated sketches	 Understanding and
accurately, in accordance	purpose of products (toys),	drawing upon new and prior	Adapting a recipe based	 Placing and manoeuvring 	drawing cross-sectional
with a design	including what is meant by	knowledge of structures	on research	3D objects, using CAD	diagrams to show the inner-
Sewing a strong running	'fit for purpose' and 'form	Measuring, marking and	Working to a given	 Changing the properties 	working
stitch, making small, neat	over function'	cutting wood to create a	timescale	of, or combine one or more	
stitches and following the		range of structures	Working safely and	3D objects, using CAD	Make
edge	Make	 Using a range of materials 	hygienically with		 Measuring, marking and
Tying strong knots	Constructing a stable base	to reinforce and add	independence	Make	checking the accuracy of the
 Decorating a waistcoat - 	for a game	decoration to structures		 Considering materials and 	jelutong and dowel pieces
attaching objects using	 Accurately cutting, folding 			their functional properties,	required
thread and adding a secure	and assembling a net		Evaluate	especially those that are	 Measuring, marking and
fastening	 Decorating the base of the 	Evaluate	 Evaluating a recipe, 	sustainable and recyclable	cutting components
 Learning different 	game to a high quality finish	 Improving a design plan 	considering: taste, smell,	(for example, cork and	accurately using a ruler and
decorative stitches	 Making and testing a 	based on peer evaluation	texture and origin of the	bamboo)	scissors
 Sewing accurately with 	circuit Incorporating a circuit	 Testing and adapting a 	food group	 Explaining material 	 Assembling components
even regularity of stitches	into a base	design to improve it as it is	 Taste testing and scoring 	choices and why they were	accurately to make a stable
		developed	final products	chosen as part of a product	frame
Evaluate	Evaluate	 Identifying what makes a 	 Suggesting and writing up 	concept	 Understanding that for the
 Evaluating work 	 Testing own and others 	successful structure	points of improvements in	 Programming an N,E, S,W 	frame to function effectively
continually as it is created	finished games, identifying		productions	cardinal compass	the components must be
	what went well and making		Evaluating health and		cut accurately and the joints
	suggestions for		safety in production to	Evaluate	of the frame secured at right
	improvement		minimise cross	 Explaining how my 	angles
			contamination	program fits the design	



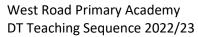
D1 Teaching Sequence 20.				
	 Gathering images and 		criteria and how it would be	 Selecting appropriate
	information about existing		useful as part of	materials based on the
	children's toys		a navigation tool	materials being joined and
	 Analysing a selection of 		 Developing an awareness 	the speed
	existing children's toys		of sustainable design	at which the glue needs to
			 Identifying key industries 	dry/set
			that utilise 3D CAD	
			modelling and explain why	
			 Describing how the 	Evaluate
			product concept fits the	 Evaluating the work of
			client's request and how it	others and receiving
			will benefit the	feedback on own work
			customers	 Applying points of
			 Explaining the key 	improvements
			functions in my program,	 Describing changes they
			including any additions	would make/do if they were
			 Explaining how my 	to do the project again
			program fits the design	
			criteria and how it would be	
			useful as part of	
			a navigation tool	
			 Explaining the key 	
			functions and features of my	
			navigation tool to the client	
			as part of a	
			product concept pitch	
			Demonstrating a	
			functional program as part	
			of a product concept	
			•	
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Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
	Assemble	Adapt	 Accompaniment 	• 3D CAD	Accurate
 Accurate 	Battery	Apparatus	 Collaboration 	Application (apps)	 Assembly-diagram
Adapt	Battery pack	Bench hook	Cookbook	 Biodegradable 	 Automata
 Annotate 	Benefit	Cladding	 Cross-contamination 	Boolean	• Axle
Design	Bulb	Coping saw	Equipment	 Cardinal compass 	Bench hook
 Design criteria 	Bulb holder	Design	• Farm	• Client	• Cam
• Detail	Buzzer	• Dowel	• Flavour	Compass	Clamp
• Fabric	• Circuit	Evaluation	Illustration	Concept	 Component
Fastening	Circuit symbol	Feedback	Imperative-verb	Convince	Cutting list
• Knot	 Component 	• Idea	Ingredients	Corrode	Diagram
Properties	Conductor	Jelutong	Method	 Duplicate 	• Dowel
 Running-stitch 	• Copper	Landscape	Nationality	 Environmentally friendly 	Drill bits
• Seam	Design	Mark out	Preparation	 Equipment 	 Exploded-diagram
• Sew	 Design criteria 	Measure	Processed	Feature	• Finish
Shape	Evaluation	Modify	Reared	• Finite	Follower
 Target audience 	 Fine motor skills 	 Natural materials 	Recipe	Function	Frame
 Target customer 	 Fit for purpose 	Plan view	Research	Functional	Function
 Template 	• Form	 Playground 	Storyboard	GPS tracker	Hand drill
Thread	Function	Prototype	 Target audience 	 If statement 	Jelutong
Unique	 Gross motor skills 	Reinforce	Top tips	• Infinite	◆ Linkage
 Waistcoat 	Insulator	Sketch	 Unit of measurement 	Investment	Mark out
Waterproof	• LED	Strong		 Lightweight 	Measure
	• User	Structure		● Loop	 Mechanism
		Tenon saw		 Manufacture 	Model
		Texture		 Materials (wood, 	Research
		• User		metal, plastic etc.)	Right-angle
		• Vice		 Mouldable 	Set square
		• Weak		Navigation	• Tenon saw
				 Non-recyclable 	
				 Product lifecycle 	
				 Product lifespan 	
				Program	
				Recyclable	
				• Smart	
				 Sustainable 	
				 Sustainable design 	
				 Unsustainable 	
				design	



