

Parwich Primary School

D & T Progression Grid

D & T Intent

At Parwich Primary School, our intention is to build an inspiring, enriching and ‘hands on’ Design Technology curriculum, which brings out children’s creativity and imagination. The curriculum will enable our children 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, and resulting in the achievement and development of knowledge and skills.

We intend to create a Design and Technology curriculum with appropriate subject knowledge, skills and understanding as set out in the National Curriculum Design Technology Programmes of study. To fulfil the duties of the National Curriculum, we will provide a balanced and broadly-based curriculum, which promotes the spiritual, moral, cultural, mental and physical development of pupils and prepares them for the opportunities, responsibilities and experiences in later life.

EYFS – see Development Matters 2021 for detailed examples of how to support learning in EYFS

3 - 4 Years	Reception Class	Early Learning Goal
<p style="text-align: center;">Personal, Social and Emotional Development</p> <ul style="list-style-type: none"> • 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. <p style="text-align: center;">Physical Development</p> <ul style="list-style-type: none"> • Use large-muscle movements to wave flags and streamers, paint and make marks. • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors. <p style="text-align: center;">Understanding the World</p> <ul style="list-style-type: none"> • Explore how things work. <p style="text-align: center;">Expressive Arts and Design</p> <ul style="list-style-type: none"> • 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, in order 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. • Create closed shapes with continuous lines, and begin to use these shapes to represent objects 	<p style="text-align: center;">Physical Development</p> <ul style="list-style-type: none"> • Progress towards a more fluent style of moving, with developing control and grace. • Develop their small motor skills, so that they can use a range of tools competently, safely and confidently. • Use their core muscle strength to achieve a good posture, when sitting at a table or sitting on the floor. <p style="text-align: center;">Expressive Arts and Design</p> <ul style="list-style-type: none"> • Explore, use and refine a variety of artistic effects to express their ideas and feelings. • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills. 	<p style="text-align: center;">Physical Development Fine Motor Skills</p> <ul style="list-style-type: none"> • Use a range of small tools, including scissors, paint brushes and cutlery. <p style="text-align: center;">Expressive Arts and Design Creating with Materials</p> <ul style="list-style-type: none"> • 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.

Areas of Study	Key Stage 1		Key Stage 2			
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	<p><u>Year 1</u></p> <ul style="list-style-type: none"> • Have own ideas; • Explain what I want to do; • Explain what my product is for, and how it will work; • Use pictures and words to plan; • Begin to use models; • Design a product for myself following design criteria; • Research similar existing products. <p><u>Year 2</u></p> <ul style="list-style-type: none"> • Have own ideas and plan what to do next; • Explain what I want to do and describe how I may do it; • Explain purpose of product, how it will work and how it will be suitable for the user; • Describe design using pictures, words, models, diagrams & begin to use ICT; • Design products for myself and others following design criteria; • Choose best tools and materials, and explain choices; • Use knowledge of existing products to produce ideas. 		<p><u>Year 3</u></p> <ul style="list-style-type: none"> • Begin to research others' needs; • Show design meets a range of requirements; • Describe purpose of product; • Follow given design criteria; • Have at least one idea about how to create product; • Create a plan which shows order, equipment and tools; • Describe design using an accurately labelled sketch and words; • Make design decisions; • Explain how product will work; • Make a prototype; • Begin to use computers to show design. <p><u>Year 4</u></p> <ul style="list-style-type: none"> • Use research for design ideas; • Show design meets a range of requirements and is fit for purpose; • Begin to create own design criteria; • Have at least one idea about how to create product and suggest improvements for design; • Produce a plan and explain it to others; • Say how realistic plan is; • Include an annotated sketch; • Make and explain design decisions considering availability of resources; • Explain how product will work; • Make a prototype; • Begin to use computers to show design. 		<p><u>Year 5</u></p> <ul style="list-style-type: none"> • Use internet and questionnaires for research and design ideas; • Take a user's view into account when designing; • Begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose; • Create own design criteria; • Have a range of ideas; • Produce a logical, realistic plan and explain it to others; • Use cross-sectional planning and annotated sketches; • Make design decisions considering time and resources; • Clearly explain how parts of product will work; • Model and refine design ideas by making prototypes and using pattern pieces; • Use computer-aided designs. <p><u>Year 6</u></p> <ul style="list-style-type: none"> • Draw on market research to inform design; • Use research of user's individual needs, wants, requirements for design; • Identify features of design that will appeal to the intended user; • Create own design criteria and specification; • Come up with innovative design ideas; • Follow and refine a logical plan; • Use annotated sketches, cross-sectional planning and exploded diagrams; • Make design decisions, considering, resources and cost; • Clearly explain how parts of design will work, and how they are fit for purpose; • Independently model and refine design ideas by making prototypes and using pattern pieces; • Use computer-aided design. 	

