

Woodlands Infant School



D&T Curriculum

Long term plan
Progression of skills, knowledge and vocabulary

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D&T Topic Overview

Topics	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery		Food and Nutrition: Healthy Eating – Fruit Kebabs	Textiles and Materials: Weaving – Clothes for Stickman		Structures and Construction & Mechanism and Movement: Junk Modelling -Transport	
Reception	Mechanisms and Movement: Pivots - Christmas cards		Structures and Construction: Bridges / Stick puppets Textiles and Materials Character outfits		Food and Nutrition: Fruit faces – link to Handa's Surprise	
Year One	Mechanisms and Movement: Levers and sliders – Calendar Textiles and Materials: Christmas Bauble (non unit)		Food and Nutrition: Sandwiches		Structures and Construction: Bridges	
Year Two	Food and Nutrition: Seasonal Soup		Textiles and Materials: Sock Puppets		Mechanisms and Movement: Toy Car	

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Progression in Disciplinary Knowledge

	Nursery	Reception	Year 1	Year 2
Designing	- Begin to use imagination to decide what to make during play. - Talk about ideas while building or creating. - Choose from a range of available materials with support. - Begin to notice that what they make can have a purpose (e.g. "This is a house for the doll.").	- Generate ideas based on interests, stories or shared experiences. - Talk about what they would like to make and why. - Begin to draw or model simple ideas before making. - Talk about who their product is for and what it should do. - With support, think about which materials might work best.	- Design purposeful, functional, and appealing products for themselves and others. - Generate ideas through talking, drawing, and modelling using templates or examples. - Begin to label designs and describe how the product will work. - Think about the user and purpose of their product when planning.	- Develop design criteria based on user needs and purpose. - Produce detailed designs through labelled drawings, mock-ups, or prototypes. - Explain how they will make their product and which materials, tools, and components to use. - Understand that design is an iterative process and ideas can be refined before making.
Making	- Explore joining, stacking, balancing and combining materials. - Use basic tools such as glue sticks and scissors with close supervision. - Notice what materials can and cannot do (e.g. tape sticks, blocks balance). - Enjoy the process of making and adapt ideas naturally during play.	- Select materials and tools with increasing independence. - Use scissors, glue, hole punches and simple fasteners safely. - Join materials using tape, glue, split pins or construction kits. - Explore cutting, folding and shaping to achieve a chosen effect. - Work collaboratively on larger projects, sharing tools and ideas.	- Select materials and components based on characteristics and purpose. - Use tools (scissors, rulers, cutting/shaping equipment) safely and accurately. - Follow plans to measure, mark, and join materials carefully. - Develop control and coordination when assembling and finishing work.	- Choose from a wider range of materials, components, and tools suited to design criteria. - Use tools and techniques with accuracy and independence. - Measure, mark, cut, join, and finish precisely, following a logical making sequence. - Take responsibility for safety and care when using tools and equipment.
Evaluating	- Talk about what they have made. - Say what they like about their creation. - Notice when something does not work as expected. - Begin to understand that there are different ways to solve a problem. - Evaluation remains conversational and adult-supported.	- Talk about what worked well in their creation. - Notice when something does not move, stand or fit as expected. - Suggest simple improvements with adult guidance. - Begin to use simple success ideas such as: "It stands up." "It rolls." "It moves."	- Evaluate their product as they make it, identifying strengths and areas for improvement. - Test the product against simple design criteria and user needs. - Express opinions using appropriate vocabulary (e.g. "My bridge is strong"). - Evaluate the final product and share thoughts with others.	- Test and evaluate products against design criteria and intended user. - Suggest realistic improvements, identifying how changes improve function or appearance. - Evaluate existing products to inform their own designs. - Use peer and self-assessment to refine ideas, applying feedback constructively.
Technical Knowledge	Explore how objects move, fit together or come apart through play.	- Recognise that products are made up of different parts. - Explore how parts work together (e.g. wheels attached to a body).	- Understand that mechanisms are made of parts that move together (e.g. sliders, levers, wheels, axles). - Know that structures can be	- Understand that mechanisms use inputs and outputs to produce movement. - Know that different structures serve

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	• Notice simple movement such as rolling, spinning or opening. • Begin to talk about different materials used in everyday objects. • Observe that some shapes and materials feel stronger or more stable than others. • There is no expectation of formal mechanism language.	• Understand that a pivot allows something to move around a fixed point. • Use split pins to create simple moving parts (e.g. Christmas cards). • Notice that wider bases and added supports can make structures more stable. • Begin to talk about materials as smooth, strong, soft or flexible.	strengthened and made stable through shape or reinforcement. • Identify suitable materials for particular tasks and describe their properties. • Begin to understand where food comes from and how it can be prepared.	different purposes and can be made stronger or more stable. • Describe how materials and components are chosen for durability or flexibility. • Apply knowledge of ingredients, nutrition, and safe food handling when cooking.
Problem Solving	• Show curiosity when things do not work. • Try different ways to balance, join or build. • Persevere with adult encouragement. • Explore alternative ways of achieving a goal during construction play. • Problem solving is experiential rather than planned.	• Try different ways to fix or improve their creation. • Adapt ideas if something does not work as planned. • Show resilience when using tools or constructing models. • Talk about what they changed and why. • Problem solving becomes more intentional but remains supported.	• Identify simple problems during designing or making and try different approaches to overcome them. • Adapt plans when materials behave unexpectedly. • Test ideas to find the most effective solution (e.g. which bridge holds the most weight). • Recognise that solving problems is an important part of design.	• Plan, test, and refine ideas systematically, showing perseverance when faced with challenges. • Use reasoning and prior knowledge to select effective solutions. • Make purposeful adaptations to designs and explain how these improve the product. • Work collaboratively to share, test, and evaluate possible solutions to a design challenge.
Disciplinary Vocabulary	make, choose, fix	design, plan, test, improve	design criteria, purpose, assemble, evaluate, adapt, user	function, refine, refinement, annotate, integrate, justify, systematically, performance, research, compare, sequence, suitable

