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Significant people

Aspire London will:

- Develop pupils' knowledge and understanding of the world and people, past and present, who shape it
- Provide identifiable role models to raise ambition and aspiration

Community

Aspire London will:

- Immerse the children in the historically rich and diverse nature of London
- Give pupils an understanding of the positive impact of migration and a cultural appreciation of our community

Equality & Justice

Aspire London will:

- Empower pupils to be advocates who address issues of prejudice and discrimination
- Ensure pupils value fairness and resolve differences through positive discussion

Environmental Responsibility

Aspire London will:

- Educate children of the need to protect God's planet from environmental damage
- Create eco- friendly citizens who are aware of the impact of their individual actions and those of the wider world.



| Autumn Term | Knowledge/Skills | | Vocabulary |
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| Year 1 Textiles Puppets | <u>Knowledge</u> <ul style="list-style-type: none"> • To explore and evaluate different types of puppets e.g: string puppets, shadow puppets, finger puppets. • To create a design criteria based on research. • Talk about ideas and design a simple glove puppet through annotated drawings. Eg: as a design booklet. • To design a product that has a purpose. Eg: retell a familiar story. • To explore what materials and equipment they will need and will be most effective for their design. • To identify strengths and possible changes they might make to refine their existing design. • To evaluate their products and ideas against their simple design criteria. | <u>Skills</u> <ul style="list-style-type: none"> • To draw around hand straight onto felt to create glove puppet. • To cut and shape materials, with some accuracy. • To join the felt using, needle, thick thread and a basic running stitch. • To use simple finishing techniques to improve the appearance of their product, such as adding simple decorations Eg: hair, eyes, clothes. <p>Example: Look at work by Darrell Wakem.</p> | Design Purpose Puppet Drawings Decorations Glove String Finger Materials Felt Fabric Needles Sew Stiches Thick / thin thread |

