

Petersfield Infant School

Design and Technology Knowledge & Skills Progression Across KS 1 & EYFS

Year R (EYFS)	Years 1 and 2 (KS1)
Early Learning Goals	National Curriculum Subject Content
EAD: Creating with Materials ■ Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].
• Share their creations, explaining the process they have used	When designing and making, pupils should be taught to: Design:
 Make use of props and materials when role playing characters in narratives and stories PD: Gross Motor Skills 	 design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology
 Negotiate space and obstacles safely, with consideration for themselves and others Demonstrate strength, balance and coordination when playing 	Make: select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
PD: Fine Motor Skills Use a range of small tools, including scissors, paint brushes and cutlery	Evaluate:
Begin to show accuracy and care when drawing.	Technical Knowledge: • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Year R Autumn	Year R Spring	Year R Summer	Year 1 Autumn 2 Structures: Freestanding	Year 1 Spring 2 Mechanisms: Sliders and Levers	Year 1 Summer 2 Food: Preparing Fruit	Year 2 Autumn 2 Mechanisms: Wheels and Axles	Year 2 Spring 2 Food: Healthy and Varied Diet	Year 2 Summer 2 Textiles: Templates & Joining Techniques
Children will: • Know how to safely prepare a healthy snack independently • Know which resources they can select in the environment to create • Know how to join different 2D materials • Know how to use one handed tools, such as scissors	Children will: • Know how to use a knife safely • Know you can join things together to create a design	Children will: Know how to make a simple sandwich Know how to create a free standing structure e.g. a den Know how to use a variety of joining techniques	Generate ideas based on simple design criteria and their own experiences, explaining what they could make. Develop, model and communicate their ideas through talking, mock-ups and drawings.	 Generate ideas based on simple design criteria and their own experiences, explaining what they could make. Develop, model and communicate their ideas through drawings and mock-ups with card and paper. 	Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through investigating a variety of fruit. Communicate these ideas through talk and drawings.	dening Generate initial ideas and simple design criteria through talking and using own experiences. Develop and communicate ideas through drawings and mock-ups.	Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. Communicate these ideas through talk and drawings.	 Design a functional and appealing product for a chosen user and purpose based on simple design criteria. Generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, mockups and information and communication technology.

	Skills		Making					
Children will: • Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park • Explore different materials freely, to develop their ideas about how to use them and what to make • Develop their own ideas and then decide which materials to use to express them. • Join different materials and explore different textures. • Use one-handed tools and equipment, for example, making snips in paper with scissors. • Choose the right resources to carry out their own plan. For example, choosing a spade to enlarge a small hole they dug with a trowel.	Skills Children will: Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills.	Children will: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; Share their creations, explaining the process they have used Make use of props and materials when role playing characters in narratives and stories. Children at the expected level of development will: Negotiate space and obstacles safely, with consideration for themselves and others; Demonstrate strength, balance and coordination when playing;	 Plan by suggesting what to do next. Select and use tools, skills and techniques suitable for the task, explaining their choices. Select new and reclaimed materials and construction kits to build their structures. Use simple finishing techniques suitable for the structure they are creating 	Plan by suggesting what to do next. Select and use tools suitable for the task, explaining their choices, to cut, shape and join paper and card. Use simple finishing techniques suitable for the product they are creating.	• Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. • Select from a range of fruit according to their characteristics e.g. colour, texture and taste to create a chosen product.	• Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing. • Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics.	Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.	Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. Select from and use textiles according to their characteristics.
and equipment, for example, making snips in paper with scissors. Choose the right resources to carry out their own plan. For example, choosing a spade to enlarge a small hole they dug	sharing ideas,	development will: Negotiate space and obstacles safely, with consideration for themselves and others; Demonstrate strength, balance and coordination when playing;	suitable for the structure they			Cital accel isacs.		
others to manage large items, such as moving a long plank safely, carrying large hollow blocks.		Use a range of small tools, including scissors, paint brushes and cutlery Begin to show accuracy and care when drawing.						

