

Annesley Primary & Nursery School Progression Map



Subject: D and T

Intent

The curriculum has a focus upon developing children's skills and knowledge in design structures, mechanisms, electrical control, and materials including food. Skills are taught progressively to ensure that all children are able to learn and practice in order to develop as they move through the school. Evaluation is an essential part of the design process and allows children to adapt and improve their product, this is a key skill which they need throughout their life.

	EYFS	Key Stage 1	Key Stage 2	
	Nursery/Year R	Year 1 Year 2	Year 3 Year 4	Year 5 Year 6
Designing	Nursery I can develop my own ideas & decide which materials to use to express them. Reception I can develop my own ideas through experimentation with different materials such as loose parts, recycled and natural materials and talk about my choices.	Understanding contexts, users and purposes Across KS1 pupils should: • work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment • state what products they are designing and making • say whether their products are for themselves or other users • describe what their products are for • say how their products will work • say how they will make their products suitable for their intended users • use simple design criteria to help develop their ideas Generating, developing, modelling and communicating ideas Across KS1 pupils should:	Understanding contexts, users and purposes Across KS2 pupils should: • work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • describe the purpose of their products • indicate the design features of their products that will appeal to intended users • explain how particular parts of their products work In early KS2 pupils should also: • gather information about the needs and wants of particular individuals and groups • develop their own design criteria and use these to inform their idea	Understanding contexts, users and purposes Across KS2 pupils should: • work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • describe the purpose of their products • indicate the design features of their products that will appeal to intended users • explain how particular parts of their products work In late KS2 pupils should also: • carry out research, using surveys, interviews, questionnaires and web-based resources • identify the needs, wants, preferences and values of particular individuals and groups • develop a simple design specification to guide their thinking

		• generate ideas by drawing on their own experiences • use knowledge of existing products to help come up with ideas • develop and communicate ideas by talking and drawing	Generating, developing, modelling and communicating ideas Across KS2 pupils should: • share and clarify ideas through discussion • model their ideas using prototypes and pattern pieces • use annotated sketches, cross-sectional drawings and diagrams to develop and communicate their ideas In early KS2 pupils should also: • generate realistic ideas, focusing on the needs of the user • make design decisions that take account of the availability of resources	Generating, developing, modelling and communicating ideas Across KS2 pupils should: • share and clarify ideas through discussion • model their ideas using prototypes and pattern pieces • use annotated sketches, cross-sectional drawings and diagrams to develop and communicate their ideas In late KS2 pupils should also: • generate innovative ideas, drawing on research • make design decisions, taking account of constraints such as time, resources and cost
Making	Nursery I can use various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces. Reception I can create collaboratively sharing ideas and resources. I can build on previous learning and my understanding of tools and materials	Planning Across KS1 pupils should: • plan by suggesting what to do next • select from a range of tools and equipment, explaining their choices • select from a range of materials and components according to their characteristics. Practical skills and techniques Across KS1 pupils should: • follow procedures for safety and hygiene • use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components • measure, mark out, cut and shape materials and components	Planning Across KS2 pupils should: • select tools and equipment suitable for the task • explain their choice of tools and equipment in relation to the skills and techniques they will be using • select materials and components suitable for the task • explain their choice of materials and components according to functional properties and aesthetic qualities In early KS2 pupils should also order the main stages of making Practical skills and techniques Across KS2 pupils should: • follow procedures for safety and hygiene • use a wider range of materials and components than KS1, including	Planning Across KS2 pupils should: • select tools and equipment suitable for the task • explain their choice of tools and equipment in relation to the skills and techniques they will be using • select materials and components suitable for the task • explain their choice of materials and components according to functional properties and aesthetic qualities In late KS2 pupils should also: • produce appropriate lists of tools, equipment and materials that they need • formulate step-by-step plans as a guide to making Practical skills and techniques Across KS2 pupils should:

