

**DT progression at Shaw CE Primary School**



	EFYS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Cultural Capital</b> <b>(See passports for linked values)</b>	<i>Make a boat from junk.</i>						
<b>Designing</b>  <b>KS1</b> – Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment. Design purposeful, functional, appealing products for themselves and other users based on design criteria.. Generate, develop, model and communicate their ideas.  <b>KS2</b> – Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.	Uses talk in pretending that objects stand for something else in play, e.g, ‘This box is my castle. Uses talk to connect ideas, explain what is happening and anticipate what might happen next, Questions why things happen and gives explanations. Asks who, what, when, how. Uses talk to organise, sequence and clarify thinking, ideas, feelings and events.  ELG They develop their own narratives and explanations by connecting ideas or events.	State what products they are designing and making Explain how they will make their product, saying how it is suitable for their intended user. Develop and communicate ideas by talking and drawing. Use simple design criteria to help develop their ideas. Model ideas by exploring materials. Use information and communication technology where appropriate to develop and communicate their ideas.	State what products they are designing and making Say whether their products are for themselves or for other users Describe what their products are for Say how their products will work Say how they will make their products suitable for intended users Use simple design criteria to help develop their ideas. Generate ideas by drawing on their own experiences. Use knowledge of existing products to help come up with ideas. Model ideas by exploring materials and by making templates and mock-ups. Explain why they have chosen specific materials.	Describe the purpose of their products and explain how they intend it to meet the brief. Explain how particular parts of their products work Select materials and begin to explain their choices. make design decisions that take account of the availability of resources prove that a design meets a set criteria.	describe the purpose of their products, producing a plan to explain their ideas further. indicate the design features of their products that will appeal to intended users – use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas gather information about the needs and wants of particular individuals and groups Persevere and adapt when ideas don’t work. model their ideas using prototypes and pattern pieces use computer-aided design to develop and communicate their ideas make design decisions that take account of the availability of resources	describe the purpose of their products and explain how particular parts of their products work carry out research, using surveys, interviews, questionnaires and web-based resources generate innovative ideas, drawing on research. Identify the needs, wants, preferences and values of particular individuals and groups before developing a simple design specification to guide their thinking. share and clarify ideas through discussion Begin to model their ideas using prototypes and use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas use computer-aided design to develop and communicate their ideas Design a product using pulleys or gears.	Where possible, use market research to inform plans and ideas. describe the purpose of their products and explain how particular parts of their products work justifying their ideas in a convincing way. model their ideas using prototypes and pattern pieces use annotated sketches, cross-sectional drawings and exploded diagrams to develop and use computer-aided design to develop and communicate their ideas generate innovative ideas, drawing on research follow and refine original plans. make design decisions, taking account of constraints such as time.
<b>Making</b>  <b>KS1</b> – select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials, textiles and ingredients. Follow procedures for safety and hygiene (Yr1-4) Apply a range of finishing techniques, including those from art and design, with some accuracy  <b>KS2</b> – select from and use a wider range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing), accurately select from a range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. accurately apply a range of finishing techniques, including those from art and design	Understands that equipment and tools have to be used safely Practices some appropriate safety measures without direct supervision. Uses one-handed tools and equipment, e.g. makes snips in paper with child scissors. Uses simple tools to effect changes to materials. Handles tools, objects, construction and malleable materials safely and with increasing control.  ELG handle equipment and tools effectively, including pencils for writing.	Plan by suggesting what to do next Discuss which tools would be most appropriate for their purpose. cut and shape materials Assemble, join and combine materials	Plan what to do next Select from a range of tools and equipment Use a range of materials Measure, mark out, cut and shape materials and components Assemble, join and combine materials and components	Follow a plan and select tools and equipment suitable for the task explaining their choices in relation to the skills and techniques they will be using. select materials and components suitable for the task measure, mark out, cut and shape materials and components with some accuracy assemble, join and combine materials and components with some accuracy	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 order the main stages of making measure, mark out, cut and shape materials and components with some accuracy assemble, join and combine materials and components with some accuracy	select tools and equipment suitable for the task select materials and components suitable for the task explain their choice of materials and components according to functional properties and aesthetic qualities formulate step-by-step plans as a guide to making follow procedures for safety and hygiene accurately measure, mark out, cut and shape materials and components accurately assemble, join and combine materials and components Make a prototype before making a final version. demonstrate resourcefulness when tackling practical problems	Know which tool to use for a specific task and explain their choice. select materials and components suitable for the task. Produce appropriate lists of tools, equipment and materials that they need formulate step-by-step plans as a guide to making follow procedures for safety and hygiene use a wider range of materials and components than KS1, including construction materials, food ingredients and electrical components 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 practical problems
<b>Evaluating</b>  <b>KS1</b> – explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. <b>KS2</b> – Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in design and technology have helped shape the world. identify the strengths and areas for development in their ideas and products		Talk about their design ideas and what they are making Through discussions, suggest how they might improve their product. Explore what they like and dislike about products.	Talk about their design ideas and what they are making Suggest how their products could be improved Explore: what products are, who products are for, how products work, how products are used, what materials products are made of, what they like and dislike about products.	refer to their design criteria as they design and make use their design criteria to evaluate their completed products whether products can be recycled or reused	refer to their design criteria as they design and make use their design criteria to evaluate their completed products 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	evaluate the quality of the design, manufacture and fitness for purpose of their products. evaluate their ideas and products against their original design specification Know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. Suggest alternative plans; outlining positive features as well as drawbacks.	critically evaluate the quality of the design, manufacture and fitness for purpose of their products. evaluate their ideas and products against their original design specification including how sustainable the materials in products are and what impact products have beyond their intended purpose Know about inventors, designers, engineers, chefs and manufacturers who have developed

