Trinity Road Primary School
RESPECT • ACHIEVE • BELONG

Trinity Road Primary School Knowledge Progression Document
Design Technology

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Generate a design and take steps towards making it. Understand the importance of design and begin to use basic drawings.	Create a design to meet simple design criteria. Develop and communicate ideas through words, drawings, templates and mock-ups.	Generate ideas based on design criteria and their own experiences. Develop, model and communicate their ideas through talking, drawing, templates, mock ups and, where appropriate, ICT.	Gather information about user needs. Generate, develop and model ideas through discussion, prototypes and annotated sketches. Generate and clarify ideas through discussion with peers and adults to develop design criteria.	Research and investigate similar products to give starting points for a design. Generate realistic ideas and their own design criteria through discussion, focussing on the needs of the user. Produce annotated sketches and prototypes. Explain how particular parts of their products work. Select materials and components suitable for the task. Explain the choice of materials and components.	Research, investigate and begin to evaluate similar products/images to collect ideas. Generate realistic and innovative ideas through research and discussions with peers and adults. Develop a design brief and criteria for a design specification based on research. Model and communicate ideas through annotated sketches, prototypes and cross-sectional diagrams.	Carry out research and gather information about needs and wants of individuals/groups by carrying out research including surveys, interviews and questionnaires. Design innovative, functional, appealing products that are fit for purpose. Generate, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design.

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Make	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Begin to name the tools they need. Make an original creation	Name a wider range of tools and select the tools they need. Select appropriate materials from a range, beginning to explain their choices. Make a creation from a given brief.	Name and select appropriate tools needed to work the materials. Select appropriate materials from a range that will meet the design criteria. Begin to select appropriate techniques explaining why they have chosen them.	Begin to select and use a wider range of tools safely and appropriately to measure, mark out, cut shape and join with some accuracy. Begin to apply a wider range of finishing techniques with some accuracy. Select appropriate materials that are fit for purpose. Work through a plan in order with support.	Use a wider range of tools safely and appropriately to measure, mark out, cut shape and join with growing accuracy. Apply a wider range of finishing techniques with more accuracy, explaining why this is needed. Select appropriate materials that are fit for purpose, explaining their choices. Work through plan in order.	Use tools with good level of precision and accuracy to measure, mark out, cut, shape assemble and join components. Apply a range of finishing techniques mostly accurately, explaining confidently why this is needed. Select appropriate materials that are fit for purpose, explaining their choices and considering functionality.	Select and use tools and equipment precisely and accurately to measure, mark out, cut, shape assemble and join components. Accurately apply a range of finishing techniques. Select appropriate materials that are fit for purpose; explaining choices and considering functionality and aesthetics. Explain how product will appeal to audience; make changes to improve quality during the making process.
Evaluate	Revisit, review and refine their creations. Share their creations, explaining the	Explain likes and dislikes about items they have made. Discuss designs as they develop and	Explain likes and dislikes about existing products, beginning to make comparisons. Discuss designs as they develop and	Begin to identify the strengths and weaknesses of existing products and their own design ideas. Consider and	Identify and explain the strengths and weaknesses of their design ideas, showing how they have been	Identify what does and does not work in the product, beginning to consider the views of others as to how their design	Clearly identify what does and does not work in theirs and others' products, listening to and making suggestions as how

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	process they have used. Discuss their own and others work.	identify good and bad points. Talk about their own and each other's work with support.	identify successful and unsuccessful points. Explain changes made during the making process and give reasons why. Discuss how closely their finished products meet their design criteria.	explain how the finished product could be improved. Begin to understand how key events and individuals in design and technology have helped shape the world.	influenced by existing products. Discuss how well the finished product meets the design criteria, how well it meets the needs of the user and how it could be improved. Understand how key events and individuals in design and technology have helped shape the world.	could be improved. Begin to evaluate their ideas and products against their own design criteria to inform their decisions about ways to proceed. Reflect on their work using design criteria stating how well the design fits the needs of the user. Understand how key events and individuals in DT have helped shape the world.	designs could be improved. Fully reflect on their work using design criteria stating how well the design fits the needs of the user. Justify their decisions about materials and methods of construction with reasoned explanations. Understand how key events and individuals in DT have helped shape the world.
Technical Knowledge	Select and use materials for particular purposes. Talk about what they are making and the materials they are using.	Use a range of mechanisms including wheels and axels to make a moving vehicle. Understand how to cut, join and combine materials.	Use sliders and levers to make a moving picture. With support, begin to construct simple structures, models or other products using a range of materials. Explore how a structure can be made stronger,	Understand how to strengthen, stiffen and reinforce 3D frameworks. Create shell or frame structures, strengthening frames with diagonal struts. Begin to understand that	Explore and use a range of mechanisms (linkages and pulleys) in models or products. Create more complex shell or frame structures, selecting where to strengthen frames with diagonal	Identify arch and beam bridge structures, understanding the terms compression and tension. Identify stronger and weaker structures and explain why. Understand and explain why	Know how more complex electrical circuits and components can be used to create functional products. Pin and tack fabric pieces together. Join fabrics using a variety of all taught stitches.

Trinity Road Primary School Knowledge Progression Document
Design Technology

			stiffer and more stable. Begin to develop sewing techniques with simple stitches.	you can make structures more stable by giving them a wide base. Make prototype frame and shell structures.	struts. Understand how to securely join two pieces of fabric together using a range of sewing techniques. Begin to devise a template or pattern design. Use appropriate decoration techniques such as embroidery to add colour, texture and pattern to fabric.	triangles are used to reinforce structures. Know how to use mechanical systems such as cams or pulleys or gears create movement.	Combine fabrics to create more useful properties. Think about user's wants/needs and aesthetics when choosing textiles think about how product might be sold. Decorate textiles appropriately often before joining components.
Cooking and Nutrition	Understand the importance of washing hands and working hygienically when preparing food. Understand the need to eat a variety of foods to stay healthy. Know the importance of a healthy diet. Use knives, forks and spoons.	Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from. Know how to prepare simple dishes safely and hygienically, without using a heat source. Know how to use techniques such as cutting, peeling and grating.		Understand and apply the principles of a healthy and varied diet. Know how to prepare and cook dishes safely and hygienically including, where appropriate, the use of a heat source. Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, and baking.		Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Know how to prepare and cook savoury dishes safely and hygienically including, the use of a heat source (bread). Know that different food and drink contain different substances – nutrients, water and fibre – that are needed for health. Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, crushing, kneading and baking.	

	Know that some of the plants we grow can be eaten.			