

All Saints CE Primary School and Nursery

Design and Technology Curriculum-Progression in Knowledge and Skills

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	What can you build?	What can you make?	What is a materials and how can you use them?	How will you make a mini beast?	How does it feel?	What shapes can you use?
	Talk about what they are going to make and begin to talk about who it is for (people in own experience) Make simple models which express their ideas. Explore how things work. Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.	Use one-handed tools and equipment, for example, making snips in paper with scissors. Explore different materials and, using all their senses to investigate them. Manipulate and play with different materials.	Use their imagination as they consider what they can do with different materials. Develop their own ideas and decide which materials to use to express them.	Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them. Choose the right resources to carry out their own plan. Explore different materials freely, in order to develop their ideas about how to use them and what to make.	Explore different materials freely. Develop their own ideas and decide which materials to use to express them.	Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
Core Vocabulary	Idea, build, strong, add, fix, join, up, across, next to, on top of, underneath, between, over the top, roll.	Try, like, dislike, make, cut, snip, materials, touch, texture, scissors, equipment, tweezers.	Materials, texture, ideas, plan, bear, collage, conkers and leaves, Andy Goldsworthy, nature, pattern, sculpture.	Cut, stick, glue, tape, paper, card, colour, build, make, construct, recycle, paint, plan, design, model.	Shape, colour, materials arrange, ideas, make, texture, slice, chop, mix, stir, whisk, measure, pour, bake cook, ingredients	Build, construct, blocks, moblio, stickle bricks, transport, fix, design, cut, stick, attach
Misconceptions	Technology is not just a computer...	The use of scissors- what can they be used for? What can they cut?	What is a material? Material is only a fabric.	You can only build with bricks.	A shape is only a circle, square, triangle etc Shapes can only be flat.	All our pictures/ models need to look the same.
Reception	What can you design?	Can you use tools correctly?	What can you make?	Can you evaluate your own work and the work of others?	What does it feel like?	What can you build?

	Explore, use and refine a variety of artistic effects to express their ideas and feelings. Use one-handed tools and equipment, for example, making snips in paper with scissors.	Return to and build on their previous learning, refining ideas and developing their ability to represent them. Uses simple tools and techniques competently and appropriately.	Create collaboratively sharing ideas, resources and skills.	Share their creations, explaining the process they have used.	Make use of props and materials when role playing characters in narratives and stories	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
Core Vocabulary	Idea, how, why, choose build, strong, add, fix, join, up, across, next to, on top of, underneath, between, over the top, roll, measure, height, scissors, snip.	Make, cut, snip, materials, touch, texture, feel, grip, hold, safety, paint, brush.	Ideas, plan, share, collaborate, likes, dislikes, improvements, adaptations, enhance.	Build, make, construct, plan, design, model, materials, likes, dislikes, team work, evaluating, improving, explaining.	Shape, colour, materials arrange, ideas, texture, props, masks.	Build, construct, blocks, fix, design, cut, stick, attach, colour, texture, form, function, tools, safety, explore, experiment.
Misconceptions	Only scissors cut paper.		All our pictures/ models need to look the same.	What is a design? What is technology?	Materials are always fabric.	

By the end of EYFS children as designers and technologists will:

- Constructs with a purpose in mind using a variety of materials
- Uses simple tools and techniques competently and appropriately.
- Selects appropriate resources and adapts where necessary.
- Reviewing models they have made with different materials and media and discussing how they can improve them
- Eats a healthy range of foodstuffs and understands need for variety in food. Discussed during snack times.
- Shows some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health.
- Understand that equipment and tools have to be used safely.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1		How does it move?		What animal will you create?		What will you design?
		Learn to design purposeful, functional and appealing products for themselves and other users based on design criteria. Learn to evaluate their ideas and products against design criteria. Explore and		Learn to generate and develop their ideas through talking, drawing, templates and mock-ups. Select from and use a wide range of materials.		Use the basic principles of a healthy and varied diet to prepare dishes.

