

Our children are receptive, inquisitive learners who, through our Gospel values, have a unique sense of the world

The DT Curriculum K&S at St Teresa’s Catholic Academy – Lower Key Stage 2

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| NC objective    Pupils should be taught to: | Year 3 | | Year 4 | |
| Skills | Knowledge | Skills | Knowledge |
| Design |  |  |  |  |
|  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 their own ideas for a product, taking into consideration its purpose and the user’s needs.    Be able to identify a purpose and establish criteria for a successful product. | Know their product, its function and the intended individual user. | Generate their own ideas for a product, taking into consideration their design criteria.    Be able to develop a clear idea of what has to be done, planning how to use materials, equipment and processes | Know how to use their design criteria to inform their product design.    Know their product, its function and the intended group user. |
|  generate, develop, model and communicate their ideas through discussion, annotated sketches, crosssectional and exploded diagrams, prototypes, | Make drawings with labels when designing.    Explore, develop and communicate design | Know how to create simple designs and models to communicate their ideas. | Make labelled drawings from different views showing specific features.    Explore, develop and communicate design | Know how to create designs and models in a variety of ways to develop and communicate their ideas. |

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| pattern pieces and computer-aided design | proposals by modelling idea. |  | proposals by modelling ideas |  |
| Make |  |  |  |  |
|  select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately | Select and use a range of appropriate tools, utensils and equipment. | Know which tools, utensils and equipment will be most suitable for their chosen product. | Select and justify their choice of tools, utensils and equipment. | Know which tools, utensils and equipment will be best for their chosen product and explain why. |
|  select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities | Select their materials and components showing an awareness for functionality and appeal. | Know which materials and components will be most suitable for their chosen product. | Select and justify their choice of materials and components showing an awareness for functionality and finishing techniques. | Know which materials and components will be most suitable for their chosen product and why. |
|  practical skills and techniques | Be able to use tools, materials and techniques suitable for their product. | Know how to use a variety of tools, materials and techniques. | Be able to use tools, materials and techniques suitable for their product with increased confidence and accuracy. | Know how to use a variety of tools, materials and techniques confidently. |
| Evaluate |  |  |  |  |
|  investigate and analyse a range of existing products | Be able to investigate similar products. | Know how to investigate similar products. | Disassemble and analyse similar products against their design brief. | Know how to disassemble and analyse similar products. |

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|  evaluate their ideas and products against their own design criteria and consider the views of others to improve their work | Evaluate their product against original design criteria. | Know the design criteria and how to their product against it. | Evaluate their product against original design criteria.    Use peer feedback to identify strengths and next steps. | Know the design criteria and how to compare and evaluate their product against it.    Understand how to use peer feedback to inform their next steps. |
|  understand how key events and individuals in design and technology have helped shape the world |  | Teacher/ individual year group choice | |  |
| Structures |  |  |  |  |
|  apply their understanding of how to strengthen, stiffen and reinforce more complex structures | Be able to construct and strengthen their structure. | Understand how to construct and strengthen their structure. | Be able to construct and strengthen their structure using a variety of methods. | Understand different ways to construct and strengthen more complex structures. |
| Mechanisms |  |  |  |  |
|  understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] | Be able to use simple selected mechanical systems e.g. levers and linkages effectively within their product | Understand how to use simple selected mechanical systems | Be able to use selected mechanical systems e.g. levers and linkages effectively within their product | Understand how to use selected mechanical systems and why. |
| Electrical systems |  |  |  |  |
| understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] | Be able to use simple electrical systems in their product. | Know how to use simple electrical systems. | Be able to use electrical systems in their product. | Know how to use electrical systems. |
| Computing |  |  |  |  |
| apply their understanding of computing to program, monitor and control their products | Be able to program their product. | Program and control their product. | Be able to program and control their product. | Know how to use their understanding of computing to program and control their product. |
| Cooking and nutrition |  |  |  |  |
|  understand and apply the principles of a healthy and varied diet | Use their knowledge of healthy eating to make healthy choices. | Know about a range of fresh and processed ingredients. | Use their knowledge of healthy eating to make healthy choices/ design a balanced menu. | Know about a range of fresh and processed ingredients and how they can be used within a varied diet. |
|  prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques | Be able to use appropriate equipment and utensils to prepare food. | Know how to use appropriate equipment and utensils to prepare food. | Be able to use appropriate equipment and utensils to prepare and combine food | Know how to use appropriate equipment and utensils to prepare and combine food to make a meal. |
|  understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. | Explore seasonality of grown ingredients. | Know about seasonality. | Explore seasonality and the origin of a variety of grown ingredients. | Know about seasonality and know where and how a variety of ingredients are grown. |
| Vocabulary | Know age-appropriate technical vocabulary relevant to their project (from the DT vocabulary document) | | | |