Design and Technology at St Ignatius – Progression of Skills

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|  | **EYFS** |
| **Where D&T can be seen in the EYFS** | At St Ignatius the children are encouraged to investigate and experience things, and ‘have a go’. They are guided to make sense of their physical world and community. The frequency and range of their personal experiences increases their knowledge and sense of the world around them. They play with a wide range of materials and media. Practitioners promote the idea of concentration, persistence if they encounter difficulties, and enjoyment of achievements. Children are given the opportunity and support to develop their own ideas, make links between ideas, and develop strategies for doing things. By the end of the Foundation stage, children at the expected level of development will: * Express their ideas and feelings about their experiences;
* Offer explanations for why things might happen, making use of recently introduced vocabulary;
* Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;
* Share their creations, explaining the process they have used.
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|  | **Key Stage 1** |  **Lower Key Stage 2**  | **Upper Key Stage 2** |
| **Design** | * Say what product we are designing and what it is for
* Decide who our product is for
* Talk about some features that make our product suitable for purpose
* Generate and develop ideas by talking and drawing
* Develop ideas by exploring materials and components
 | * Describe the product and its purpose, explaining what different features are for
* Indicate the design features that will appeal to intended users
* Use annotated sketches and exploded diagrams to develop and communicate ideas
* Explain how various parts work
* Make mock-ups to help shape our ideas
 | * Describe the product and its purpose, explaining how various features make it suitable for its intended use
* Carry out research in order to ensure design features that will appeal to intended users
* Use annotated sketches, exploded diagrams and computer-aided design to develop and communicate ideas
* Explain how various parts work in detail
* Model our ideas using prototypes
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| **Make** | * Select from and use a range of tools
* Make choices about which materials to use according to their characteristics
* Cut and shape materials and components
* Assemble, join and combine materials
* Use finishing techniques to make our product appealing to the user
* Follow procedures for safety
 | * Select from and use a range of tools that are suitable for the task
* Explain our choice of materials and components according to their functional properties
* Order the main stages of making
* Understand and follow procedures for safety
* Measure, mark out and cut materials and components
* Assemble, join and combine materials in a number of ways
* Apply a range of finishing techniques
 | * Select from and use a range of tools that are suitable for the task, explaining why they have chosen them in relation to the skills used
* Explain our choice of materials and components according to their functional properties and aesthetic qualities
* Make lists of equipment, tools and materials needed alongside a step-by step plan
* Follow and explain to others the procedures for safety
* Measure, mark out and cut materials and components with increasing accuracy
* Assemble, join and combine materials in a number of ways and with precision
* Apply a range of finishing techniques, including those learnt in other areas of the curriculum
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| **Evaluate** | * Say what an existing product is for
* Identify what a product is made from
* Share opinions about a product
* Talk about what makes a product suitable for its purpose
* Say what has been successful about our own product
* Make suggestions for improving our product
 | * Explain what different parts of a product are for
* Identify materials used and possible reasons for use
* Share opinions about the suitability of the product for its intended purpose and users
* Indentify strengths and areas for development in our own products
* Suggest and explain in detail how we could improve our product
* Talk about the work of individuals in design and technology
 | * Identify and explain parts of a product, commenting on the success of the design
* Identify materials used and possible reasons for use, including sustainability
* Share opinions about the suitability of the product for its intended purpose and any further impact it has
* Indentify strengths and areas for development in our own products, comparing to original design specification
* Consider the views of others before suggesting and explaining ways to improve our product
* Talk about the work of individuals in design and technology and apply some things we learn to our own product design
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| **Technical knowledge** | * Build structures
* Explore ways of strengthening, stiffening and stabilising a structure
* Learn about different ways of joining materials
* Explore and use mechanical systems (levers, sliders, wheels and axles)
 | * Explore ways of strengthening, stiffening and stabilising more complex structures
* Build on previous knowledge and use of mechanical systems (pneumatics)
* Understand and use simple circuits involving bulbs and switches
 | * Make informed choices about how to strengthen, stiffen and stabilise more complex structures
* Apply knowledge of circuits and make choices about suitable electrical components to use
* Use computing to programme and control our product
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| **Cooking and nutrition** | * Know that all food comes from plants and animals
* Begin to sort food into food groups
* Understand that it is important to have a balanced diet
* Know that to be healthy, we need to eat a lot of some foods and a little of others
* Begin to make and explain choices about food
* Learn and practise simple food preparation skills (e.g. chopping, mixing, spreading)
* Practise good food hygiene
* Explore a variety of flavours
* Describe tastes and textures and share opinions
 | * Know that all food has to be grown, reared or caught
* Begin to understand origins of some food and how climate affects this
* Know what constitutes a healthy and balanced diet
* Make sensible choices about food, based on knowledge of a healthy diet
* Develop and add to food preparation skills (e.g. grating, slicing, peeling, kneading)
* Practise good food hygiene and explain why it is necessary
* Express opinions about taste and begin to adapt recipes accordingly
 | * Know where and how some food is grown, reared, caught and processed
* Understand that climate and seasonal changes affect the availability of some foods at different times of year
* Know that different food and drink contain a variety of nutrients, vitamins etc and the associated health benefits these
* Adapt recipes and make food/drink choices that ensure a healthy diet
* Develop and add to food preparation skills (e.g. mashing, shaping, baking, decorating)
* Practise good food hygiene, explain why it is necessary and encourage others to do the same
* Take their own and others’ opinions into account when planning ingredients
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