## Padiham Green Church of England Primary School

## **DT Progression Map**



## Intent

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Our D.T. curriculum will develop imaginative thinking in children to enable them to talk about what they like and dislike when designing and making. It will enable children to discuss and understand how things work, and to draw and model their ideas. We want our children to use creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We intend for all children to acquire appropriate subject knowledge, skills and understanding as set out in the National Curriculum. It is our aim to create strong cross-curricular links with other subjects, such as Mathematics, Science, Computing, and Art.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	All About Me	Food	Mechanisms	Structures	Electrical	Food	Food
Knowledge	-Construction blocks	Mechanisms	Food	Food	Textiles	Mechanical systems	Electrical
criowleage	Transport	Structures	Textiles	Mechanical-leavers	Food	Textiles	Mechanisms
	-Junk modelling			and linkages			
	-Construction blocks						
	Animals						
	-Construction blocks						
	Seaside						
	-Scarecrows						

	To experiments to	Begin to draw on	Start to generate	With growing	Start to generate	Start to generate,	Generate, develop,
	create different	their own experience	ideas by drawing on	confidence generate	ideas, considering the	develop, model and	model and
	textures.	to help generate	their own and other	ideas for an item,	purposes for which	communicate their	communicate their
		ideas and research	people's experiences.	considering its	they are designing-	ideas through	ideas through
	To understands that	conducted on		purpose and the	link with	discussion, annotated	discussion, annotat
	different media can	criteria.	Begin to develop	user/s.	Mathematics and	sketches, cross-	sketches, cross-
	be combined to		their design ideas		Science.	sectional and	sectional and
	create new effects.	Begin to understand	through discussion,	Start to order the		exploded diagrams,	exploded diagrams
		the development of	observation, drawing	main stages of	Confidently make	prototypes, pattern	prototypes, patter
		existing products:	and modelling.	making a product.	labelled drawings	pieces.	pieces.
		What they are for,		Identify a purpose	from different views		
		how they work,	Identify a purpose for	and establish criteria	showing specific	Begin to use research	Use research and
		materials used.	what they intend to	for a successful	features.	and develop design	develop design
		Start to suggest ideas	design and make.	product.		criteria to inform the	criteria to inform
		and explain what			Develop a clear idea	design of innovative,	design of innovativ
		they are going to do.	Understand how to	Understand how well	of what has to be	functional, appealing	functional, appeals
			identify a target	products have been	done, planning how	products that are fit	products that are
Skills		Understand how to	group for what they	designed, made,	to use materials,	for purpose.	for purpose.
		identify a target	intend to design and	what materials have	equipment and		
		group for what they	make based on a	been used and the	processes, and	With growing	Accurately apply a
		intend to design and	design criteria.	construction	suggesting alternative	confidence apply a	range of finishing
		make based on a		technique.	methods of making,	range of finishing	techniques, includi
		design criteria.	Develop their ideas		if the first attempts	techniques, including	those from art and
			through talk and	Learn about	fail.	those from art and	design.
		Begin to develop	drawings and label	inventors, designers,	Identify the strengths	design.	
		their ideas through	parts. Make	engineers, chefs and	and areas for		Draw up a
		talk and drawings.	templates and mock	manufacturers who	development in their	Draw up a	specification for th
		Make templates and	ups of their ideas in	have developed	ideas and products.	specification for their	design- link with
		mock ups of their	card and paper or	ground-breaking		design- link with	Mathematics and
		ideas in card and	using ICT.	products.	When planning	Mathematics and	Science.
		paper or using ICT.			consider the views of	Science.	
				Start to understand	others, including		Plan the order of
				whether products	intended users, to	Use results of	their work, choosii
				can be recycled or	improve their work.	investigations,	appropriate
				reused.		information sources,	materials, tools an

			Learn about	including ICT when	techniques.
		Know to make	inventors, designers,	developing design	cocriniques.
			_	ideas.	Curanet alternative
		drawings with labels	engineers, chefs and manufacturers who	iueus.	Suggest alternative
		when designing.			methods of making if
			have developed	With growing	the first attempts
		When planning	ground-breaking	confidence select	fail.
		explain their choice	products.	appropriate	
		of materials and		materials, tools and	Identify the strengths
		components including	When planning	techniques.	and areas for
		function and	explain their choice		development in their
		aesthetics.	of materials and	Start to understand	ideas and products.
			components	how much products	
			according to function	cost to make, how	Know how much
			and aesthetic.	sustainable and	products cost to
				innovative they are	make, how
				and the impact	sustainable and
				products have beyond	innovative they are
				their intended	and the impact
				purpose.	products have
					beyond their
					intended purpose.
					, ,

