DESIGN TECHNOLOGY SKILLS PROGRESSION

Twineham CofE School

Nurture Togetherness Resilience Creativity

KS1	Year 1	Year 2
Developing, planning and communicating ideas	Think of some ideas of their own Explain what they want to do Use pictures and words to plan **Challenge:** Come up with a range of possible solutions to a problem	Think of ideas and plan what to do next Choose the best tools and materials Give a reason why these are best Describe their design by using pictures, diagrams, models and words **Challenge:** Explain why they disregarded some tools/materials
Working with tools, equipment, materials & components to make quality products	Explain what they are making Explain which tools are they using **Challenge:** Name tools and their uses	Join things (materials/ components) together in different ways **Challenge:** Use a variety of appropriate joins successfully
Evaluating processes and products	Describe how something works Talk about their own work and things that other people have done **Challenge:** Suggest an alternative design/process to improve their work	Explain what went well with their work If they did it again, explain what would they want to improve **Challenge:** How did they adapt their design as they worked?
Cooking and nutrition	Cut food safely Describe the texture of foods Wash their hands and make sure that surfaces are clean Think of interesting ways of decorating food they have made, eg, cakes	Explain what it means to be hygienic Be hygienic in the kitchen Know where food comes from
Textiles	Describe how different textiles feel Make a product from textile by gluing	Measure textile Join textiles together to make something cut textiles Explain why they chose a certain textile
Mechanisms	Make a product which moves Cut materials using scissors Describe the materials using different words Say why they have chosen moving parts	Join materials together as part of a moving product Add some kind of design to their product
Use of materials	Make a structure/model using different materials Work tidily Make their model stronger if it needs to be	Measure materials to use in a model or structure Join material in different ways Use joining, folding or rolling to make it stronger
Construction	Talk with others about how they want to construct their product Select appropriate resources and tools for their building projects Make simple plans before making objects, e.g. drawings, arranging pieces of construction before building	Make sensible choices as to which material to use for their constructions Develop their own ideas from initial starting points Incorporate some type of movement into models Consider how to improve their construction

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LKS2	Year 3	Year 4
Developing, planning and communicating ideas	Show that the design meets a range of requirements Put together a step-by-step plan which shows the order and also what equipment and tools are needed Describe their design using an accurately labelled sketch and words Be realistic with their plan **Challenge**: Prioritise their design requirements	How to check if their design is successful Begin to explain how they can improve their original design Evaluate their product, thinking of both appearance and the way it works Consider how they could have made their idea better **Challenge**: Suggest alternative designs and evaluate them
Working with tools, equipment, materials & components to make quality products	Use equipment and tools accurately **Challenge**: Measure accurately and avoid wasting materials	Tell if their finished product is going to be good quality Be aware of the need to produce something that will be liked by others Show a good level of expertise when using a range of tools and equipment Work at their product even though their original idea might not have worked **Challenge**: Evaluate their design from another person's point of view
Evaluating processes and products	Explain what was changed which made the design even better **Challenge**: Suggest further changes to improve appearance	How to check if their design is successful Begin to explain how they can improve their original design Evaluate their product, thinking of both appearance and the way it works Consider how they could have made their idea better **Challenge**: Check and adapt their work as they go along
Cooking and nutrition	Choose the right ingredients for a product Use equipment safely Make sure that the product looks attractive Describe how combined ingredients come together Set out to grow plants such as cress and herbs from seed with the intention of using them for the food product	Be hygienic and safe Present their product in an interesting way
Textiles	Join textiles of different types in different ways Choose textiles both for their appearance and also qualities	Consider what the user would want when choosing textiles How to make their product strong Devise a template Explain how to join things in a different way
Electrical and Mechanical Components	Select the most appropriate tools and techniques to use Make a product which uses both electrical and mechanical components Use a simple circuit	Add things to their circuits Alter their product after checking it Be confident about trying out new and different ideas
Stiff and flexible sheet materials	Do they use the most appropriate materials Work accurately to make cuts and holes Join materials	Measure carefully to ensure there are no mistakes Make their product strong
Mouldable materials	Select the most appropriate materials Use a range of techniques to shape and mould Use finishing techniques	Use a range of advanced techniques to shape and mould Use finishing techniques, showing an awareness of audience

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UKS2	Year 5	Year 6
Developing, planning and communicating ideas	Come up with a range of ideas after collecting information Take a user's view into account when designing Produce a detailed step-by-step plan Suggest some alternative plans and say what the good points and drawbacks are about each **Challenge**: Draw their plan to scale	Use a range of information to inform their design Use market research to inform plans Work within constraints Follow and refine their plan if necessary Justify their plan to someone else Consider culture and society in their designs **Challenge**: Present/advertise/promote their idea to 'sell' it to a company/buyer
Working with tools, equipment, materials and components to make quality products	Explain why their finished product is going to be of good quality Explain how their product will appeal to the audience Use a range of tools and equipment expertly Persevere through different stages of the making process **Challenge**: Predict the risks involved in using different tools	Use tools and materials precisely Change the way they are working if needed **Challenge**: Train others to use tools and materials precisely
Evaluating processes and products	Check that their design is the best it can be Check whether anything could be improved Evaluate appearance and function against the original criteria **Challenge**: Identify the successes and if it is fit for purpose	Test and evaluate their final product Ensure their product is fit for purpose Identify what would improve their product Evaluate if different resources would have improved their product Evaluate if more or different information would make it even better Check their product meet all design criteria Consider the use of the product when selecting materials **Challenge**: Research and compare similar products on the market and identify how theirs compare
Cooking and nutrition	Describe what they do to be both hygienic and safe Present their product well	Explain how their product should be stored with reasons Set out to grow their own products with a view to making a salad, taking account of time required to grow different foods
Textiles	Think what the user would want when choosing textiles Make their product attractive and strong Make up a prototype first Use a range of joining techniques	Consider about how their product could be sold What would improve their product even more
Electrical and Mechanical Components	Incorporate a switch into their product Refine their product after testing it Incorporate hydraulics and pneumatics	Use different kinds of circuit in their product Identify ways in which adding a circuit would improve their product
Stiff and flexible sheet materials	Accurate measurements to ensure that everything is precise Ensure their product is strong and fit for purpose	Justify why they selected specific materials Ensure their work is precise and accurate Hide joints so as to improve the look of their product
Mouldable materials	Be motivated to refine and further improve their product using mouldable materials	Refine and further improve their product using mouldable materials Justify why the chosen material was the best for the task Justify design in relation to the audience