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| <p>Year 2</p> <p>Building Houses</p> | <p>Knowledge</p> <ul style="list-style-type: none"> To research different Tudor and Stuart buildings Eg: materials used in construction. To create a design for a building from that century based on research. Design an animated Great fire of London scene with building using computer software eg: purple mash. Talk about ideas and design a building through annotated drawings in sketchbooks. To design a product that has a purpose. To explore and test materials and equipment they will need and what will be most effective for their design. To identify strengths and possible changes they might make to refine their existing design. To evaluate their products and ideas against their simple design criteria. To know about Sir Christopher Wren. | <p>Skills</p> <ul style="list-style-type: none"> To follow a simple design of a house. Children to make own building. To use a range of hand tools and equipment eg: scissors, card, boxes, kitchen rolls, paper, glue, other collage materials. To assemble, join and combine materials, components. To use simple finishing techniques to improve the appearance of their product, such as adding simple decorations. To build simple structures, exploring how they can be made stronger, stiffer and more stable; | <p>Design Criteria</p> <p>Research</p> <p>Sketches</p> <p>Tudor</p> <p>Stuart</p> <p>Building Materials</p> <p>Wood</p> <p>Glass</p> <p>Stone</p> <p>Mud</p> <p>Clay</p> <p>Structure</p> <p>Joining</p> <p>Folding</p> <p>Connecting</p> <p>Cutting</p> <p>Nets</p> <p>Decorate</p> <p>Stronger</p> <p>Stiffer</p> <p>Stable</p> <p>Evaluate</p> |
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| <p>Year 3</p> <p>Moving Parts Wheels and axles</p> | <p>Knowledge</p> <ul style="list-style-type: none"> To follow a design brief eg: design a stone age form of transportation, based on the invention of the wheel. To identify the design features of their product that will appeal to intended customers eg: cave men. To explain how particular parts of their products work; To use annotated sketches and cross-sectional drawings to develop and communicate their ideas. When designing, explore different initial ideas before coming up with a final design; When planning, start to explain their choice of materials and components including function and aesthetics; To test ideas out through using prototypes; To use computer-aided design to develop and communicate their ideas. To develop and follow simple design criteria; To evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world. | <p>Skills</p> <ul style="list-style-type: none"> Select from a range of tools and equipment, explaining their choices; Select from a range of materials and components according to their functional properties eg: experimenting with different wheel shapes. Place the main stages of making in a systematic order; To use a range of tools and equipment safely, appropriately and accurately. To use a wider range of materials and components, including construction materials and kits and mechanical components; To measure and mark out to the nearest cm. To assemble, join and combine material and components with some degree of accuracy. To evaluate their product against their original design criteria; | <p>Stone Age Invention Wheels Design criteria Annotate Sketches Axles Base Washer Components Mechanical Mechanics Rotation Rotate Motion Annotate Function Transportation Transport Cross-sectional Accuracy Measuring Millimetres Centimetres Methodical Systematic order Experiment Test Evaluate</p> |
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| <p>Year 4</p> <p>Building an Anglo-Saxon hut</p> | <p>Knowledge</p> <ul style="list-style-type: none"> To research Anglo-Saxon homes and settlements. To follow a design brief eg: design an Anglo-Saxon dwelling. To identify the design features of their product. To explain how particular parts of their products work; To use annotated sketches and cross-sectional drawings to develop and communicate their ideas. When designing, explore different initial ideas before coming up with a final design; When planning, start to explain their choice of materials and components including function and aesthetics; To explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose; To explore what materials were used and suggest reasons for this; consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product; To test ideas out through using prototypes; To use computer-aided design to develop and communicate their ideas. To develop and follow simple design criteria. | <p>Skills</p> <ul style="list-style-type: none"> To follow a simple design for an Anglo-Saxon dwelling. To use a wider range of materials and components, including construction materials and kits. To assemble, join and combine material and components with some degree of accuracy. To use simple finishing techniques to improve the appearance of their product, such as adding simple decorations. To understand that materials have both functional properties and aesthetic qualities. To apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products. To evaluate their product against their original design criteria; | <p>Anglo-Saxon Dwelling Research Design criteria Annotate Sketches Settlement Round house Design Function Features Aesthetics Purpose Cross-sectional Assemble Combine Components Characteristics Properties Reinforce Strengthen Manipulate Materials Thatch Straw Hearth Chimney Open fire Evaluate</p> |
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| <p>Year 5</p> <p>Textiles Tudors</p> | <p>Knowledge</p> <ul style="list-style-type: none"> To research Tudor rose patterns. To research the Westminster tournament roll and John Blanke. To use research to inform and develop detailed design criteria. To design an innovative and appealing product eg: a padded Tudor Rose pin cushion. To use their knowledge of a broad range of existing products to help generate their ideas. To use annotated sketches, and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas; To generate a range of design ideas and clearly communicate final designs; To critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make; Evaluate their ideas and products against the original design criteria, making changes as needed. | <p>Skills</p> <ul style="list-style-type: none"> To select from a range of materials and components according to their functional properties and aesthetic qualities; To create step-by-step plans as a guide to making eg: base design and embellishments. To create a card template of all elements of their design. To cut and shape a range of materials with precision and accuracy; To assemble, join and combine materials with accuracy; To demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product; To join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch; To refine the finish using techniques to improve the appearance of their product, such as adding embellishment or a more precise scissor cut after roughly cutting out a shape. | <p>Tudor Rose Research Pattern Textiles Design criteria Annotate Base design Embellishment Functional Aesthetic Template Precision Accuracy Measure Assemble Seam Allowance Pin Cut Shape Join Backstitch Whip stitch Blanket stitch Critically evaluate</p> |
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| <p>Year 6</p> <p>Building WW2 Design and make an air raid shelter</p> | <p>Knowledge</p> <ul style="list-style-type: none"> To research WW2 air raid shelters. Morrison and Anderson To use research to inform and develop detailed design criteria. To design an innovative and functional shelter. To use their knowledge of a broad range of existing shelters to help generate their ideas. To know how to make a simple electrical circuit. To use annotated sketches, cross sectional and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas; To generate a range of design ideas and clearly communicate final designs; To critically evaluate the quality of design, manufacture and fitness for purpose of the shelter as they design and make it. | <p>Skills</p> <ul style="list-style-type: none"> To create a step by step plan and follow it independently. To learn to use a range of tools and equipment safely and appropriately. To use a full range of materials and components, including construction materials and kits and mechanical components; To make and test an electrical circuit to allow a bulb to light up. To cut a range of materials with precision and accuracy; To shape and score materials with precision and accuracy. To assemble, join and combine materials and components with accuracy; To understand and demonstrate that mechanical and electrical systems have an input, process and output; | <p>WW2 Air raid shelter</p> <p>Research</p> <p>Design Criteria</p> <p>Innovative</p> <p>Functional</p> <p>Electrical Circuit</p> <p>Closed circuit</p> <p>Open circuit</p> <p>Bulb</p> <p>Wire</p> <p>Battery</p> <p>Lamp</p> <p>Cell</p> <p>Battery</p> <p>Electrical</p> <p>Mechanical</p> <p>Components</p> <p>Input</p> <p>Process</p> <p>Output</p> <p>Cross sectional</p> <p>Annotate</p> <p>Exploded diagram</p> <p>Critically Evaluate</p> |