	To selects tools and	Begin to make	Begin to select tools	Select a wider range	Select a wider range	Select appropriate	Confidently select
	techniques needed to	theirdesign using	and materials; use	of tools and	of tools and	materials, tools and	appropriate tools,
	shape, assemble and	appropriate	correct vocabulary to	techniques for	techniques for	techniques e.g.	materials,
	join materials they	techniques.	name and describe	making their product	making their product	cutting, shaping,	components and
	are using.		them.	i.e. construction	safely.	joining and finishing,	techniques and us
		Begin to build		materials and kits,		accurately.	them.
	Use simple tools and	structures,	Build structures,	textiles, food	Know how to		
	techniques	exploring how they	exploring how they	ingredients,	measure, mark out,	Select from and use	Use tools safely a
	competently.	can be made	can be made	mechanical	cut and shape a	a wider range of	accurately.
		stronger, stiffer and	stronger, stiffer and	components and	range of materials,	materials and	
	Manipulates	more stable.	more stable.	electrical	using appropriate	components,	Assemble compor
	materials to achieve			components.	tools, equipment and	including	to make working
	a planned effect.	Tourism and an	With help measure,		techniques.	construction	models.
		example, levers, sliders, wheels and axles], in their products.	cut and score with	Explain their choice		materials, textiles	
	Constructs with a		some accuracy.	of tools and	Start to join and	and ingredients,	Aim to make and
	purpose in mind,		Learn to use hand	equipment in relation	combine materials	according to their	achieve a quality
	using a variety of		tools safely and	to the skills and	and components	functional properties	product.
kills	resources.		appropriately.	techniques they will	accurately in	and aesthetic	
				be using.	temporary and	qualities.	With confidence p
			Start to assemble,		permanent ways.		sew and stitch
		With help measure,	join and combine	Start to understand		Understand how	materials togethe
		mark out, cut and	materials in order to	that mechanical and	Know how	mechanical systems	create a product.
		shape a range of	make a product.	electrical systems	mechanical systems	such as cams or	
		materials.		have an input,	such as cams or	pulleys or gears	Demonstrate who
		Timbono di a taglo	Demonstrate how to	process and output.	pulleys or gears	create movement.	make modificatio
		Explore using tools	cut, shape and join		create movement.		as they go along.
		safely.	fabric to make a	Start to understand		Know how more	
		Real to seem life	simple product. Use	that mechanical	Understand how	complex electrical	Construct produc
		Begin to assemble,	basic sewing	systems such as	more complex	circuits and	using permanent
	materia	join and combine	techniques.	levers and linkages or	electrical circuits and	components can be	joining techniques
			Start to choose and	pneumatic systems	components can be	used to create	Understand how
		components	use appropriate	create movement.	used to create	functional products	mechanical system
		together using	finishing techniques		functional products.	and how to program	such as cams, pu
		temporary	based on own ideas.	Know how simple		a computer to	or gears create
	1	methods e.g. glues or masking tape.	i	electrical circuits and	1	monitor changes in	movement.

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	components can be	Continue to learn	the environment and	
Begin to use	used to create	how to program a	control their	Know how more
simple finishing	functional products.	computer to monitor	products.	complex electrical
techniques to		changes in the		circuits and
improve the	Measure, mark out,	environment and	Understand that	components can be
appearance of	cut, score and	control their	mechanical and	used to create
their product.	assemble components	products.	electrical systems	functional products
	with more accuracy.		have an input,	and how to program
		Understand how to	process and output.	a computer to
	Start to work safely	reinforce and		monitor changes in
	and accurately with	strengthen a 3D	Begin to measure	the environment and
	a range of simple	framework.	and mark out more	control their
	tools.		accurately.	products.
		Sew using a range of	-	
	Start to think about	different stitches, to	Demonstrate how to	
	their ideas as they	weave and knit.	use skills in using	Know how to
	make progress and		different tools and	reinforce and
	be willing to change	Demonstrate how to	equipment safely and	strengthen a 3D
	things if this helps	measure, tape or pin,	accurately with	framework.
	them to improve	cut and join fabric	growing confidence	
	their work.	with some accuracy.	cut and join with	Understand that
		•	accuracy to ensure a	mechanical and
	Start to measure,	Begin to use finishing	good-quality finish to	electrical systems
	tape or pin, cut and	techniques to	the product.	have an input,
	join fabric with some	strengthen and	•	process and output.
	accuracy.	improve the	Weigh and measure	
		appearance of their	accurately (time, dry	Use finishing
		product using a	ingredients, liquids).	techniques to
		range of equipment	, ,	strengthen and
		including ICT	Use finishing	improve the
		,	techniques to	appearance of their
			strengthen and	product using a
			improve the	range of equipment
			appearance of their	including ICT.
			product using a	
			· · · · · · · · · · · · · · · · · · ·	I.