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Make	<u>Year 1</u> <ul style="list-style-type: none"> • Explain what I am making and why; • Consider what I need to do next; • Select tools/equipment to cut, shape, join, finish and explain choices; • Measure, mark out, cut and shape, with support; • Choose suitable materials and explain choices; • Try to use finishing techniques to make product look good; • Work in a safe and hygienic manner. <u>Year 2</u> <ul style="list-style-type: none"> • Explain what I am making and why it fits the purpose; • Make suggestions as to what I need to do next; • Join materials/components together in different ways; • Measure, mark out, cut and shape materials and components, with support; • Describe which tools I am using and why; • Choose suitable materials and explain choices depending on characteristics; • Use finishing techniques to make product look good; • Work safely and hygienically. 		<u>Year 3</u> <ul style="list-style-type: none"> • Select suitable tools/equipment, explain choices and begin to use them accurately; • Select appropriate materials, fit for purpose; • Work through plan in order; • Consider how good product will be; • Begin to measure, mark out, cut and shape materials/components with some accuracy; • Begin to assemble, join and combine materials and components with some accuracy; • Begin to apply a range of finishing techniques with some accuracy. <u>Year 4</u> <ul style="list-style-type: none"> • Select suitable tools/equipment, explain choices in relation to required techniques and use accurately; • Select appropriate materials, fit for purpose and explain choices; • Work through plan in order; • Realise if product is going to be good quality; • Measure, mark out, cut and shape materials/components with some accuracy; • Assemble, join and combine materials and components with some accuracy; • Apply a range of finishing techniques with some accuracy. 		<u>Year 5</u> <ul style="list-style-type: none"> • Use selected tools/equipment with good level of precision; • Produce suitable lists of tools, equipment and materials needed; • Select appropriate materials, fit for purpose and explain choices, considering functionality; • Create and follow detailed step-by-step plan; • Explain how product will appeal to an audience; • Mainly accurately, measure, mark out, cut and shape materials/components; • Mainly accurately, assemble, join and combine materials/components; • Mainly accurately, apply a range of finishing techniques; • Use techniques that involve a small number of steps; • Begin to be resourceful with practical problems. <u>Year 6</u> <ul style="list-style-type: none"> • Use selected tools and equipment precisely; • Produce suitable lists of tools, equipment and materials needed, considering constraints; • Select appropriate materials, fit for purpose and explain choices, considering functionality and aesthetics; • Create, follow, and adapt detailed step-by-step plans; • Explain how product will appeal to audience and make changes to improve quality; • Accurately measure, mark out, cut and shape materials/components; • Accurately assemble, join and combine materials/components; • Accurately apply a range of finishing techniques; • Use techniques that involve a number of steps; • Be resourceful with practical problems. 	