of Teaching Sequence 2022/23						
				VariableWorkplane		





DT teaching sequences Cycle B Y5/6:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Textiles	Electrical Systems	Structures	Food	Digital World	Mechanical
Stuffed toys	Doodlers	Bridges	What could be	Monitoring devices	Systems
			healthier?		Pop up Book
Key Concepts: User Pu	rpose, Functionality, De	sign Decisions, Innovation	on and Authenticity.		
Teaching Sequence	Teaching Sequence	Teaching Sequence	Teaching Sequence	Teaching Sequence	Teaching Sequence
To know that blanket	 To know that series 	 To understand some 	To understand where	 To know that a 'device' 	 To know that mechanisms
stitch is useful to reinforce	circuits only have one	different ways to reinforce	meat comes from - learning	means equipment created	control movement
the edges of a fabric	direction for the electricity	structures	that beef is from cattle and	for a certain purpose or job	 To understand that
material or join two pieces	to flow	 To understand how 	how beef is reared and	and that monitoring devices	mechanisms that can be
of fabric	 To know when there is a 	triangles can be used to	processed, including key	observe and record	used to change one kind of
 To understand that it is 	break in a series circuit, all	reinforce bridges	welfare issues	• To know that a sensor is a	motion into another
easier to finish simpler	components turn off	 To know that properties 	To know that I can adapt a	tool or device that is	 To understand how to use
designs to a high standard	 To know that an electric 	are words that describe the	recipe to make it healthier	designed to monitor, detect	sliders, pivots and folds to
To know that soft toys are	motor converts electrical	form and function of	by substituting	and respond to changes for	create paper-based
often made by creating	energy into rotational	materials	ingredients	a purpose	Mechanisms
appendages separately	movement, causing the	 To understand why 	To know that I can use a	To understand that	 To know that a design
and then attaching them to	motor's axle to spin	material selection is	nutritional calculator to see	conditional statements (and,	brief is a description of what
the main body	To know a motorised	important based on their	how healthy a food	or, if booleans) in	I am going to design and
To know that small, neat	product is one which uses a	properties	option is	programming are a set of	make
stitches which are pulled	motor to function.	To understand the	• To understand that 'cross-	rules which are followed if	To know that designers
taut are important to	To know that product	material (functional and	contamination' means that	certain conditions are met.	often want to hide
ensure that the soft toy is	analysis is critiquing the	aesthetic) properties of	bacteria and germs	To understand key	mechanisms to make a
strong and holds the stuffing	strengths and weaknesses of	wood	have been passed onto	developments in	product more aesthetically
securely	a	To understand the	ready-to-eat foods and it	thermometer history	pleasing
,	product	difference between arch,	happens when these foods	To know events or facts	
	• To know that	beam, truss and suspension	mix with raw meat or	that took place over the last	
	'configuration' means how	bridges	unclean objects	100 years in the history of	
	the parts of a product are	To understand how to		plastic, and how this is	
	arranged	carry and use a saw safely		changing our outlook on the	
		, , , , , , , , , , , , , , , , , , , ,		future	
				• To know the 6Rs of	
				sustainability	