			range of equipment including ICT.	

	To share their	Start to evaluate	Evaluate their	Start to evaluate	Evaluate their	Start to evaluate a	Evaluate their
	creations, explaining	their product by	work against their	their product	products	product against the	products,
	the process they have	discussing how well	designcriteria.	againstoriginal	carrying out	original design	identifyingstrengtl
	used.	it works in relation		design criteria <i>e.g.</i>	appropriate	specification and by	and areasfor
		tothe purpose	Look at a range of	how well it meets	tests.	carrying out tests.	development, and
		(design criteria).	existing products	its purpose			carrying out
			explain what they		Start to	Evaluate their	appropriate tests.
		When looking at	like and dislike	Begin to	evaluatetheir	workboth during	
		existing products	about products	disassemble and	work both	and at the end of	Evaluate their
		explain what they	andwhy.	evaluate familiar	during and at	the assignment.	workboth during
		like and dislike		products and	theend of the		and at the end of
		about products	Start to evaluate	consider the views	assignment.	Begin to evaluate it	the assignment.
		andwhy.	their products as	of others to		personally and seek	
			they are developed,	improvethem.	Be able to	evaluation from	Record their
		Begin to evaluate	identifying		disassemble and	others.	evaluations using
		their products as	strengthsand	Evaluate the key	evaluate familiar		drawings with
		they are developed,	possible changes	designs of individuals	products and	Evaluate the key	labels.
kills		identifying strengths	they mightmake.	in designand	consider the views	designs of individuals	
		and possible changes		technology has	of others to	in designand	Evaluate against
		they mightmake.	With confidence talk	helped shape the	improvethem.	technology has	their original
			about their ideas,	world.		helped shape the	criteriaand sugge
			saying what they like		Evaluate the key	world.	ways that their
			and dislike about		designs of individuals		product could be
			them.		in designand		improved.
					technology has		
					helped shape the		Evaluate the key
					world.		designs of individ
							in designand
							technology has
							helped shape the
							world.

