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| **High Ercall Primary School** |
| **Long Term Plan for DT** |
| **Subject Leader: Kate Caton** | **Date: May 2023** |

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| **Year A** **(2023 - 2024)** | **Autumn** | **Spring** | **Summer** |
| **Class 1** | Moving pictures: traditional tales (Twinkl)Moving pictures will give children opportunities to develop their understanding of mechanisms. They will learn to make different types of mechanisms such as levers, wheels and sliders to create their own moving pictures. | Flying kites (PlanBee) Children will learn how to test different materials, design kites, construct a carp kite and a diamond kite, fly kites and evaluate their own creations. | Dips and dippers (Twinkl)Children will learn about good hygiene and using kitchen equipment to prepare food safely. They will apply these skills to design, make and evaluate healthy dips and dippers. |
| **Substantive****concepts** | **Mechanics** | **Structures** | **Food** |
| **Class 2** | Structures (Twinkl)Children will explore strengthening structures and making long and tall structures with different bases.  | Moving minibeasts (PlanBee)Children will learn how to make three different mechanisms to create moving minibeast pictures! | Perfect pizzas (PlanBee)Children will explore pizzas, discovering what a variety of toppings and bases look like, taste like and feel like. They will then have the challenge of designing and making their pizza to meet a design brief and evaluate it based on the criteria. |
| **Substantive****concepts** | **Structures** | **Mechanics** | **Food** |
| **Class 3** | **Moving Monsters – Plan Bee**Children will have the chance to get to grips with pneumatic systems before designing, making and evaluating their own monster with moving parts. | **Photograph Frames – Plan Bee**Children will have the chance to explore the materials and components of different photograph frames, engage in practical activities to develop their experience of working with tools and techniques, as well as having the chance to design, make and evaluate their own photograph frames. |  **Edible Garden - Twinkl**Children will learn where and how a variety of ingredients are grown. Firstly, children will learn how to plant seeds and care for their plants so they yield produce that can be used in their cooking. They will learn how to cook with the ingredients they are growing; following recipes and using different kitchen equipment.  |
| **Substantive****concepts** | **Mechanics** | **Structures** | **Food** |
| **Class 4** | **Gingerbread Houses – Plan Bee**Children will design their own edible houses. Children will build houses out of biscuits, design a template on the computer, test and improve their design and construct their gingerbread houses.  | **Automata Animal – Twinkl***(or Moving Toys - Plan Bee)*Children to investigate mechanisms and toys. They will look at different shaped cams and alter movements of their followers. Children will design, make and evaluate their own moving toy. | **Marbulous Structures – Twinkl**Children will look at free standing structures and how they can be strengthened and reinforced. They will join and shape materials and then apply these skills, using an iterative design process, to create their marble runs. They will test and evaluate their marble runs against design criteria. |
| **Substantive****concepts** | **Food**  | **Mechanics** | **Structures** |
| **Class 5** | **Plan Bee – Chinese Inventions**Children explore the innovative culture of ancient China and discover the inventions that have helped shape the world, including paper, the compass, gunpowder and the moveable-type printing press. |   **Twinkl – Super seasonal**Children will have the chance to sample some spring seasonal food before designing their own balanced seasonal meal. They will learn how to cook with the seasonal ingredients following their own recipes and using a wide range of preparation and cooking techniques. | **Plan Bee – Bird house**Children will learn about bird houses and why they are constructed for birds in our environment. They will get the chance to research common birds and design a bird house suitable for a bird to nest in. |
| **Substantive****concepts** | **Mechanics** | **Food** | **Structures** |

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| **Year B****(2024\_2025)** | **Autumn** | **Spring** | **Summer** |
| **Class 1** | Eat more fruit and veg (PlanBee)Children will learn about healthy eating as they explore a variety of fruits and vegetables, what they look like, taste like and feel like, as well as how to prepare fruits and vegetables through cutting, grating, peeling and more. They will then have the challenge of designing, making and evaluating their own salad or smoothie. | Fabric bunting (Twinkl)Children will evaluate a range of existing bunting with a theme around counting. They will design, make and evaluate their work and learn a few simple stitches and joining. | Homes (PlanBee)Children will design, make and evaluate their own model houses. |
| **Substantive****concepts** | **Food** | **Textiles** | **Structures** |
| **Class 2** | Delightful decorations (PlanBee)Children will develop their cutting and sewing skills whilst making a delightful decoration for the Christmas tree! They will explore, cut, sew, design, make and evaluate their Christmas tree decorations in this practical Christmas themed DT series of lessons. | Wacky windmill (PlanBee)Children will explore different ways of making windmill bases and sails with classroom and craft materials, learning how to join materials together and make axles allowing sails to spin in the wind. They can then design, make and evaluate their own wacky windmill! | Seaside snacks (PlanBee)Children will taste, explore and think about a range of foods. The first five lessons each centre around a different element of a picnic, encouraging them to experience the flavours, textures and colours of different foods. They will then design their own seaside picnic, while thinking carefully about what makes a balanced meal. |
| **Substantive****concepts** | **Textiles** | **Structures** | **Food** |
| **Class 3** | **The Great Bread Bake Off – Twinkl**Children will gain an insight into the history of bread production, then investigate and evaluate existing bread products. They will create design criteria which will be referred to when designing, making and evaluating their own bread product. Children will use a range of skills and techniques using simple kitchen tools and measuring equipment, they will learn how to knead dough correctly and the technique of proving bread. | **Battery Operated Lights - Twinkl**Children will develop understanding about series and parallel circuits and different types switches. They will then be given the chance to apply their knowledge about electric circuits in a purposeful way by designing and making a battery operated light which will be controlled by a homemade switch. Children will decide upon the design criteria for the light by considering who will use it, where it will be used and what for. Finally, children will complete a detailed evaluation of their final product. | **Pencil Cases – Plan Bee**Children think about different materials used to make pencil cases and the different ways they are opened and closed. They will learn how to use a variety of stitches including running stitch, whip stitch and back stitch, as well as how to decorate their pencil case creations. |
| **Substantive****concepts** | **Food** | **Electrics** | **Textiles** |
| **Class 4** | **Global Food - Twinkl** Children will look at a diverse range of food from around the world. They will learn about different ingredients and look at the Eatwell plate. Children will learn some cooking techniques including cutting, frying and boiling. They will making some traditional dishes from different countries. | **Fashion and Textiles – Plan Bee**Children will learn how cotton cloth is manufactured and how textiles like this are used to make clothes and other garments. They will develop their own designing skills and make a fashionable product – a hand stitched drawstring bag. | **Light up Signs – Plan Bee**Children will use woodworking and DT tools to make a light up sign. They will design their own sign, make circuits using bulbs and LEDs. They will investigate how computers can be used to program and control light products.  |
| **Substantive****concepts** | **Food** | **Textiles** | **Electrics** |
| **Class 5** | **Plan Bee – Fairground** Roll up! Roll up! Class 5 will be challenged to design, build and create their own rotating fairground rides using knowledge of electrical circuits to power them. |  **Twinkl – Phone cases**Children will design products with the user in mind thinking about aesthetics and functionality. They will learn how to make a paper template and how to sew a running stitch, backstitch, whip stitch and blanket stitch.  | **Plan Bee – Burgers** Children design, cook, taste and evaluate their own burgers. Can they combine flavours to produce tasty, healthy meals? |
| **Substantive****concepts** | **Electrics** | **Textiles** | **Food** |