**Rock Ferry Primary School Design and Technology Long Term Overview – Year 5**

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|  | **Target Tracker Assessment Focus** | **Weaving Knowledge, Skills and Understanding** |
| **Cooking and Nutrition: Eating in Benin** | | |
|  | * Understand the main food groups and the different nutrients that are important for health * Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat * Select appropriate ingredients and use a wide range of techniques to combine them | During KS2 pupils should be taught to:   * Understand and apply the principles of a healthy and varied diet * Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques * Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed   Breadth of study:   * Can they describe what to do to be both hygienic and safe? * How have they presented their product well? |
| **Processes: Hanging decorations/saxon purses/ Space (link to levers, gears, pulleys?)** | | |
| **Developing, planning and communicating ideas** | * Use his/her market research to inform the design of his/her own innovative product * Create prototypes to show his/her ideas | During KS2 pupils should be taught to:   * 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, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design   Breadth of study:   * Can they come up with a range of ideas after they have collected information? Do they take a user’s view into account when designing? * Can they explain how their product will appeal to the audience? * Can they produce a detailed step by step plan? * Can they make up a prototype first? * Can they suggest some alternative plans and say what the good points and drawbacks are about each? |
| **Working with tools, equipment, materials and components to make quality products**  **Textiles**  **Stiff and flexible sheet materials**  **Mouldable materials** | * Make careful and precise measurements so that joins, holes and openings are in exactly the right place * Product step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques | During KS2 pupils should be taught to:   * Select from and use a range of tools and equipment to perform practical tasks, (for example, cutting, shaping, joining and finishing, accurately) * Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities   Breadth of study:   * Can they use a range of tools and equipment expertly? * Do they persevere through different stages of the making process? * Do they think what the user would want when choosing textiles? * Are they motivated enough to refine and further improve their product using mouldable materials? |

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|  | **Target Tracker Assessment Focus** | **Weaving Knowledge, Skills and Understanding** |
| **Evaluating processes and products** | * Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work | During KS2 pupils should be taught to:   * Investigate and analyse a range of existing products * Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work * Understand how key events and individuals in design and technology have helped shape the world   Breadth of study:   * Can they explain why their finished product is going to be of good quality? * Do they keep checking that their design is the best it can be? * Do they check whether anything could be improved? * Can they evaluate appearance and function against the original criteria |
| **Electrical**  **and**  **mechanical components** | * Understand how to use more complex mechanical and electrical systems | During KS2 pupils should be taught to:   * Understand and use mechanical systems in their products (eg as gears, pulleys, cams, levers and linkages) * Understand and use electrical systems in their products (eg series circuits incorporating switches, bulbs, buzzers and motors) * Apply their understanding of computing to programme, monitor and control their products   Breadth of study:   * Can they incorporate a cam into their product? * Can they select the most appropriate cam for their required movement? * Can they refine their product after testing it? |
| **Construction** | * Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable | During KS2 pupils should be taught to:   * Apply their understanding of how to strengthen, stiffen and reinforce more complex structures   Breadth of study:   * How have they made their product attractive, strong and fit for purpose * Can they use a range of joining techniques? * Are their measurements accurate enough to ensure that everything is precise? |

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| **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Construction** |  | **Textiles** | **Mechanisms** |  | **Food** |
| Hanging decorations |  | Saxon purses | Solar system model with moving parts |  | Benin food |