	To start to know	Begin to	Understand that	Start to know that	Understand that	Understand that	Know that food is
	where food comes	understandthat all	allfood comes	food is grown (such	food is grown (such	food is grown (such	grown (such as
	from.	food comes from	from plants or	as tomatoes, wheat	as tomatoes, wheat	as tomatoes, wheat	tomatoes, wheat
		plants or animals.	animals.	and potatoes),	and potatoes),	and potatoes),	and potatoes),
	To be able to identify			reared (such as	reared (such as	reared (such as	reared (such as
	healthy foods in	Explore the	Know that food has	pigs, chickens and	pigs, chickens and	pigs, chickens and	pigs, chickens and
	comparison to	understanding	to be farmed,	cattle) and caught	cattle) and caught	cattle) and caught	cattle) and caught
	unhealthy foods	thatfood has to be	grownelsewhere	(such as fish) in the	(such as fish) in the	(such as fish) in the	(such as fish) in th
		farmed, grown	(e.g. home) or	UK, Europe and	UK, Europe and	UK, Europe and	UK, Europe and
		elsewhere (e.g.	caught.	thewider world.	thewider world.	thewider world.	thewider world.
		home) or caught.					
			Understand how to	Understand how to	Understand how to	Begin to	Understand that
		Start to	name and sort	prepare and cook a	prepare and cook a	understandthat	seasons may affec
		understandhow to	foodsinto the five	variety of	variety of	seasons may affect	the food available.
		name and sort	groups in 'The Eat	predominantly	predominantly	the food available.	Understand how
		foods into the five	well plate'	savoury dishes	savoury dishes		food is processed
		groups in 'The Eat		safely and	safely and	Understand how	into ingredients
Skills		well plate'	Know that	hygienically	hygienically	food is processed	thatcan be eaten
			everyoneshould eat	including, where	including, where	into ingredients	or used in cooking
		Begin to	at least five	appropriate, the	appropriate, the	thatcan be eaten	
		understandthat	portions of fruit	use of a heat	useof a heat source.	or used in cooking.	
		everyone should eat	and vegetables	source.			Know how to
		at least five	every day.		Know how to use a	W. and bank ha	prepare and cook
		portions offruit and		Radio to		Know how to	variety of
		vegetablesevery day.	Demonstrate how	Begin to understandhow to	range of techniques	prepare and cook a	predominantly
			toprepare simple		such as peeling, chopping, slicing,	variety of predominantly	savoury dishes
		Know how to	dishes safely and	use a range of techniques such as	11 0	1 '	safely and
		prepare simple dishes	hygienically,	•	grating, mixing,	savoury dishes	hygienically
		safely and	withoutusing a heat	peeling, chopping,	spreading, kneading	safely and	including, where
		hygienically, without	source.	slicing, grating,	and baking.	hygienically including, where	appropriate, the
		using a heat source.		mixing, spreading, kneadingand	Know that a	appropriate, the	useof a heat sourc
		Know how to use	Demonstrate how to	· ·		useof a heat source.	
		techniques such as	use techniques suchas	baking.	healthy diet is made up froma	useoi a neat source.	Understand how
		cutting, peeling and	cutting, peeling and	Start to	variety and	Start to understand	to use a range of
		grating.	grating.	understand that a	balance of different	how to use a range	techniques such as

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healthy diet is	food and drink, as	of techniques such	peeling, chopping,
made up from a	depicted in 'The	as peeling,	slicing, grating,
variety and balance	Eatwell plate'	chopping, slicing,	mixing, spreading,
of different food		grating, mixing,	kneadingand
anddrink, as	Know that to be	spreading, kneading	baking.
depicted in The Eat	active and healthy,	and baking.	
well plate'	food and drink are		Know different
	needed to provide	Begin to	food and drink
Begin to know that	energy for the body.	understandthat	contain different
to be active and		different food and	substances -
healthy, food and		drink contain	nutrients, water
drink are needed to		different substances	and fibre – that
provide energy for		-nutrients, water	are needed for
the body.		and fibre – that	health.
		are needed for	
		health.	
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Impact						
Children so	fely use Children sh	ould be Children will	be able Children sho	uld know   Children wou	ld know   Children would ha	ve Children have a very
and explor	a variety   confident u	using to use a rang	e of how shapes	and a variety tech	nniques consolidated their	good understanding
of material	s, tools different ty	ypes of cutting and jo	oining structures co	an be to join differe	ent knowledge of	of the purpose and
and techni	ques, media to ci	reate techniques. Cl	hildren used to mak	e materials. Th	ey different materials	target market of a
experiment	ing with moving pic	tures. will be able to	o make effective pro	ducts. would be able	e to and how to	product. They will
colour, des	gn, They should	d be able simple plans,	and They should	be able   select approp	riate strengthen where	able to use refined
texture, for	m and to design the	heir ideas design accord	ling to a to select app	propriate material fit fo	or the appropriate. They	skills to create a
function. C	hildren and think a	about the criteria.	materials fo	their purpose. Child	dren will   will have learnt ho	w range of projects
junk mode	materials u	ised before	final pieces o	of work. be able to inv	restigate to create simple	that link to their
confidently	, making the	em. They	Children sho	uld have and evaluate	a range   circuits to power	foundation topics
evaluating	and are able to	use	a clear	of existing pr	oducts. motors and solve	and wider world
changing th	neir different to	ools safely	understandi	ng of They can eval	luate problems when the	ey issues.
models. Ch	ldren and compe	tently.	characteristi	cs and their final pro	oduct arrive. Children ca	n
handle equ	pment		properties of	food and suggest	plan then evaluate	,
and tools e	fectively.		ingredients.	Children improvement	s to identifying areas f	or
			can evaluate	their their designs.	improvement.	
			final produc	t and	·	
			suggest			
			improvemen	ts to		
			their designs			