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| **DT LONG TERM PLANNING 2024-2025** | | | | | | |
|  | **AUTUMN 1** | **AUTUMN 2** | **SPRING 1** | **SPRING 2** | **SUMMER 1** | **SUMMER 2** |
|  | Art | | Food | | Structures | |
| **NURSERY** |  |  | **Cutting Fruit**  Use ready-made ingredients to mix and handle hygienically  Begin to develop a food vocabulary using taste, smell, texture and feel  Include fruit that is less likely to be known to the children.  Begin to think about the need for a variety of foods in a diet  **INSPIRATION: Stories or poems about fruit** | | **Can I design and make a chair that is strong enough for the troll to sit on?** | |
| **RECEPTION** | Food | | Textiles | | Structures | |
| **Plan and make a healthy Fruit Kebab**  Use ready-made ingredients to mix and handle hygienically  Develop further a food vocabulary using taste, smell, texture and feel  Include fruit that is less likely to be known to the children.  Develop understanding of the need for a variety of foods in a diet  **Link Chef: Phil Howard** | | **Design and make an apron for Little Red Hen – Weaving**  Describe what their products are for  Say how their products will work  Say how they will make their product suitable for their intended user   * Develop practical understanding of words and ideas like over, under, in, out, up and down   **Link Textiles Artist: Annie Albers**  [**https://www.tate.org.uk/kids/make/cut-paste/learn-weave**](https://www.tate.org.uk/kids/make/cut-paste/learn-weave) | | **Can I design and make a stable chair for a super hero?** | |
| **YEAR 1** | Structures | | Textiles | | Food | |
| **Design and make a sailing boat**  DESIGN  Understand the function and purpose of a boat  Look at real life examples, what they look like and what they might be made of  Use simple design criteria to help develop their ideas  MAKE  Understand the characteristics of effective materials and components, e.g. that wood floats  **Link Designer: Owen Clarke Design**  [Sailing design yacht designers and naval architects : Owen Clarke Design - Yacht Design and Naval Architects](https://www.owenclarkedesign.com/) | | **Design and make a hand puppet using a running stitch**  DESIGN  Describe what their products are for  Say how their products will work  Say how they will make their products suitable for their intended user  Use simple design criteria to develop their ideas  MAKE  Understand that a 3D textiles product can be assembled from two identical fabric shapes  Children should begin to be able to measure, mark out, cut and shape a range of materials including textiles.  Use a running stitch to join materials  **Link Puppet Artist:**  <https://dreamtalepuppets.org/2021/10/03/how-to-build-a-simple-glove-puppet/> | | **Plan and make an appealing Fruit Smoothie**  Begin to understand that all food comes from plants or animals  DESIGN  Communicate these ideas through talk and drawings  MAKE  Assemble ingredients to prepare a variety of foods using simple tools  Begin to develop being able to cut, peel or grate safely and hygienically  **Link Chef: Jamie Oliver** | |
| **YEAR 2** | Structures | | Food | | Mechanisms | |
| **Design and make a bridge**  INSPIRATION  Look at existing bridges and understand their uses and purpose  DESIGN  Use knowledge of bridges to help create ideas for their own  Describe what their bridge might be used for  Communicate design ideas through talk or drawings  Explain how they will put their product together using ‘now’ and ‘next’  Understand the characteristics of effective materials and components, e.g. materials most appropriate to create a stable structure  MAKE  Use the correct technical vocabulary for the projects they are undertaking  Understand how free standing structures can be made stronger, stiffer and more stable  **Link Structural Engineer:**  <https://www.easternengineeringgroup.com/the-art-of-bridging-analyzing-the-design-principles-behind-iconic-structures/> | | **Plan and make a super salad**    DESIGN  Use annotated sketches to communicate ideas for a particular user  MAKE  Prepare food safely and hygienically, measuring and weighing ingredients using measuring cups and digital scales.  Know that food has to be farmed, grown elsewhere (e.g. home) or caught.  Understand how to name and sort foods into the five groups in the ‘Eat well plate.’  Begin to use techniques such as cutting, peeling and grating.  **(Salad – Super Salads unit from DT Association)**  INSPIRATION  **Link Chef: Akis Petretzikis**  <https://greekcitytimes.com/2016/11/02/introducing-greeces-most-popular-chef-akis-petretzikis-2/> | | **Design and make a small wheeled trolley**  that will carry tools to use in the school garden or for a character in a story  INSPIRATION  Look at existing trolleys or vehicles with moving wheels and axles through play and understand their uses and purpose  DESIGN  Use knowledge of trolleys with wheels to create ideas for their own  Describe what their trolley might be used to transport  Communicate design ideas through drawings or annotated diagrams  e.g. Draw an example of a wheeled product, stating the user and purpose, and labelling the main parts e.g. body, chassis, wheels, axles and axle holders  MAKE  Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing  Make their wheel and axle product using their design ideas and criteria as an ongoing guide  **Link Engineer: Henry Ford** | |
| **YEAR 3** | Mechanisms | | Food | | Structures | |