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Progression in Substantive Knowledge

	Nursery	Reception	Year 1	Year 2
Food and Nutrition	- Explore different fruits and foods using senses (taste, smell, texture). - Begin to understand that some foods help us grow and stay healthy. - Prepare simple dishes such as fruit kebabs with adult support. - Follow simple hygiene routines such as washing hands before handling food.	- Explore where some foods come from (grown or made). - Prepare simple dishes such as fruit faces. - Slice and cut soft fruit safely using a plastic knife. - Talk about healthy and less healthy food choices. - Begin to understand that we need a variety of foods to stay healthy.	- Identify and group foods into basic food groups (fruit, vegetables, dairy, protein, carbohydrates). - Spread, cut and assemble foods safely when preparing sandwiches. - Use a table knife safely to cut soft foods. - Evaluate taste, texture and appearance when combining foods. - Follow hygiene routines such as cleaning surfaces and using utensils correctly.	- Safely use the bridge and claw grip when slicing fruit and vegetables. - Prepare and cook simple hot dishes such as seasonal soup. - Understand that a balanced diet includes a range of food groups. - Explain the concept of seasonality and how it affects ingredients. - Handle and prepare ingredients hygienically. - Evaluate finished dishes against criteria such as flavour, texture and presentation.
Textiles and Materials	- Explore a range of fabrics and describe how they feel. - Experiment with wrapping, threading, weaving and attaching materials. - Develop fine motor skills through simple weaving and threading. - Begin to notice that materials can be used to make decorative or useful items.	- Explore how fabrics can be shaped, joined and decorated. - Design and make simple items such as character outfits or stick puppets. - Join fabric using glue or simple fastening methods. - Decorate materials to add character and detail. - Notice that some joins are stronger than others.	- Cut fabric accurately using a template and fabric scissors. - Join pieces of fabric using fabric glue. - Create a hole in fabric to add a hanging loop. - Decorate felt products using simple embellishment techniques. - Evaluate how well a finished product matches design ideas.	- Use running stitch neatly and evenly to join fabric. - Pin and cut fabric accurately from a paper template. - Join fabric securely using stitching rather than glue. - Decorate and finish textile products using appliqué or simple embellishment techniques. - Evaluate strength, neatness and suitability of joining methods.
Mechanisms and Movement	- Explore rolling, pushing, pulling and spinning during play. - Notice that wheels help objects move. - Use simple language such as fast, slow, turn and roll. - Experiment with adding moving parts to models with support.	- Explore creating movement using pivots and split pins. - Notice that different mechanisms change how something moves. - Use simple tools safely to assemble moving parts. - Develop fine motor control when assembling components.	- Make products that use sliders and levers to create movement (e.g. moving pictures or calendars). - Measure, cut and assemble card accurately to create a working mechanism. - Understand the difference between a slider and a lever and how each changes motion. - Test and adapt mechanisms to improve movement and presentation.	- Construct products using wheels and axles (e.g. toy cars). - Attach wheels securely using axles and axle holders. - Understand that mechanisms require an input and output to produce movement. - Test and adapt moving products to improve smoothness, balance and function.

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Structure and Construction	- Stack, join and balance materials to build models. - Notice when structures fall and try again. - Explore using tape or glue to join parts. - Begin to notice that wider bases or thicker blocks help structures stand.	- Build simple bridges or structures using blocks or recycled materials. - Explore how to make structures more stable by widening the base. - Test whether structures can stand or hold small weights. - Work collaboratively to plan and build larger constructions.	- Make structures strong and stable using folding, rolling or layering. - Cut and join materials to create simple frameworks (e.g. a bridge). - Test structures for strength and stability and adapt designs to improve performance. - Identify and compare strong shapes used for support (e.g. triangle, arch).	- Test, evaluate and modify structures to improve their ability to hold weight and remain stable. - Strengthen structures through reinforcement and improved joining. - Apply knowledge of shape and support to increase stability.
Everyday Products and Local Design	Notice that everyday objects are designed for a purpose.	- Recognise that products are made by designers to meet needs. - Recognise that products are designed for specific users.	- Explore how familiar products meet user needs. - Identify key features of existing products and explain how they meet user needs. - Compare similar products and discuss differences in design.	Evaluate existing products to inform design choices.
Substantive Vocabulary	build, join, material, food, healthy, tool, strong, push, pull, move	structure, stable, ingredient, cut, mix, mechanism	mechanism, slider, lever, movement, diet, food group, spread, combine, structure, support, pillar, beam, arch, free-standing, pivot, slot, rigid, flexible, bridge, load, reinforce, base, span	balanced diet, seasonality, harvest, vegetable, stock, nutrition, blend, texture, measure, recipe, hygiene, fabric, stitch, running stitch, seam, thread, durable, secure, wheel, axle, chassis, rotary movement, align, friction, balance, stability, reliable