	to develop my ideas	• assemble, join and combine materials and components	construction materials and kits, textiles, food ingredients, mechanical components and electrical components In early KS2 pupils should also: • measure, mark out, cut and shape materials and components with some accuracy • assemble, join and combine materials and components with some accuracy	• follow procedures for safety and hygiene • use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components In late KS2 pupils should also: • accurately measure, mark out, cut and shape materials and components • accurately assemble, join and combine materials and components • use techniques that involve a number of steps • demonstrate resourcefulness when tackling a practical problem
Evaluating	Nursery I can talk about what I have made Reception I can discuss problems I have encountered and how I can solve them	Own ideas and products Across KS1 pupils should: • talk about their design ideas and what they are making • make simple judgements about their products and ideas against design criteria • suggest how their products could be improved Existing Products Across KS1 pupils should explore: • what products are • who products are for • what products are for • how products work • how products are used • where products might be used • what materials products are made from • what they like and dislike about products	Own ideas and products Across KS2 pupils should: • identify the strengths and areas for development in their ideas and products • consider the views of others, including intended users, to improve their work In early KS2 pupils should also: • refer to their design criteria as they design and make • use their design criteria to evaluate their completed products Existing Products Across KS2 pupils should investigate and analyse: • how well products have been designed • how well products have been made • why materials have been chosen	Own ideas and products Across KS2 pupils should: • identify the strengths and areas for development in their ideas and products • consider the views of others, including intended users, to improve their work In late KS2 pupils should also: • critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make • evaluate their ideas and products against their original design specification Existing Products Across KS2 pupils should investigate and analyse: • how well products have been designed • how well products have been made • why materials have been chosen

			• what methods of construction have been used • how well products work • how well products achieve their purposes • how well products meet user needs and wants In early KS2 pupils should also investigate and analyse: • who designed and made the products • where products were designed and made • when products were designed and made • whether products can be recycled or reused Key Products and Individuals Across KS2 pupils should know: • about inventors, designers, engineers, chefs and manufacturers who have developed ground breaking products	• what methods of construction have been used • how well products work • how well products achieve their purposes • how well products meet user needs and wants In late KS2 pupils should also investigate and analyse: • how much products cost to make • how innovative products are • how sustainable the materials in products are • what impact products have beyond their intended purpose Key Products and Individuals Across KS2 pupils should know: • about inventors, designers, engineers, chefs and manufacturers who have developed ground breaking products
Technical Knowledge	Nursery I can use tools for a purpose Reception I can use tools independently with care and precision.	Across KS1 pupils should know: • about the simple working characteristics of materials and components • about the movement of simple mechanisms such as levers, sliders, wheels and axles • how freestanding structures can be made stronger, stiffer and more stable • that a 3-D textiles product can be assembled from two identical fabric shapes • that food ingredients should be combined according to their sensory characteristics • the correct technical vocabulary for the projects they are undertaking	Across KS2 pupils should know: • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking	Across KS2 pupils should know: • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking

			In early KS2 pupils should also know: • how mechanical systems such as levers and linkages or pneumatic systems create movement • how simple electrical circuits and components can be used to create functional products • how to program a computer to control their products • how to make strong, stiff shell structures • that a single fabric shape can be used to make a 3D textiles product • that food ingredients can be fresh, pre-cooked and processed	In late KS2 pupils should also know: • how mechanical systems such as cams or pulleys or gears create movement • how more complex electrical circuits and components can be used to create functional products • how to program a computer to monitor changes in the environment and control their products • how to reinforce and strengthen a 3D framework • that a 3D textiles product can be made from a combination of fabric shapes • that a recipe can be adapted by adding or substituting one or more ingredients
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Food and Nutrition	Nursery I can make healthy choices Reception I can talk about the factors that keep me healthy	Across KS1 pupils should know: • that all food comes from plants or animals • that food has to be farmed, grown elsewhere (e.g. home) or caught Across KS1 pupils should know: • how to name and sort foods into the five groups in the Eatwell Guide • that everyone should eat at least five portions of fruit and vegetables every day • how to prepare simple dishes safely and hygienically, without using a heat source • how to use techniques such as cutting, peeling and grating	Across KS2 pupils should know: • that a recipe can be adapted a by adding or substituting one or more ingredients • that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chicken and cattle) and caught (such as fish) in the UK, Europe and the wider world Food Preparation Across KS2 pupils should know: • how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source	Across KS2 pupils should know: • that a recipe can be adapted a by adding or substituting one or more ingredients • that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world In late KS2 pupils should also know: • that seasons may affect the food available • how food is processed into ingredients that can be eaten or used in cooking Food Preparation Across KS2 pupils should know:
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Impact (End Points)

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EYFS	Key Stage 1		Key Stage 2			
Nursery/Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

