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| **DESIGN TECHNOLOGY LONG TERM PLAN PROGRESSION OF SKILLS.** | | | | |  |
| KS1: Design   * design purposeful, functional, appealing products for themselves and other users based on design criteria. * generate, develop, model, and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology   Make   * select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining, and finishing] * select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.   Evaluate   * explore and evaluate a range of existing products. * evaluate their ideas and products against design criteria.   Technical knowledge   * build structures, exploring how they can be made stronger, stiffer and more stable. * explore and use mechanisms [for example, levers, sliders, wheels and axles   Food and cooking   * use the basic principles of a healthy and varied diet to prepare dishes. * understand where food comes from. | | | KS2: Design   * use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at 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.   Make   * select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. * select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities   Evaluate   * 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.   Technical knowledge   * apply their understanding of how to strengthen, stiffen and reinforce more complex structures. * understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] * understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] * apply their understanding of computing to program, monitor and control their products.   Food and cooking   * 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. | |  |
|  | **Autumn 1** | **Spring 2** | | **Summer 1** | **Summer 2** |
| **EYFS** | **Continuous Provision** | **Continuous Provision** | | **Continuous Provision** | **Continuous provision** |
| **Year 1** | **Autumn 2 - Calendars**   * *Design products that have a clear purpose and an intended user.* * *Explore objects and designs to identify likes and dislikes of the designs.* * *Suggest improvements to existing designs.* | **Spring 2**  **Mechanisms- Moving picture.**   * *Construction: Use materials to practise drilling, screwing, gluing, and nailing materials to make and strengthen products.* * *Mechanics: Create products using levers and wheels.* | | **Summer 1**  **Textile tree**   * *Cut materials safely using tools provided.* * *Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling* | **Summer 2**  **Fruit Salad**   * Cut ingredients safely and hygienically. * Assemble or cook ingredients |
| **Year 2** | **Autumn 2**  **Fridge Magnets**   * *Explore objects and designs to identify likes and dislikes of the designs.* * *Suggest improvements to existing designs.*   *Explore how products have been created.* | **Spring 2**  **Roly Poly Mechanisms**   * *Model designs using software.* * *Create products using winding mechanisms.* | | **Summer 2****Toasties**  * Cut, peel or grate ingredients safely and hygienically. * Measure or weigh using measuring cups or electronic scales. | **Summer 2** **Textiles- Puppets** Templates and joining techniques.   * *Join textiles using running stitch.* * *Colour and decorate textiles using a number of techniques.* |
| **Year 3** | **Autumn 1**   * **Musical Instruments** *Cut materials accurately and safely by selecting appropriate tools.* * *Select appropriate joining techniques.* | **Spring 2**  **Cold Drinks**   * Prepare ingredients hygienically using appropriate utensils. * Measure accurately. | | **Summer 1**  Textiles**- Pencil case**   * 2D shapes to *Understand the need for a seam allowance.* * *Join textiles with appropriate stitching* 3D product. | **Summer 2**  **Photo Frames**   * *Construction: Choose suitable techniques to construct products or to repair items.*   *Mechanics: Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product* |
| **Year 4** | **Autumn 2**  Pop up books   * *Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).* | **Spring 2** Pastry   * Prepare ingredients hygienically using appropriate utensils. * Measure ingredients to the nearest gram.   Assemble and cook ingredients (controlling the temperature of the oven or hob, if cooking). | | **Summer 2 Electrical systems- light box**  Simple programming and control.  Simple circuits and switches   * *Create parallel circuits* | **Summer 2**  **Game.**   * *Construction: Strengthen materials using suitable techniques.*   *Mechanics: Use scientific knowledge to choose appropriate mechanisms for a product.* |
| **Year 5** | **Autumn 2**  Tea   * Research where products are grown link to Geography and fair trade. * understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. | **Spring 2**  **Summer 2 Bags**   * *Create objects (such as a bag) that employ a seam allowance.* * *Join textiles with a combination of stitching techniques (e.g. back stitch for seams and running stitch to attach decoration* | | **Summer 2 Food- Mediterranean Cous Cous**   * Understand the importance of correct storage and handling of ingredients (knowledge of micro-organisms). * Demonstrate knowledge of a healthy balanced diet. | **Space buggy**   * *Construction: Develop a range of practical skills to create products.*   *Mechanics: Use innovative combinations of electronics and mechanics in product designs* |
| **Year 6** | **Autumn 1**  Lights Torches   * *Create circuits using electronics kits that employ a number of components with increasing confidence.* | **Spring 2**  **Safety software.**   * *Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.* | | **Summer 2**  Fashion and textiles -   * *Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles.* | **Summer 2**  **Food- Chicken Caesar salad wrap**   * Measure accurately and calculate ratios of ingredients to scale up or down from recipe. * Create and refine recipes, including ingredients, methods, cooking times and temperatures. |