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| Spring Term | Knowledge/Skills | | Vocabulary |
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| <p>Year 1</p> <p>Food Fruit salad</p> | <p>Knowledge</p> <ul style="list-style-type: none"> To understand where in the world different fruit comes from. To name different fruit and explain how it grows (trees / plants / bushes) To know what a fruit salad is (show / taste a variety of readymade fruit salads) To understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why. To create a design criteria based on research. Talk about ideas and design a simple fruit salad Eg: as a recipe. To design a product that has a purpose. To explore what fruits and equipment they will need and what will be most effective for their recipe. To identify strengths and possible changes they might make to refine their existing design. To evaluate their products and ideas against their simple design criteria. | <p>Skills:</p> <ul style="list-style-type: none"> To follow a simple recipe. To select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; To learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures. To cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups. | <p>Apples, Pears, tomatoes, avocado</p> <p>Stone fruit (nectarines, peaches, plums)</p> <p>Citrus fruit (oranges, grapefruits, mandarins, limes)</p> <p>Tropical & Exotic fruit (bananas, mangoes)</p> <p>Berries (strawberries, blueberries, raspberries)</p> <p>Growing (trees, plants, bushes)</p> <p>Salad</p> <p>Recipe method</p> <p>Design criteria</p> <p>Hand tools (scissors, graters, zesters, safe knives, juicer)</p> <p>Safety</p> <p>Hygiene</p> <p>Ingredients</p> |

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| Year 2 Food Dips and Dippers | Knowledge <ul style="list-style-type: none"> To understand where in the world different food comes from. To understand that all food comes from plants or animals. Understand that food has to be farmed, grown elsewhere (e.g. home) or caught. To name and sort foods into the five groups in the Eatwell Guide; To explore a range of existing products. To know what a dip and a dipper is. To create a dip based on research. To record what they had done in a simple process diary. To design a product that has a purpose. To explore what ingredients and equipment they will need and what will be most effective for their recipe. To identify strengths and possible changes they might make to refine their existing design. To evaluate their products and ideas against their simple design criteria. | Skills <ul style="list-style-type: none"> To follow a simple recipe. To select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; To learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures. To cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups. | Dips (humus, raita, salsa, guacamole, thousand island) Dippers (breadsticks, nachos, vegetable sticks) Research Ingredients Recipe Hygiene Equipment Safety (cutting techniques) Chop Zest Peel Grate Slice Mash Weigh Measure Food groups Healthy Farmed food Grown food Evaluate |

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| Year 3 Food Afternoon tea | <u>Knowledge</u> <ul style="list-style-type: none"> To research a traditional English afternoon tea. To start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK. To start to understand seasonality. To explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes; To understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body. To understand how to prepare and cook savoury and sweet dishes safely and hygienically; To design a product that has a purpose based on research. To identify strengths and possible changes they might make to refine their existing design. To evaluate their products and ideas against their simple design criteria. | <u>Skills</u> <ul style="list-style-type: none"> To create a menu based on a traditional English tea. To follow a simple recipe independently. To select from a range of tools and equipment, explaining their choices; To use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking. To cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups, jugs, scales. To understand grams, kilograms, litres and millilitres. With support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven; To understand and follow hygiene procedures and explain why these are essential. | Traditional English Afternoon tea Seasonality Healthy diet Eatwell guide Food groups Balanced diet Variety Raw Cooked Healthy Active Prepare Hygiene Hygienic Ingredients Weigh Measure Grams Kilograms Litres Millilitres Scales Measuring jug Weighing scales Nutritious Savoury Sweet |

