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| **DESIGN TECHNOLOGY LONG TERM PLAN** | | | | |
| **Expressive Arts and Design ELG**: Creating with Materials Children at the expected level of development will:   * Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function * Share their creations, explaining the process they have used   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], in their   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 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   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** | **Spring** | | **Summer** |
| **EYFS** | **Continuous Provision**  **Food- Rainbow Fruit cup**  Tasting and smelling common fruit.  Can I make a tasty and healthy snack? | **Continuous Provision**  **Mechanisms-**Assemble vehicles with moving wheels using construction kits  Can I make something that moves? | | **Continuous Provision**  Make a musical instrument  Can I make an instrument that makes a sound? |
| **Year 1** | **Autumn 2**  **Structures-playground equipment**  Freestanding structures  Can I design and make playground equipment for a lego person? | **Spring 2**  **Mechanisms- Moving picture**  Sliders and Levers  Can I design and make a moving picture to share with reception at story time? | | **Summer 2**  **Food- Garden salad**  Preparing fruit and vegetables  Can I make a healthy salad for lunchbox? |
| **Year 2** | **Autumn 2**  **Mechanisms- Moving vehicles**  Wheels and axels  Can I make a moving vehicle to take a teddy across the classroom? | **Spring 2**  **Food- Potato salad and Rainbow coleslaw**  Preparing fruit and vegetables  Can I make food for a family picnic? | | **Summer 2****Textiles- Puppets** Templates and joining techniques  Can I make a puppet for Mrs Ashcroft to use with Reception? |
| **Year 3** | **Autumn 1**  **Structure- Packaging for**  Shell structures using CAD  Can I make a package to protect and advertise a healthy snack? | **Spring 2**  **Food- Pasta salad**  Healthy and varied diet  Can I make a healthy pasta salad for families at a BBQ? | | **Summer 1**  **Textiles- Pencil case**  2D shapes to 3D product  Can I make a pencil case to use in Year 4 to keep my stationary safe? |
| **Year 4** | **Autumn 2**  **Food- Exotic fruit kebab**  Healthy and varied diet  Can I make an exotic fruit kebab for athletes as nutrition? | **Spring 2**  **Electrical systems- light box**  Simple programming and control.  Simple circuits and switches  Can I design and make a light box for shop keepers to advertise products? | | **Summer 2**  **Mechanical systems- moving picture book**  Levers and linkages  Pneumatics  Can I make a moving picture book to share with KS1 at story time? |
| **Year 5** | **Autumn 2**  **Mechanical systems-**  Pulleys and Gears  Cams  Can I design a moving toy for a Christmas gift? | **Spring 2**  **Food- Mediterranean Cous Cous**  Celebrating culture and seasonality  Can I design a healthy lunch for a teenager? | | **Summer 2**  **Structures- Hide**  Frame structures  Can I design a hide for wildlife? |
| **Year 6** | **Autumn 1**  **Textiles- Shopping bag**  Combining different fabric shapes.  Using computer aided design in textiles  Can I make a functional/eco shopping bag for supermarket customers? | **Spring 2**  **Electrical systems-Alarm**  More complex switches and circuits.  Monitoring and control  Can I make an alarm to protect an artefact? | | **Summer 2**  **Food- Chicken Caesar salad wrap**  Celebrating culture and seasonality  Can I make a chicken Caesar salad wrap for a diverse diet? |