| **Design and make a pop-up book with levers, sliders and pop up mechanisms**  **(Levers and linkages)**  **See DT Association Unit**  INSPIRATION  Children investigate, analyse and evaluate books and, where available, other products which have a range of lever and linkage mechanisms  DESIGN  Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user.  Use annotated sketches and prototypes to develop, model and communicate ideas.  MAKE  Recap - basic cutting, joining and finishing techniques with paper and card.  Understand lever and linkage mechanisms  Order the main stages of making.  Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.  Select from and use finishing techniques suitable for the product they are creating. | | **Design and make healthy a Salad Sandwich**  INSPIRATION  Gather information about existing products available relating to your product. Visit a local supermarket and/or use the internet  DESIGN  Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose.  Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.  Follow a recipe or plan own – outlining main stages - using appropriate utensils and measuring skills to prepare a savoury food.  Begin to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world.  Be able to use a range of techniques such as peeling, chopping, slicing and grating  See DT Association Unit: Food – Healthy and varied diet | | **Design, make and evaluate packaging for a gift for a family member**  **See DT Association Unit**  INSPIRATION  Look at existing packaging and understand their uses and purpose  DESIGN  Use knowledge of packaging to help create ideas for their own  Understand the characteristics of effective materials and components, e.g. materials most appropriate to create a stable structure  Communicate their ideas through annotated diagrams and sketches  MAKE  Use the correct technical vocabulary for projects they are undertaking  To make strong, stiff structures using nets of 3D shapes with accuracy  **Link Gift Wrapping Company**:  M&S | |
| **Year 4** | Textiles | | Food | | Mechanisms | |
| **Design and make a stuffed toy for a child**  Understand that a 3D textiles product can be assembled from two identical fabric shapes  Children should be able to measure, mark out, cut and shape a range of materials including textiles.  To be able to use a running stitch and a blanket stitch | | **Follow a recipe and bake some bread**  Follow a recipe, using appropriate utensils and measuring ingredients to the nearest gram accurately in order to prepare food.  Some may write own recipe numbering steps, including equipment and ingredients used.  Understand that food is grown, reared and caught in the UK, Europe and the wider world.  Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically.  Further develop skills including mixing, kneading and baking. | | **Design and make a moving toy for small children (Pneumatics)**  **(see DT Association)**  DESIGN  Generate realistic and appropriate ideas and their own design criteria through discussion, focusing on the needs of the user.  Use annotated sketches or exploded diagrams and prototypes to develop, model and communicate ideas.  MAKE  Order the main stages of making.  Recap on simple mechanisms, such as sliders and levers, and simple structures  Select from and use appropriate tools with some accuracy to cut and join materials and components such as tubing, syringes and balloons. • Select from and use finishing techniques suitable for the product they are creating  **Link Engineer: Robert William Thomson**  <https://www.instructables.com/Simple-Pneumatic-Machine/>  (SEN)  <https://littlebinsforlittlehands.com/lego-balloon-car-diy-lego-building-kit/> | |
| **Year 5** | Mechanisms | | Textiles | | Food | |
|  | **Design and make a moving mechanism using a cams mechanism**  INSPIRATION  Discuss different types of movement: rotary, oscillating and reciprocating. Make simple models of different types of cams or have toys in which the cam mechanisms can be seen. Watch videos or photos of products.  DESIGN  Generate innovative ideas by carrying out research using surveys, interviews, questionnaires  Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views.  MAKE  Recap on prior learning of axles, axle holders and wheels that are fixed or free moving  Produce detailed lists of tools and materials. Formulate step-by-step plans  Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished | | **Design and make a Viking tunic or purse**  INSPIRATION  Children generate ideas by carrying out research using e.g. surveys, interviews, questionnaires and the web  DESIGN  Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design.  MAKE  Children should be able to measure, mark out, cut and shape a range of materials including textiles.  Understand and join fabrics using a running stitch, blanket stitch and over sewing  (Recap on using a running stitch and blanket stitch from year 4)  Use seam allowance as the area between the edge of the fabric and the line of stitches | | **Create some soup celebrating culture and diversity**  DESIGN  As designers, scale up or down a recipe, having accurately calculated ratios of carefully measured ingredients.  Write a step-by-step recipe, including a list of ingredients, equipment and utensils  MAKE  Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients  Understand that seasons may affect the food available.  Understand how food is processed into ingredients that can be eaten or used in cooking.  Gain confidence in the skills of peeling, chopping, slicing, grating and mixing.  **Link Chef: Mark Hix** | |
| **Year 6** | Structures | | Mechanisms | | Food | |
|  | **Design and make a model of an Air Raid Shelter**  INSPIRATION  Gather information about the needs and wants of particular individuals and groups – e.g. the purpose of an Air Raid Shelter  Research facts about shelter structures and techniques and how to create a stable structure fit for purpose  DESIGN  Use annotated sketches and cross-sectional drawings to communicate their ideas  Identify features that will appeal to intended users  Explain step by step instructions for how a structure can be made  MAKE  Choose materials based on the suitability of their properties.  Choose suitable tools for making whilst explaining why they should be used. | | **Design and make a new toy vehicle for children in a particular age range**  **(Pulleys or Gears – DT Assoc)**  INSPIRATION  Investigate, analyse and evaluate existing everyday products and existing or pre-made toys that incorporate gear or pulley systems. Use videos and photographs of products  DESIGN  Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views.  MAKE  Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished | | **Design and market a healthy pizza for children on a balanced diet**  As designers, create and refine recipes that demonstrate a range of baking and cooking techniques, applying previously learned skills.  Using their knowledge and skills know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically.  Become increasingly skilled at peeling, chopping, slicing, grating, mixing, kneading and baking.  Link Pizza Company:Pizza Express  <https://www.pizzaexpress.com/kids/school-visits> | |