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| | | | Mash Whisk Crush Knead Bake Evaluate |
| Year 4 Food European dish | Knowledge <ul style="list-style-type: none"> To research a traditional European dish eg: pizza, kebabs, paella, minestrone soup. To start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in Europe. To start to understand seasonality. To explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes; To understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body. To understand how to prepare and cook savoury dishes safely and hygienically; To design a product that has a purpose based on research. To identify strengths and possible changes they might make to refine their existing design. To evaluate their products and ideas against their simple design criteria. | Skills <ul style="list-style-type: none"> To create a recipe based on a traditional European dish. To follow a simple recipe independently. To select from a range of tools and equipment, explaining their choices; To use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking. To cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups, jugs, scales. To understand grams, kilograms, litres and millilitres. With support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven; To understand and follow hygiene procedures and explain why these are essential. | European dishes Research Home grown food Farmed food Processed food Raw Cooked Seasonality Healthy diet Eatwell guide Food groups Balanced diet Energy Recipe Prepare Variety Hygiene Hygienic Ingredients Grams Kilograms Litres Millilitres Scales Measuring jug Weighing scales |

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| Year 5 Food South America | Knowledge <ul style="list-style-type: none"> To research a popular South American dish eg: tacos, fajitas, enchiladas, burritos, To know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world; To understand about seasonality, how this may affect the food availability and plan recipes according to seasonality; To understand that food is processed into ingredients that can be eaten or used in cooking; To explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes. To know what a competitor analysis is of other products on the market; To evaluate their ideas and products against the original design criteria, making changes as needed. | Skills <ul style="list-style-type: none"> To create a recipe based on research of popular South American foods. To demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source; To demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling; To adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma; To alter methods, cooking times and/or temperatures; To measure accurately and calculate ratios of ingredients to scale up or down from a recipe; Independently follow a recipe. To complete a detailed analysis of other products on the market; To critically evaluate the quality of design. | South American dishes Home grown food Farmed food Mass produced food Processed food Raw Cooked Seasonality Availability Healthy diet Eatwell guide Food groups Balanced diet Substances Protein Fats Sugars Carbohydrates Minerals Vitamins Competitor analysis Hygiene Savoury Sweet Substitution |

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| | | | Griddling Grilling Frying Boiling Adjust Temperature Seasoning |
| Year 6 Moving Parts Fairground rides | Knowledge <ul style="list-style-type: none"> To research fairground rides around the country and how they move. To use knowledge of existing products to design their own fairground ride model with moving parts. To complete a detailed competitor analysis of other products on the market; To develop a detailed design criteria based on findings. To use annotated sketches to develop and communicate their ideas. To independently plan by suggesting what to do next; To explain how particular parts of their fairground model work. When designing, explore different initial ideas before coming up with a final design; To use computer-aided design to develop and communicate their ideas. To consider the availability and costings of resources when planning design. To understand their fair ground ride in a range of relevant contexts eg: conservation, | Skills <ul style="list-style-type: none"> To select from a wide range of tools and equipment, explaining their choices; To select from a range of materials and components according to their functional properties and aesthetic qualities; To create step-by-step plans as a guide to making; To learn to use a range of tools and equipment safely and appropriately. To independently take exact measurements and mark out, to within 1 millimetre; To assemble, join and combine materials and components with accuracy; To apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products; To understand and demonstrate that mechanical and electrical systems have an input, process and output; To explain how mechanical systems, such as cams, create movement and use mechanical systems in their products; | Fairground rides Rotation Motion Turn Mechanism Components Characteristics Product Electrical motor Speed Increase Decrease Engineering Electrical circuit Mechanical system Input Process Output Movement Cams Pullies Levers Control Properties Complex structure |

