



The Federation of St. Giles and St. John Design and Technology progression map



Area of study	Foundation Stage	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Design	Early Learning Goals: - Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. - They represent their own ideas, thoughts and feelings through design and technology	National Curriculum. Pupils should be taught to: - design purposeful, functional, appealing products for themselves and other users based on design criteria. - generate , develop, model and communicate their ideas through drawing, talking, templates, mock-ups and, where appropriate, information and communication technology.	National Curriculum. Pupils should be taught to: - use research and development design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.	
	Draw pictures and simple plans before making things.	- Think of ideas and with help put them into practice. - Know what a design is and its purpose. - Use pictures and words to describe what they want to do (materials and tools)	- Think of ideas and plan what to do next, based on what they know about materials and components. - Plan using specific materials and explain their choices. - Select the appropriate tools, techniques and materials explaining their choices.	- Use their knowledge of design and designers to further research to help influence their own design. - Create models or prototypes to show aspects design. - Produce step by step plans. - Use computer aided design.

		Label a simple diagram to show what they are intending to make.	- Use pictures and words to describe what they want to do (materials, techniques, features-mechanics etc. and tools) - Communicate their ideas using labelled sketches giving reasons for choices - Start to produce step by step plans	- Come up with solutions to problems as they happen. - Take part in technical discussions about ideas. - Come up with solutions to problems as they happen.
Make	Early Learning goals: - Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. - They represent their own ideas, thoughts and feelings through design and technology	National curriculum: Pupils should be taught to: - select from and use a range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing] - select from and use a wide range of materials and components, including construction materials, textiles and ingredients.	National curriculum: Pupils should be taught to: - select from and use a wider range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing], - accurately select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.	
	Explore materials and how to join them together.	- know what materials can be used for a structure. - measure, mark out and cut fabric and paper/card. - join fabrics using glue, masking tape, sellotape and running stitch.	- Use appropriate materials and an appropriate join. - measure and mark out materials with care and increasing accuracy. - use scoring and folding to shape materials accurately. - make cuts accurately (scissors and saws) - make holes accurately (drill and punch)	- Select from a variety of materials best suited to a design. - measure using mm and then use scoring, and folding to shape materials accurately. - make cuts accurately and reject pieces that are not accurate and improve their technique. - joins are strong and stable, giving extra strength to products.

			• join materials to make products using both temporary and permanent fastenings. • select the appropriate textile for a product. • use sharp scissors accurately to cut textiles.	• some joins are flexible to allow for dismantling or folding. • methods of working are precise so that products have a high quality finish. • use computer programming when creating a product
Evaluate	Characteristics of effective learning: • Children keep on trying, even when things go wrong. • Showing satisfaction in meeting their own goals • Being proud of how they accomplished something- not just the end result	National Curriculum: Pupils should be taught to: • Explore and evaluate a range of existing products. • Evaluate their ideas and products against design criteria.	National Curriculum: Pupils should be taught to: • Investigate and analyse a range of existing products. • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • Understand how key events and individuals in design and technology have helped to shape the world.	
	• Say what has worked well and what has not worked well. • Experiment with different ways to do things to see if they can improve their initial ideas.	• Know/say what a product is. • Describe a product (who is it for? How is it made? How does it work?) • Talk about their own work (features, design, opinion) • Describe how their product works • Know the features of familiar products • Give reasons for some features (colour choice, choice of material, joining technique)	• Research and evaluate existing products to inform planning • Understand that products are designed for a purpose (e.g. a problem, an audience, an event) Talk about own and others' work (features, design, opinion) • Explain why they chose certain materials, techniques and tools • Say how they would improve their product • Identify what is working well and what can be improved (this is during the make as well as at the end	• Research and evaluate existing products giving reasons for the decisions of the designers (materials, design, tools, techniques) • Use the ideas from current designers to help with plans • Reflect on designs and develop them bearing in mind the way they will be used (during the process)

Technical knowledge	Early Learning Goals: They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	National Curriculum: Pupils should be taught to: build structures, exploring how they can be made stronger, stiffer and more stable explore and use mechanisms [e.g. levers, sliders, wheels and axles], in their products	National Curriculum: Pupils should be taught to: apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] understand and use electrical systems in their products [e.g. series circuits incorporating switches, bulbs, buzzers and motors] apply their understanding of computing to program, monitor and control their products	
	- Learn how to use scissors effectively to cut paper, string etc. - Learn how to draw around shapes carefully.	- Explore how moving objects work. - Look at wheels, axels, turning mechanisms, hinges and simple levers. - Make a product that moves using a turning mechanism (e.g. wheels, winding) or a lever or a hinge (to make a movement) - Know what a designer does. Know the names and the products of some British designers. - Say what they like and dislike about the product and the designer	- Know the application of mechanisms to create movement. Combine a number of components well in a product. - Use simple circuits to either illuminate or create motion. - Make a product that uses both electrical and mechanical components. - Know that products have a good finish so that a user will find it both useful and attractive. - Know some designers from history. - Talk about some of the tools, techniques and design used by the designer.	- Choose components that can be controlled by switches or by ICT equipment. - Use science skills (resistance, circuits etc) to alter the way electrical products behave. Explore mechanical movement using hydraulics and pneumatics. - Use other DT skills to create housings for mechanical components. - Product are well finished in a way that would appeal to users. - Know how key events and individuals have influenced the world (in terms of products) - Compare and contrast the work of different designers (e.g. historical and modern)
Food technology	Early Learning Goals: Children know the importance for good health of a healthy diet, and talk about ways to keep healthy and safe.	National Curriculum: Pupils should be taught to: use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from	National Curriculum: Pupils should be taught to: understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed	

	• They handle equipment and tools effectively, including pencils for writing.			
	• Learn to use a knife with support to cut and chop things. • Learn to use a spoon for mixing. • Think about how we can make sure we keep our hands clean and why this is important. • Begin to understand about healthy eating. • Prepare a healthy snack with support.	• With help, use knives safely • Use a mixing bowl • Be aware of hygiene for cooking • Know some things are made and some things are natural • Know some things are dangerous to eat raw • Know heat changes food • Use a variety of utensils safely • Know what the food groups are • Know where some foods come from Be aware there are different ways to cook • Prepare a healthy snack	• Select ingredients for a product with reasons • Work in a safe, hygienic way • Begin to measure out ingredients • Understand what is healthy and unhealthy • Boil and bake to cook • Understand why we need a healthy diet • Use knowledge of the food groups to plan a lunch • Know where food comes from • Prepare a healthy meal	• Explain why they have chosen ingredients in a dish • Know why we need certain food types Know about local produce • Know where different crops can be found around the world and understand the concept of carbon footprints • Know different cultures have different diets • Design and prepare a healthy dinner