Treatining Sequence 20.				To understand what a virtual model is and the pros and cons of traditional vs CAD modelling	
Skills	Skills	Skills	Skills	Skills	Skills
Design	Design	Design	Design	Design	Design
 Designing a stuffed toy 	 Identifying factors that 	 Designing a stable 	 Adapting a traditional 	 Researching (books, 	 Designing a pop-up book
considering the main	could be changed on	structure that is able to	recipe, understanding that	internet) for a particular	which uses a mixture of
component shapes required	existing products and	support weight	the nutritional value of a	(user's) animal's needs	structures and
and creating an appropriate	explaining how these would	 Creating frame structure 	recipe alters if you remove,	 Developing design criteria 	mechanisms
template	alter the form and function	with focus on triangulation	substitute or add additional	based on research	 Naming each mechanism,
 Considering the 	of the product		ingredients	 Generating multiple 	input and output accurately
proportions of individual	 Developing design criteria 	Make	 Writing an amended 	housing ideas using building	 Storyboarding ideas for a
components	based on finding from	 Making a range of 	method for a recipe to	bricks	book
	investigating existing	different shaped beam	incorporate the relevant	 Understanding what a 	
Make	products	bridges	changes to ingredients	virtual model is and the pros	Make
 Creating a 3D stuffed toy 	 Developing design criteria 	 Using triangles to create 	 Designing appealing 	and cons of traditional and	 Following a design brief to
from a 2D design	that clarifies the target user	truss bridges that span a	packaging to reflect a recipe	CAD modelling	make a pop up book, neatly
 Measuring, marking and 		given distance and		 Placing and manoeuvring 	and with focus on
cutting fabric accurately and	Make	supports a load	Make	3D objects, using CAD	accuracy
independently	 Altering a product's form 	Building a wooden bridge	 Cutting and preparing 	 Changing the properties 	 Making mechanisms
 Creating strong and secure 	and function by tinkering	structure	vegetables safely	of, or combine one or more	and/or structures using
blanket stitches when	with its configuration.	 Independently measuring 	 Using equipment safely, 	3D objects, using CAD	sliders, pivots and folds to
joining fabric	 Making a functional series 	and marking wood	including knives, hot pans		produce movement
 Threading needles 	circuit, incorporating a	accurately	and hobs	Make	 Using layers and spacers
independently	motor	 Selecting appropriate tools 	 Knowing how to avoid 	 Understanding the 	to hide the workings of
 Using applique to attach 	Constructing a product	and equipment for	cross-contamination	functional and aesthetic	mechanical parts for an
pieces of fabric decoration	with consideration for the	particular tasks	Following a step by step	properties of plastics	aesthetically pleasing result
Sewing blanket stitch to	design criteria	Using the correct	method carefully to make a	 Programming to monitor 	
join fabric	Breaking down the	techniques to saws safely	recipe	the ambient temperature	
Applying blanket stitch so	construction process into	 Identifying where a 		and coding an (audible or	Evaluate
the space between the	steps so that others can	structure needs	Evaluate	visual) alert when the	Evaluating the work of
stitches are even and	make the product	reinforcement and using	Identifying the nutritional	temperature rises above or	others and receiving
regular		card corners	differences between	falls below a specified range	feedback on own work
	Evaluate	for support	different products and		 Suggesting points for
	Carry out a product	Explaining why selecting	recipes• Identifying and	Evaluate	improvement
	analysis to look at the	appropriating materials is an	describing healthy benefits		
		important part of the	of food groups		



Evaluate • Testing and evaluating an end product and giving point for further improvements	purpose of a product along with its strengths and weaknesses • Determining which parts of a product affect its function and which parts affect its form • Analysing whether changes in configuration positively or negatively affect an existing product • Peer evaluating a set of instructions to build a product	design process Understanding basic wood functional properties Evaluate Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary Suggesting points for improvements for own bridges and those designed by others		Stating an event or fact from the last 100 years of plastic history Explaining how plastic is affecting planet Earth and suggesting ways to make more sustainable choices Explaining key functions in my program (audible alert, visuals) Explaining how my product would be useful for an animal carer including programmed features	
Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary	Key Vocabulary
• Accurate	Circuit component	Abutment	• Beef	• Alert	Aesthetic
Annotate	Configuration	Accurate	 Cross-contamination 	Ambient	 Computer-aided design
 Appendage 	Current	Arched bridge	• Diet	Boolean	(CAD)
 Blanket-stitch 	Develop	Beam bridge	 Ethical issues 	 Consumables 	Caption
Design criteria	• DIY	Coping saw	• Farm	 Decompose 	 Design
• Detail	 Investigate 	Evaluation	Healthy	Development	Design brief
Evaluation	Motor	• File	Ingredients	Device	Design criteria
• Fabric	 Motorised 	Mark out	Method	Duplicate	 Exploded-diagram
• Sew	 Problem solve 	 Material properties 	Nutrients	Durable	• Function
• Shape	Product analysis	Measure	Packaging	Electronic	● Input
Stuffed toy	• Series circuit	Predict	Reared	Inventor	Linkage
Stuffing	• Stable	Reinforce	Recipe	Lightweight	Mechanism
Template	Target user	Research	Research	Man-made	Motion
		Sandpaper	 Substitute 	 Manipulate 	Output
		• Set square	 Supermarket 	Manoeuvre	• Pivot
		 Suspension bridge 	Vegan	 Microplastics 	Prototype
		Tenon saw	Vegetarian	Model	• Slider
		• Test	Welfare	Monitor	Structure
		Truss bridge		 Monitoring device 	Template



 • Wood	Moulded
	• Plastic
	Plastic pollution
	Programming
	comment
	Programming loop
	• Reformed
	• Replica
	• Research
	• Sensor
	• Strong
	Sustainability
	• Synthetic
	Thermometer
	Thermoscope
	• Value
	• Variable
	• Versatile
	Water-resistant
	Workplane
	·