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Evaluate	<p><u>Year 1</u></p> <ul style="list-style-type: none"> • Talk about my work, linking it to what I was asked to do; • Talk about existing products considering use, materials, how they work, audience and where they might be used; • Talk about existing products and say what is and is not good; • Talk about things that other people have made; • Begin to talk about what could make product better. <p><u>Year 2</u></p> <ul style="list-style-type: none"> • Describe what went well, thinking about design criteria; • Talk about existing products considering use, materials, how they work, audience and where they might be used; express personal opinion; • Evaluate how good existing products are; • Talk about what I would do differently, if I were to do it again and why. 		<p><u>Year 3</u></p> <ul style="list-style-type: none"> • Look at design criteria while designing and making; • Use design criteria to evaluate finished product; • Say what I would change to make design better; • Begin to evaluate existing products, considering how well they have been made, materials, whether they work, how they have been made, and whether they are fit for purpose; • Begin to understand by whom, when and where products were designed; • Learn about some inventors/designers /engineers/chefs/ manufacturers of ground-breaking products. <p><u>Year 4</u></p> <ul style="list-style-type: none"> • Refer to design criteria while designing and making; • Use criteria to evaluate product; • Begin to explain how I could improve original design; • Evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, and whether they are fit for purpose; • Discuss by whom, when and where products were designed; • Research whether products can be recycled or reused; • Know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products. 		<p><u>Year 5</u></p> <ul style="list-style-type: none"> • Evaluate quality of design while designing and making; • Evaluate ideas and finished product against specification, considering purpose and appearance; • Test and evaluate final product; • Evaluate and discuss existing products, considering how well they have been made, materials, whether they work, how they have been made and whether they are fit for purpose; • Begin to evaluate how much products cost to make and how innovative they are; • Research how sustainable materials are; • Talk about some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products. <p><u>Year 6</u></p> <ul style="list-style-type: none"> • Evaluate quality of design while designing and making; is it fit for purpose? • Keep checking design is the best it can be; • Evaluate ideas and finished product against specification, stating if it is fit for purpose; • Test and evaluate final product; explain what would improve it and the effect different resources may have had; • Do thorough evaluations of existing products considering how well they have been made, materials, whether they work, how they have been made and whether they are fit for purpose; • Evaluate how much products cost to make and how innovative they are; • Research and discuss how sustainable materials are; • Consider the impact of products beyond their intended purpose; • Discuss some key inventors/designers/ engineers/ chefs/manufacturers of groundbreaking products. 	

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Technical Knowledge – Construction (Including materials, structures, mechanisms and electrical systems)	<u>Year 1</u> <ul style="list-style-type: none"> Begin to measure and join materials, with some support; Describe differences in materials; Suggest ways to make material/product stronger; Begin to use levers or slides. <u>Year 2</u> <ul style="list-style-type: none"> Measure materials; Describe some different characteristics of materials; Join materials in different ways; Use joining, rolling or folding to make it stronger; Use own ideas to try to make product stronger; Use levers or slides; Begin to understand how to use wheels and axles. 		<u>Year 3</u> <ul style="list-style-type: none"> Use appropriate materials; Work accurately to make cuts and holes; Join materials; Begin to make strong structures; Select appropriate tools / techniques; Alter product after checking, to make it better; Begin to try new/different ideas; Use simple lever and linkages to create movement; Use simple circuit in product; Learn about how to program a computer to control product. <u>Year 4</u> <ul style="list-style-type: none"> Measure carefully to avoid mistakes; Attempt to make product strong; Continue working on product, even if original did not work; Select most appropriate tools / techniques; Explain alterations to product after checking it; Grow in confidence about trying new / different ideas; Use levers and linkages to create movement; Use number of components in circuit; Program a computer to control product. 			<u>Year 5</u> <ul style="list-style-type: none"> Select materials carefully, considering intended use of product and appearance; Explain how product meets design criteria; Measure accurately enough to ensure precision; Ensure product is strong and fit for purpose; Begin to reinforce and strengthen a 3D structure; Refine product after testing; Grow in confidence about trying new / different ideas; Begin to use cams, pulleys or gears to create movement; Incorporate a switch into product; Confidently use number of components in circuit; Begin to be able to program a computer to monitor changes in environment and control product. <u>Year 6</u> <ul style="list-style-type: none"> Select materials carefully, considering intended use of the product, the aesthetics and functionality; Explain how product meets design criteria; Reinforce and strengthen a 3D structure or product; Refine product after testing, considering aesthetics, functionality and purpose; Be confident to try new / different ideas; Use cams, pulleys and gears to create movement; Use different types of circuit in product; Think of ways in which adding a circuit would improve product; Program a computer to monitor changes in environment and control product.

