**St Bernadette’s Catholic Primary School**

**Skills Progression for DT**

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| Strand | Nursery & Reception- EYFS Framework | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Design | Develop their own ideas and then decide which materials to use to express them- **N**  Articulate their ideas and thoughts in well-formed sentences- Verbal**-R**  Create collaboratively, sharing ideas, resources and skills- **R** | **Use senses to explore a wide range of familiar products.**  The seaside  Talk about and/or use construction materials, pictures and words to plan and design.  Seaside  Talk about what has been done/made in simple terms.  A Day in the Life  Homes  The seaside | **Use knowledge of existing products to support plans for a similar product.**  London  Helping others  **Describe, explore and investigate existing products.**  London  Helping others  Talk about and describe the tools and materials needed in order complete the key tasks within a plan  Space  London  Helping others | **Use knowledge of a range of products to inform plans and designs.**  **Yardley**  **Use labelled sketches instructions in plans and designs.**  **Yardley**  Talk in depth about ideas, plans and reasons for choices  **Yardley** | **Use research to develop design criteria that are fit for purpose.**  **All**  **Use annotated sketches, cross-sectional, exploded diagrams.**  **All**  Support discussions about ideas, plans and designs with relevant information.  **All** | **Generate plans and designs based on research and ideas that take account of the users’ views and the intended purpose.**  Ancient Egyptians  Ancient Greeks  The CW  **Use annotated sketches, cross-sectional, exploded diagrams, and ICT to design simple designs. – Tinkercad**  Ancient Egyptians  Ancient Greeks  Link discussions about ideas, plans and designs to the investigation, disassembly and evaluation of a range of products describing in detail their parts and their function.  Ancient Egyptians  Ancient Greeks | **Clarify and justify plans, designs and ideas by drawing upon and using a range of relevant sources of information.**  **Mayans**  **Titanic**  **Use annotated sketches, cross-sectional, exploded diagrams, and ICT to design more complex designs. – Tinkercad**  **Mayans**  **Titanic**  Discuss ways in which ideas, plans and designs are formed and modify to ensure that the design criteria are met effectively.  **Mayans**  **Titanic** |
| Make | Make imaginative and complex ‘small worlds’ with blocks and construction kits, such as a city with different buildings and a park -**N**  Explore different materials freely, to develop their ideas about how to use them and what to make **-N**  Join different materials and explore different textures –**N**  Explore collections of materials with similar and/or different properties **-N**  Confidently and safely use a range of large and small apparatus indoors and outside, alone and in a Group**-R**  Develop their small motor skills so that they can use a range of tools competently, safely and confidently- knives, forks and spoons. - **R** | Use the senses to explore and talk about materials.  All  **Use simple tools and materials with support, Cut paper/card using scissors.**  A Day in the Life  Apply simple finishes e.g. paint,  The Seaside  Follow procedures for safety and hygiene.  All | Explore and talk about the characteristics of an increasing range of materials.  Space  Helping others  London  International week  Select and use simple tools to cut and join a range of materials.  Space  Helping others  International week  Use a straight edge to mark lines for cutting.  Space  **Select from a range a finish to improve the appearance of a product.**  Helping others  International week  Follow procedures for safety and hygiene.  Space  London  Helping others  International week | **Select and use an increasing range of tools to cut, shape and join materials and components.**  Use a hacksaw, bench hook and or g clamp safely  Use a ruler to measure and mark lines for cutting.  Yardley  **Select an appropriate way to improve the appearance of a product.**  All  Follow procedures for safety and hygiene  All | **Select and use tools and equipment to measure, mark out and shape materials and components.**  **Vikings**  **Select the most effective finish to enhance the appearance of a product.**  All  Follow procedures for safety and hygiene.  All | Select a range of appropriate tools to cut, shape and join materials and components effectively.  Ancient Egyptians  Ancient Greeks  The CW  **Make a range of complex paper models, mock-ups and templates.**  Ancient Egyptians  Ancient Greeks  Follow procedures for safety and hygiene.  The CW | Produce a well finished product that fulfils the functional and aesthetic design criteria.  Titanic  **Identify and apply an appropriate finishing technique to ensure a high quality end product which meeting the design criteria.**  Titanic  Follow procedures for safety and hygiene.  **Titanic**  **Mayans** |
| Evaluate | Talk about what they have created.  Share their creations, explaining the process they have used. | **Use the senses to explore a wide range of familiar products.**  **All**  **Talk about familiar products and what they do.**  **All**  Talk about what has been made and the steps taken to achieve the outcome.  The seaside | Talk about and describe key features of a range of products.  London  Helping others  **Explore and evaluate a range of existing products.**  London  Helping others  **Begin to evaluate the success of the product in terms of function and aesthetic criteria.**  Space  London  Helping others | Investigate and compare a range of similar existing products.  Sustainability  **Compare and contrast the similarities and differences of products with the same function.**  Sustainability  **Evaluate ideas and products against design criteria; and suggest ways in which products can be improved**  All | Use knowledge of similarities and differences between products with the same function to support identification of most effective product.  **Vikings**  **Evaluate ideas and products against own design criteria, taking into account the views of others**  **All** | Investigate and begin to analyse a range of existing products.  Ancient Egyptians  Ancient Greeks  Identify from a range the key features and functions needed to create an effective and efficient working product.  Ancient Egyptians  Ancient Greeks  The CW  **Give reasons, supported by factual evidence for the success of aspects of a product.**  Ancient Egyptians  Ancient Greeks | Investigate and use analysis of existing products to inform own work.  **Mayans**  Test and evaluate products to identify the variants which may affect the function of a product.  Titanic  Give reasons, supported by factual evidence for the success of aspects of a product and provide considered solutions to resolve those parts that could be improved  **The Mayans**  **Titanic** |
| Axles, Pulleys and Gears |  |  | **Use simple construction materials to make a vehicle.**  Space  Attach wheels to a chassis using an axle, e.g. cotton reels and dowel.  Space  Use pencils or tubes as rollers to move an object across the floor  Space |  |  | **Construct a simple pulley using rope over a horizontal bar to raise an object off the ground.**  Ancient Egyptians  Use construction kits with gears to construct a line of gears that turn  Identify, describe and evaluate products that contain pulleys and drive belts.  Ancient Egyptians |  |
| Electrical and Mechanical Components |  | Talk about electrical equipment in the home, e.g., kettle, telephone, and microwave.  A Day in the Life  **Use remote controlled devices, e.g. Bee bot.**  A Day in the Life | Use remote controlled devices, e.g. a remote controlled vehicle.  Space  Talk about how equipment can be used safely.  Space |  | Explore and describe how an electric motor can be used in a circuit.  Identify key features of electrical safety  **Science.**  **Create simple circuits incorporating a battery, bulb, switch, buzzer and wires.**  Vikings |  |  |
| Food Technology | Make healthy choices about food, drink, **-N**  Know and talk about the different factors that support their overall health and wellbeing- **R** | Sort fruit and vegetables by taste, shape, size, colour, texture and simple food groups, e.g. meat, vegetables etc.  Science – Plants | Sort and classify an increasing range of food according to specific food groups, e.g. proteins, carbohydrates, fats etc.  Science  London  Measure and weigh accurately using cups and spoons.  London  Work safely and hygienically  London | Sort and classify an increasing range of food according to specific food groups, e.g. proteins, carbohydrates, fats etc.  Talk about what needs to be done in order to work safely and hygienically.  Sustainability  **Measure and weigh using standard units and scales.**  Sustainability | **Gain an understanding of ways in which specific food groups apply to the principles of a healthy and varied diet.**  Identify what needs to be done in order to work safely and hygienically when working on a range of tasks.  Romans | Talk about and give reasons for the need to work safely and hygienically.  To be able to chop food safely and accurately hold the knife. | Know and understand the practice needed in terms of food hygiene and kitchen safety.  Children to learn life skills such as chopping, dicing, mincing, and de-seeding.  Children to learn about the importance of a varied and balanced diet.  Children become more confident with food skills.  **Mayans** |
| Mechanisms |  | **Explore and talk about books containing flaps and moving pictures.**  A Day in the Life  Construct a simple slider with support.  A Day in the Life |  | Identify the cam within a simple mechanism and explain how movement is changed.  WW2  Describe the way in which a cam changes rotary motion into linear motion.  WW2 | . | Create a range of sliders and levers to produce horizontal and vertical movement.  Ancient Egyptians  **Vary the position of the pivot point to lift a load using a lever**  Ancient Egyptians  Combine sliders and levers to produce a range of movements.  Ancient Egyptians |  |
| Structures | Make imaginative and complex ‘small worlds’ with blocks and construction kits, such as a city with different buildings and a park -**N**  Join different materials and explore different textures -**N** | Explore and investigate a range of simple, large scale construction materials, e.g. cardboard boxes.  Seaside  Explore building, bridges and towers using large and small-scale construction materials, e.g. Duplo, cardboard boxes.  Homes  Make simple 2D structures using straws.  Seaside |  | Strengthen 2D frames by adding diagonal bracing struts.  **Yardley**  **Make a rectangular frame from strip wood using triangular card joints.**  **Yardley**  Use materials to make simple joints e.g. glue, tape and paper clips  **Yardley** |  | Explain why some structures fail.  Ancient Greeks  **Consider and discuss ways in which to make a structure more stable.**  Ancient Greeks  Use a range of materials to make joints e.g., card strips, elastic bands, thread and ties, and plastic tubing.  Ancient Greeks | Assemble the net of basic 3D shapes.  Mayans |
| Textiles |  | Apply an increasing range of finishing techniques, e.g.painting and printing.  Seaside  Explore techniques used for adding colour and patterns to fabric  homes. | **Talk about and begin to select textiles based on characteristics of an increasing range of materials. Use a simple template.**  Helping others  Join fabrics using glue, staples and thread.  Helping others  Decorate fabric by applying beads and sequin  Helping others  Cut and join fabrics using running stitch.  Helping others |  |  | Select appropriate materials to create a product.  The CW  **Sew using a range of stitches including, backward running stitch and over sewing.**  The CW  Identify the most effective finishing technique in order to maximise the aesthetic value of the product.  The CW  . |  |