		evaluate a range of existing products.				
Core vocabulary		Wheels, axels, chassis, materials, joining, plan, make, decorate, evaluate.		Mask, design, patterns, texture, detail, features, Paper, Mache, product.		Instructions, ingredients, make, edible, design, balanced plate.
Misconceptions		The wheels are rotating to make the car move.		A running stitch must run in a straight line. All fabric is stitched together.		Healthy food takes longer to prepare. A balanced plate is always healthy.
Year 2	How will you design and make Bog baby's bed?		How can you design and make a moving picture book?		How will you make a Royal jam sandwich?	
	Design purposeful, functional, appealing products for themselves and other users based on design criteria drawing, templates, mock-ups. 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. To evaluate their ideas and products against design criteria		Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Evaluate their ideas and products against design criteria.	
Core vocabulary	purpose, product, structure, wall, framework, base, surface, corner, point, straight, curved, cut, fold, join, fix, design, Plan, Evaluate		Moving picture, lever, slider, pivot, wheel, evaluate, product, mechanism, slider, assemble, fix, draw, design criteria, sketch, idea, label.		Fruit and vegetable names, names of equipment and utensils, cutting, healthy diet, ingredients, peeling, grating, equipment, bake, tools, evaluate, change, improve	
Misconceptions	Fabrics are not just materials. There can be more than one-way to secure joins.		Misunderstanding of vocabulary- lever and pivot.		DT includes using food. Different people like different flavours/fillings.	

By the end of Key Stage 1 children as designers and technologists will:

- Consider the purpose of the product and what it will have to do to be a 'good' one.
- Use a range of practical activities to generate, develop, model, and communicate their ideas (based on their own experiences) through talking, drawing and mock-ups.
- Use ICT where appropriate to generate, develop, and communicate ideas.
- Identify the intended user and use and what they would need the product to be like.
- Communicate their ideas through talking and through increasingly accurate drawing (with appropriate labels) showing an understanding between drawings for art and design diagram.
- Choose fabrics and embellishments according to their characteristics.
- Follow and suggest procedures for safety and hygiene.
- Measure, mark out, cut and shape paper and card components.
- Assemble, join and combine materials and component.
- Use running stitch / glue to join two fabrics.
- Select from and use a wide range of materials and components: cardboard, cotton wheels, wood, including construction materials and kits according to their characteristics.
- What products are and what they are for.
- Who products are for and how they are used.
- Identify basic materials.
- Say what they like and dislike about products.
- Pupils should be taught to safely and hygienically prepare a sandwich which includes something from each of the 5 food groups.
- Pupils should be taught how to name and sort food into the five groups on the Eatwell plate.
- Pupils should be taught how to use the techniques of cutting, spreading, peeling and grating.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3		How do I make that? Cooking and Nutrition	How do I make it work? Mechanisms-Levers and Linkages			Will it light up? Light Up Signs
		Prepare and cook a variety of dishes using a range of cooking techniques Understand and apply the principles of a healthy and varied diet.	Understand and use mechanical systems in their products e.g. levers and linkages in the context of making a mechanism which uses them. Evaluate products against success criteria			Investigate and analyse a range of existing products Generate, develop, model and communicate ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and CAD (where available)
Core vocabulary		name of products, names of equipment,	purpose, pulley, wheel, axel, input, output,			Piece, function, prototype, design,

		utensils, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, reared, caught, seasonal, harvested healthy/varied diet,	mechanism, lever, linkage, pivot, slot, input, process, output linear, rotary,			evaluate, success criteria, product, annotated sketch, cross sectional diagram
Misconceptions		May misunderstand the term 'seasonal' in relation to food. May not understand how to safely cut & peel fruit and vegetables.				May not understand the process designers have to go through in order to create a finished product.
Year 4	How shall I frame a portrait? Picture Frames		Sunshine or rain? Weather Mobile			How do you like yours? Design a Chocolate Bar
	Design and Make picture frames fit for a King's Portrait in Autumn 2 (Art)		Design and make a class mobile depicting weather symbols. Join fabric with increased accuracy			Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others.
Core vocabulary	Design, make, evaluate, product, purpose, research, develop, investigate, generate, annotate, cross-sectional, exploded diagram, structure hacksaw.		fabric, stitch, cotton, scissors, chalk, fit for purpose, finish, aesthetic pattern piece, function, prototype,			Utensils, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, moist, fresh, savoury, hygienic, edible

Misconceptions	Ongoing: understanding the function of the product. A product should be functional as well as 'pretty'. Safe use of tools Importance of accurate measuring	Threading a needle Suitable stitching method Ongoing: understanding the function of the product. A product should be functional as well as 'pretty'.	Food safety and hygiene Units of measure Following a recipe Sweet and savoury tastes Ongoing: understanding the function of the product. A product should be functional as well as 'pretty'.
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By the end of Lower Key Stage 2 children as designers and technologists will:

- Gather information about the intended user to inform the design criteria – self, historical figure, imaginary figure
- Describe how the product is fit for purpose.
- Indicate the design features of their product that will appeal to the intended user.
- Develop and use pattern pieces to develop the product and enable accurate manufacture
- Develop and use own design criteria
- Generate realistic ideas
- Develop and use a prototype to explore the functionality of the design.
- Use computer aided design to develop ideas.
- Begin to order the main stages of making.
- Highlight and follow procedures for safety and hygiene
- Measure, mark out, cut and shape resistant materials and components with more accuracy.
- Join fabric with increased accuracy and independence – smaller more neat & careful stitches.
- Compare products and discuss why one is more successful than another
- Evaluate their products against a criteria and identify how the product can be improved and why
- Prepare and cook a dish safely and hygienically using a heat source.
- Understand seasonality.
- Use the techniques of peeling, chopping, melting, kneading and baking.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5		Trench Diet		Kong- Alarm System		Giant's Necklace Bag
		Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand and apply the principles of a healthy and varied diet		understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors		Select from and use a wider range of materials and components, including construction materials, textiles and ingredients Evaluate their ideas and products against their own design criteria and consider the views of

Core vocabulary		Ingredients, Nutrition, food groups, Fibre, Fruits, fats, vegetables, carbohydrates, sugar, healthy, balanced		Wires, clips, buzzers, bulbs, alarm, battery, components, circuit, test, evaluate, plan do review,		Cotton, clothes, textiles, stitch, thread, join, sew, pattern, details, evaluate, product, design drawstring, fasteners.
Misconceptions		Food safety Units of measure Following a recipe		Electrical components What kind of circuits How to make a complete circuit		How to thread a needle Sewing techniques Safety methods
Year 6		What Can You Use? Make Do And Mend	What do you fancy cooking?	What's the Surprise? Pop Up Toys Using Cams		
		Select from and use a wider range of materials and components, including construction materials, textiles and ingredients Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand and apply the principles of a healthy and varied diet	Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Understand and use mechanical systems in their products		
Core vocabulary		functional, aesthetic, appeal seam, seam allowance, hem, running stitch, backstitch, overstitch or zigzag stitch, template, pins, needles, thread, pinking shears, fastenings, envelope fold, fasteners, buttonhole, secure, durable	Ingredients, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, fold, knead, stir, pour, shape, allergy, intolerance, savoury, source, seasonality, organic, pesticides, fibre	Mechanical, cam mechanism, linkage system, follower, rotary movement, eccentric, cams, stability, design, measurements, purpose, materials, tools, adapt, evaluate		
Misconceptions		Sewing techniques Safe use of tools and equipment	Hygiene Cross contamination	Safe use of tools and equipment		

		Understanding of the purpose of different stitches Functionality of an object Effective evaluating against design criteria	Safe use of tools and equipment Understanding of a healthy and savoury meal Effective evaluating against design criteria	Functionality of an object- who is it aimed at Aesthetic qualities- who is it aimed at Effective evaluating against design criteria		
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By the end of Upper Key Stage 2 children as designers and technologists will:

- Gather information including web-based sources to inform own design criteria
- Begin to use cross-sectional diagrams and exploded diagrams.
- Develop accurate design criteria / specification based on a range of research into existing products and intended users.
- Work in a range of relevant contexts
- Begin to formulate simple step by step plans as a guide to making.
- Use a wider range of materials and components including construction materials and kits, and mechanical components
- Use a wider range of finishing techniques accurately e.g. sanding, sawing, drilling, hot-gluing
- Measure, mark out, cut and shape materials and components accurately
- Combine the use of a range of materials and electrical components.
- Demonstrate resourcefulness when tackling practical problems.
- evaluate the functionality and aesthetics of a product
- Identify how key individuals have influenced design.
- Understand the principles of organic farming and fair trade.
- Understand how food is processed and preserved into ingredients that can be eaten or used in cooking.
- Know that people may have allergies/intolerances and what the alternatives are.
- Prepare and cook a dish safely and hygienically using a heat source and different techniques.