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Technical Knowledge - Textiles (Closely linked to Art – textiles)	<u>Year 1</u> <ul style="list-style-type: none"> Measure, cut and join textiles to make a product, with some support; Choose suitable textiles. <u>Year 2</u> <ul style="list-style-type: none"> Measure textiles; Join textiles together to make a product, and explain how I did it; Carefully cut textiles to produce accurate pieces; Explain choices of textile; Understand that a 3D textile structure can be made from two identical fabric shapes. 		<u>Year 3</u> <ul style="list-style-type: none"> Join different textiles in different ways; Choose textiles considering appearance and functionality; Begin to understand that a simple fabric shape can be used to make a 3D textiles project. <u>Year 4</u> <ul style="list-style-type: none"> Think about user when choosing textiles; Think about how to make product strong; Begin to devise a template; Explain how to join things in a different way; Understand that a simple fabric shape can be used to make a 3D textiles project. 		<u>Year 5</u> <ul style="list-style-type: none"> Think about user and aesthetics when choosing textiles; Use own template; Think about how to make product strong and look better; Think of a range of ways to join things; Begin to understand that a single 3D textiles project can be made from a combination of fabric shapes. <u>Year 6</u> <ul style="list-style-type: none"> Think about user's wants/needs and aesthetics when choosing textiles; Make product attractive and strong; Make a prototype; Use a range of joining techniques; Think about how product might be sold; Think carefully about what would improve product; Understand that a single 3D textiles project can be made from a combination of fabric shapes. 	

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Food, Drink and Nutrition (Closely linked to PSHE)	<u>Year 1</u> <ul style="list-style-type: none"> Describe textures; Wash hands & clean surfaces; Think of interesting ways to decorate food; Say where some foods come from, (i.e. plant or animal); Describe differences between some food groups (i.e. sweet, vegetable etc.); Discuss how fruit and vegetables are healthy; Cut, peel and grate safely, with support. 		<u>Year 3</u> <ul style="list-style-type: none"> Carefully select ingredients; Use equipment safely; Make product look attractive; Think about how to grow plants to use in cooking; Begin to understand food comes from UK and wider world; Describe how healthy diet = variety /balance of food/drinks; Explain how food and drink are needed for active/healthy bodies; Prepare hot drinks safely and hygienically; Grow in confidence; understanding branding of food and drink products. 		<u>Year 5</u> <ul style="list-style-type: none"> Explain how to be safe / hygienic and follow own guidelines; Present product well - interesting, attractive, fit for purpose; Begin to understand seasonality of foods; Understand food can be grown, reared or caught in the UK and the wider world; Describe how recipes can be adapted to change appearance, taste, texture, aroma; Explain how there are different substances in food / drink needed for health; Prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source; Use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. 	
	<u>Year 2</u> <ul style="list-style-type: none"> Explain hygiene and keep a hygienic kitchen; Describe properties of ingredients and importance of a varied diet; Say where food comes from (animal, underground etc.); Describe how food is farmed, home-grown, caught; Draw Eat Well plate; explain there are groups of food; Describe “five a day”; Cut, peel and grate with increasing confidence. 		<u>Year 4</u> <ul style="list-style-type: none"> Explain how to be safe/hygienic; Think about presenting product in interesting/ attractive ways; Understand ingredients can be fresh, pre-cooked or processed; Begin to understand about food being grown, reared or caught in the UK or wider world; Describe Eat Well plate and how a healthy diet = variety / balance of food / drinks; Explain importance of food and drink for active, healthy bodies; Prepare and cook some dishes safely and hygienically; Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading and baking. 		<u>Year 6</u> <ul style="list-style-type: none"> Understand a recipe can be adapted by adding / substituting ingredients; Explain seasonality of foods; Present product to a high standard to make the product interesting and aesthetically attractive; Learn about food processing methods; Name some types of food that are grown, reared or caught in the UK or wider world; Adapt recipes to change appearance, taste, texture or aroma; Describe some of the different substances in food and drink, and how they can affect health; Prepare and cook a variety of dishes safely and hygienically including, where appropriate, the use of heat source; Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. 	