St Thomas' Catholic Primary School
Design and Technology Intent and Progression Map

To ensure that children are able to use their creativity and imagination to design, make and evaluate functional products that solve real and relevant problem.

To develop a range of skills and lateral thinking in order to apply their learning.

Nursery/Reception EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Early Years Foundation Stage During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities. They have the opportunities to learn to:	With the class teacher, deconstruct a product (where possible) and answer the following questions: What is this product for and who would use it? What impact will the product have on the user? What materials have been used to make the product? How are the materials joined together to make the product?		In peer groups, deconstruct a product (where possible) and answer the following questions. What is this product for and who would use it? **What impact will the product have on the user?** What materials have been used to make the product? **Why are these good materials to use?** What adhesives have been used to join the materials together? **What mechanisms or electrical systems does the product have to help make it work?** How effective is this product in its purpose/design criteria?		Independently deconstruct a product (where possible) and make independent notes on this product under the following titles: **User** **Purpose** **Materials** **Features** **Effectiveness**	

Make plans and construct with a purpose in mind using a variety of resources	Before designing a product, with support, write and ask questions to find out information that will help make the product more effective in its purpose. For Example: If the product is a home for Little Red Riding Hood, ask questions to find out what style of house she would like and what features - hard/soft furnishings would be essential to make this house comfortable & practical for her to live in.	Before designing a product, **independently write and ask questions** to find out information that will help to make the product more effective in its purpose. For Example: What would be a popular healthy sandwich to make?	Confidently investigate user requirements via a range of **different channels** such as asking questions, completing surveys and consumer choice and **explain/summarise findings and outcome**
Make plans and construct with a purpose in mind using a variety of resources **Develop skills to use simple tools and techniques appropriately, effectively and safely**	Before designing a product, with the class teacher, learn how a specific feature of a product works or has been constructed so that they can use this in their own design. For Example: How a structure is strengthened by the frame it is standing on, how a hinge works, how wheels are placed on an axle etc.	Before designing a product, use a range of sources – Internet, Books, Q&A Session, Fact files etc. to carry out research to find out how a specific feature of the product works so that it can be incorporated in their design. For Example: how different pneumatic systems work to create a moving part or different ways to make a piece of paper stronger.	Carry out independent research using the internet, fact file, Q&A session, book into a specific feature of the product to find out more information how this works
Use different media and materials to express their own ideas **Select appropriate resources for a product and adapt their work where necessary** Cook and prepare food adhering to good health and hygiene routines	Using the information from exploring and researching, generate an idea and make a simple sketch of the idea for the product that meets the given criteria. Talk about their idea and answer the following questions: What will their product do and who is it for? How will their product help/impact the user's life? What materials will they use to make their product? How will they join their materials?	Using the information from exploring and researching, generate an idea and make a **detailed sketch or computer-aided design** of the idea that meets the given criteria. Add **annotations** to their sketch/design with regard to the materials to be used, how these materials will be attached, specific design features and what tools they will use to make the product. Children to be given a word bank to choose from.	Using the information from exploring and researching, generate an idea and produce **cross-sectional and exploded diagrams** that meet the given criteria. **Independently add annotations** to their diagram with regard to the materials to be used, how the materials will be attached and specific design features. **Refine work and techniques** as work progresses, continually evaluating the product design. **Make a prototype of the design.**

Use what they have learnt about media and materials in original ways, thinking about form, function and purpose	Evaluate their products against a simple design criteria. **Did their product match their design?** What was the best feature of their design? **What could they do to improve their product further?**	Identify the strengths and areas for development in their ideas and product. Consider the **views of others** to improve their work.	To investigate and analyse: How well has their product been designed and made? **How well has their product met the needs of the user?** How much has the product cost to make? **How effective and sustainable are the materials used for the product?** How effective was their methods of construction? **How robust is the product?** Consider the **views of others, including intended users,** to improve their work.