

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)  |