

Progression in DT at Wimborne Junior School

Progression in Design and Technology ensures that a growing awareness of design procedures, surrounding technology and evaluation skills are instilled into every child in the school. Each year builds on from the last and the expectation of progression is that children build on from the previous year's objectives to ensure that the acquisition of skills and knowledge is secure.

All children in KS2				
Designing	Making	Evaluating	Technical knowledge	Cooking and nutrition
<p><u>Understanding contexts, users and purposes</u> All KS2 pupils should:</p> <ul style="list-style-type: none"> ✓ 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 <p><u>Generating, developing, modelling and communicating ideas</u> All KS2 pupils should:</p> <ul style="list-style-type: none"> ✓ share and clarify ideas through discussion ✓ model their ideas using prototypes and pattern pieces ✓ use annotated sketches, cross-sectional drawings and exploded diagrams ✓ use computer-aided design 	<p><u>Planning</u> All KS2 pupils should:</p> <ul style="list-style-type: none"> ✓ 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 <p><u>Practical skills and techniques</u> All KS2 pupils should:</p> <ul style="list-style-type: none"> ✓ follow procedures for safety and hygiene ✓ use a wider range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components 	<p><u>Own ideas and products</u> All KS2 pupils should:</p> <ul style="list-style-type: none"> ✓ identify the strengths and weaknesses of their ideas and products ✓ consider the views of others, including intended users, to improve their work <p><u>Existing products</u> Across KS2 pupils should investigate and analyse:</p> <ul style="list-style-type: none"> ✓ 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 <p><u>Key events and individuals</u> Across KS2 pupils should know:</p> <ul style="list-style-type: none"> ✓ about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products 	<p><u>Making products work</u> Across KS2 pupils should know:</p> <ul style="list-style-type: none"> ✓ 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 	<p><u>Food preparation, cooking and nutrition</u> Across KS2 pupils should know:</p> <ul style="list-style-type: none"> ✓ how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source ✓ how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking

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Sincerity, Teamwork, Achievement, Respect

By the end of year 3 the average child can ...				
Designing	Making	Evaluating	Technical knowledge	Cooking and nutrition
<p><u>Understanding contexts, users and purposes</u> D1 -gather information about the needs and wants of particular individuals and groups</p> <p><u>Generating, developing, modelling and communicating ideas</u> D2 - generate realistic ideas, focusing on the needs of the user</p>	<p><u>Planning</u> M1 - order the main stages of making</p> <p><u>Practical skills and techniques</u> M2 - measure, mark out, cut and shape materials and components with some accuracy M3 - assemble, join and combine materials and components with some accuracy</p>	<p><u>Own ideas and products</u> E1 - refer back to their design criteria as they design and make</p> <p><u>Existing products</u> E2 - recognise who designed and made the products E3 - identify where products were designed and made</p>	<p><u>Making products work</u> T1 - recognise how levers and linkages or pneumatic systems create movement T2 -recognise how to make strong, stiff shell structures T3 - know that food ingredients can be fresh, pre-cooked and processed</p>	<p><u>Food preparation, cooking and nutrition</u> C1 - know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in <i>The eatwell plate</i></p>
By the end of year 4 the average child can ...				
Designing	Making	Evaluating	Technical knowledge	Cooking and nutrition
<p><u>Understanding contexts, users and purposes</u> D1 - develop their own design criteria and use these to inform their ideas</p> <p><u>Generating, developing, modelling and communicating ideas</u> D2 - make design decisions that take account of the availability of resources</p>	<p><u>Planning</u> <u>Practical skills and techniques</u> M1 - apply a range of finishing techniques, include those from art and design, with some accuracy</p>	<p><u>Own ideas and products</u> E1 - use their design criteria to evaluate their completed products</p> <p><u>Existing products</u> E2 - recognise when products were designed and made E3 - identify whether products can be recycled or reused</p>	<p><u>Making products work</u> T1 - understand how simple electrical circuits and components can be used to create functional products T2 - know how to program a computer to control their products T3 - recognise that a single fabric shape can be used to make a 3D textiles product</p>	<p><u>Where food comes from</u> C1 - know 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</p> <p><u>Food preparation, cooking and nutrition</u> C2 - recognise that to be active and healthy, food is needed to provide energy for the body</p>

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By the end of year 5 the average child can ...				
Designing	Making	Evaluating	Technical knowledge	Cooking and nutrition
<p><u>Understanding contexts, users and purposes</u></p> <p>D1 - carry out research, using surveys, interviews, questionnaires and web-based resources</p> <p>D2 - identify the needs, wants, preferences and values of particular individuals and groups</p> <p><u>Generating, developing, modelling and communicating ideas</u></p> <p>D3 - generate innovative ideas, drawing on research</p>	<p><u>Planning</u></p> <p>P1 - produce detailed lists of tools, equipment and materials that they need</p> <p><u>Practical skills and techniques</u></p> <p>P2 - accurately measure, mark out, cut and shape materials and components</p> <p>P3 - accurately assemble, join and combine materials and components</p> <p>P4 - accurately apply a range of finishing techniques, including those from art and design</p>	<p><u>Own ideas and products</u></p> <p>E1 - critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make</p> <p><u>Existing products</u></p> <p>E2 - discover how much products cost to make</p> <p>E3 - recognise how innovative products are</p>	<p><u>Making products work</u></p> <p>T1 - know how cams or pulleys or gears create movement</p> <p>T2 - be able to reinforce and strengthen a 3D framework</p> <p>T3 - understand that a 3D textiles product can be made from a combination of fabric shapes</p> <p>T4 - recognise that a recipe can be adapted a by adding or substituting one or more ingredients</p>	<p><u>Where food comes from</u></p> <p>C1 - that seasons may affect the food available</p> <p><u>Food preparation, cooking and nutrition</u></p> <p>C2 - that recipes can be adapted to change the appearance, taste, texture and aroma</p>

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By the end of year 6 the average child can ...				
Designing	Making	Evaluating	Technical knowledge	Cooking and nutrition
<u>Understanding contexts, users and purposes</u> D1 - develop a simple design specification to guide their thinking D2 - recognise when their products have to fulfil conflicting requirements <u>Generating, developing, modelling and communicating ideas</u> D3 - make design decisions, taking account of constraints such as time, resources and cost	<u>Planning</u> M1 - formulate step-by-step plans as a guide to making <u>Practical skills and techniques</u> M2 -use techniques that involve a number of steps M3 - demonstrate resourcefulness when tackling practical problems	<u>Own ideas and products</u> E1 - compare their ideas and products to their original design specification <u>Existing products</u> E2 - identify how sustainable the materials in products are E3 - recognise what impact products have beyond their intended purpose <u>Key events and individuals</u>	<u>Making products work</u> T1 - know how more complex electrical circuits and components can be used to create functional products T2 - know how to program a computer to monitor changes in the environment and control their products	<u>Where food comes from</u> C1 - how food is processed into ingredients that can be eaten or used in cooking <u>Food preparation, cooking and nutrition</u> C2 - that different foods contain different substances - nutrients, water and fibre - that are needed for health

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