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consider the views of others, including intended users, to improve their work							ground-breaking products
<p><b>Technical knowledge</b></p> <p><b>KS1</b> – build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms in their products. <b>KS2</b> – Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages) Understand and use electrical systems in their products (for example, series circuits, incorporating switches, bulbs, buzzers and motors.) Apply their understanding of computing to program, monitor and control their products. 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</p>	<p>Talks about why things happen and how things work</p> <p>ELG know about similarities and differences in relation to objects and materials.</p>	<p>How freestanding structures can be make stronger, stiffer and more stable.</p>	<p>Simple working characteristics of materials and components How freestanding structures can be make stronger, stiffer and more stable.</p>	<p>that materials have both functional properties and aesthetic qualities that materials can be combined and mixed to create more useful characteristics that mechanical systems have an input, process and output know the correct technical vocabulary for the projects they are undertaking how mechanical systems such as levers work</p>	<p>that mechanical and electrical systems have an input, process and output the correct technical vocabulary for the projects they are undertaking 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</p>	<p>that materials can be combined and mixed to create more useful characteristics Use the correct technical vocabulary for the projects they are undertaking Know how mechanical systems such as cams or pulleys or gears create movement products how to reinforce and strengthen a 3D framework that a 3D textiles product can be made from a combination of fabric shapes</p>	<p>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 Use appropriate vocabulary for the projects they are undertaking 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 recipe can be adapted by adding or substituting one or more ingredients</p>
<p><b>Cooking and nutrition</b></p> <p><b>KS1</b> – use the basic principle of a healthy and varied diet to prepare dishes. Understand where food comes from. Begin to understand where their food comes from. Understand there are 5 different food groups. Know why 5 a day is a recommendation.</p> <p><b>KS2</b> – Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 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>Eats a healthy range of foodstuffs and understands need for variety in food</p> <p>ELG know the importance for good health of a healthy diet,</p>	<p>How to prepare simple dishes safely and hygienically, without using a heat source. How to use techniques such as peeling, cutting and grating.</p>	<p>How to prepare simple dishes safely and hygienically, without using a heat source. How to use techniques such as peeling, cutting and grating. Weigh ingredients.</p>	<p>that a healthy diet is made up from a variety and balance of different food and drink that to be active and healthy, food and drink are needed to provide energy for the body</p>	<p>that a healthy diet is made up from a variety and balance of different food and drink, as depicted in “The Eat well plate” that to be active and healthy, food and drink are needed to provide energy for the body</p>	<p>Know which season various foods are available for harvesting. Know how to prepare a meal by collecting the ingredients in the first place.</p>	<p>that seasons may affect the food available how food is processed into ingredients that can be eaten or used in cooking 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 that recipes can be adapted to change the appearance, taste, texture and aroma that different food and drink</p>
<b>Vocabulary</b>		<b>KS1</b>		<b>KS2</b>			