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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.
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|  | **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
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| **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.*
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| **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.
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