Vocabulary	Evaluating					
• Join, cut, fix, strong, stable, tall, short, improve, design, idea	• Explore a range	• Explore a range	• Taste and	• Explore and	• Taste and	• Explore and
Names of tools and resources	of existing	of existing	evaluate a	evaluate a range	evaluate a	evaluate a range
- Wantes or tools and resources	freestanding	books and	range of fruit to	of products with	range of fruit	of existing textile
	structures in the	everyday	determine the	wheels and	and vegetables	products relevant
	school and local	products that	intended user's	axles.	to determine	to the project
	environment	use simple	preferences.	• Evaluate their	the intended	being
	e.g. everyday	sliders and	• Evaluate ideas	ideas throughout	user's	undertaken.
	products and	levers.	and finished	and their	preferences.	• Evaluate their
	buildings.	• Evaluate their	products against	products against	• Evaluate ideas	ideas throughout
	• Evaluate their	product by	design criteria,	original criteria.	and finished	and their final
	product by	discussing how	including		products	products against
	discussing how	well it works in	intended user		against design	original design
	well it works in	relation to the	and purpose.		criteria,	criteria.
	relation to the	purpose and			including	
	purpose, the	the user and			intended user	
	user and	whether it			and purpose.	
	whether it	meets design				
	meets the	criteria.				
	original design					
	criteria.					

Technical Knowledge and Understanding					
• Children know	· Children explore	• Understand	• Explore and use	 Understand 	• Understand how
how to make	and use sliders	where a range	wheels, axles	where a range	simple 3-D textile
freestanding	and levers.	of fruit comes	and axle	of fruit and	products are
structures	 Children 	from e.g.	holders.	vegetables	made, using a
stronger, stiffer	understand that	farmed or	 Distinguish 	come from e.g.	template to
and more	different	grown at home.	between fixed	farmed or	create two
stable.	mechanisms	 Understand and 	and freely	grown at	identical shapes.
Children know	produce	use basic	moving axles.	home.	 Understand how
and use	different types	principles of a	 Know and use 	 Understand 	to join fabrics
technical	of movement.	healthy and	technical	and use basic	using different
vocabulary	• Children know	varied diet to	vocabulary	principles of a	techniques e.g.
relevant to the	and use	prepare dishes.	relevant to the	healthy and	running stitch,
project.	technical	• Know and use	project.	varied diet to	glue, over stitch,
	vocabulary	technical and		prepare dishes,	stapling, lacing.
	relevant to the	sensory		including how	• Explore different
	project.	vocabulary		fruit and	finishing
		relevant to the		vegetables are	techniques e.g.
		project.		part of The	using painting,
				eatwell plate. • Know and use	fabric crayons,
				technical and	stitching, sequins,
					buttons and
				sensory vocabulary	ribbons.
				relevant to the	• Know and use
				project.	technical
				project.	vocabulary
					relevant to the
					project.

		Voca	oulary		
■ cut, fold, join,	■ slider, lever,	• fruit names,	• vehicle, wheel,	■ fruit and	names of
fix	pivot, slot,	names of	axle, axle	vegetable	existing
structure, wall,	bridge/guide	equipment and	holder, chassis,	names, names	products,
tower,	card, masking	utensils	body, cab	of equipment	joining and
framework,	tape, paper	sensory	assembling,	and utensils	finishing
weak, strong,	fastener, join	vocabulary e.g.	cutting, joining,	sensory	techniques,
base, top,	pull, push, up,	soft, juicy,	shaping,	vocabulary e.g.	tools, fabrics
underneath,	down, straight,	crunchy, sweet,	finishing, fixed,	soft, juicy,	and components
side, edge,	curve, forwards,	sticky, smooth,	free, moving,	crunchy, sweet,	■ template,
surface, thinner,	backwards	sharp, crisp,	mechanism	sticky, smooth,	pattern pieces,
thicker, corner,	■ design, make,	sour, hard	names of tools,	sharp, crisp,	mark out, join,
point, straight,	evaluate, user,	• flesh, skin, seed,	equipment and	sour, hard	decorate, finish
curved	purpose, ideas,	pip, core,	materials used	• flesh, skin, seed,	features,
■ metal, wood,	design criteria,	slicing, peeling,	■ design, make,	pip, core,	suitable, quality
plastic	product,	cutting,	evaluate,	slicing, peeling,	mock-up, design
circle, triangle,	function	squeezing,	purpose, user,	cutting,	brief, design
square,		healthy diet,	criteria,	squeezing,	criteria, make,
rectangle,		choosing,	functional	healthy diet,	evaluate, user,
cuboid, cube,		ingredients,		choosing,	purpose,
cylinder		planning,		ingredients,	function
■ design, make,		investigating		planning,	
evaluate, user,		tasting,		investigating	
purpose, ideas,		arranging,		tasting,	
design criteria,		popular, design,		arranging,	
product,		evaluate,		popular, design,	
function		criteria		evaluate,	
				criteria	