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| | leisure, culture, enterprise, industry etc. <ul style="list-style-type: none"> To understand how key events and individuals in design and technology have helped shape the world. | <ul style="list-style-type: none"> To apply their understanding of computing to program, monitor and control a product. To refine the finish using techniques to improve the appearance of their product. To evaluate their ideas and products against the original design criteria, making changes as needed. | Accuracy Functional Aesthetic qualities Adjust Adapt Refine |
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| Summer Term | Knowledge/Skills | | Vocabulary |
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| Year 1 Building Rockets | <u>Knowledge</u> <ul style="list-style-type: none"> To explore and evaluate different types of rockets. To know what criteria is needed to create a good rocket. To create a design based on research. Design a rocket using computer software eg: purple mash. Talk about ideas and design a simple rocket through annotated drawings. Eg: as a design booklet. To design a product that has a purpose. To explore and test materials and equipment they will need and what will be most effective for their design. To identify strengths and possible changes they might make to refine their existing design. To evaluate their products and ideas against their simple design criteria. | <u>Skills</u> <ul style="list-style-type: none"> To follow a simple plan. Children to make own cylinder and cone from card. To use a range of hand tools and equipment eg: scissors, card, plastic bottles, kitchen rolls, paper, glue, other collage materials. To assemble, join and combine materials, components To use simple finishing techniques to improve the appearance of their product, such as adding simple decorations. To build simple structures, exploring how they can be made stronger, stiffer and more stable; | Research Build Design Attach Join Stick Decorate Rocket Tube Cylinder Cone Design Criteria Method Materials Test Evaluate Change Instructions Structure |

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| | | | Stronger Stiffer Stable |
| Year 2 Moving pictures | Knowledge <ul style="list-style-type: none"> To explore and evaluate different types of moving pictures eg: flick books, zoetropes. To know what criteria is needed to create a good zoetrope. To create a design based on research. Talk about ideas and design a simple zoetrope through annotated drawings. Eg: as a design booklet. To design a product that has a purpose eg: to entertain. To explore and test materials and equipment they will need and what will be most effective for their design. To identify strengths and possible changes they might make to refine their existing design. To evaluate their products and ideas against their simple design criteria. | Skills <ul style="list-style-type: none"> As part of a small group, follow a simple plan to create a zoetrope eg: one or two for the class. Children to make own flick book based on a series of pictures. To use a range of hand tools and equipment eg: scissors, card, paper, glue, other collage materials. To assemble, join and combine materials, components. To use simple finishing techniques to improve the appearance of their product, such as adding simple decorations. To build simple structures, exploring how they can be made stronger, stiffer and more stable. | Research Design criteria Zoetrope Flick book Moving images Motion Spin Flick Monochrome Silhouette Circular Victorian Entertain Entertainment Test Compare Evaluate |

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| <p>Year 3</p> <p>Textiles Material Roman Motif</p> | <p>Knowledge</p> <ul style="list-style-type: none"> To follow a design brief eg: design a motif that represents the ancient Romans. To identify the design features of their product that will appeal to intended customers eg: Roman Emperor. To research important Roman symbols eg: Roman numerals, the zodiac signs, animals (eagle, bull), mosaics and the fabrics used in the time. To design their own motif based on research. To use annotated sketches to develop and communicate their ideas. When designing, explore different initial ideas before coming up with a final design; To know what a fabric pattern is and how to transfer their design into a pattern. To use computer-aided design to develop and communicate their ideas. To develop and follow simple design criteria; To evaluate the key events, including technological developments, and designs of | <p>Skills</p> <ul style="list-style-type: none"> To create their motif as a paper pattern (squared paper). To transfer pattern onto binka eg: using tracing paper and felt tips. To create design using, needle, embroidery thread and a range of basic stitches eg: cross stitch, running stitch, back stitch. To use simple finishing techniques to improve the appearance of their product, such as adding simple decorations Eg: buttons, decorative threads, beads. | <p>Research Design criteria Textiles Fabric Designing Ancient Roman Fabric pattern Motif Transfer Needle Technique Stiches Embroidery Binka Decorative Embellishment Compare Evaluate</p> |

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| | individuals in design and technology that have helped shape the world. | | |
| Year 4 Building a 'Shaduf' Crane with pulleys. | Knowledge <ul style="list-style-type: none"> To follow a design brief eg: design a shaduf (irrigation crane) To identify the design features of a shaduf and research its importance in Ancient Egyptian times. To design their own shaduf based on research. To use annotated sketches to develop and communicate their ideas. When designing, explore different initial ideas before coming up with a final design; To use computer-aided design to develop and communicate their ideas. To develop and follow simple design criteria; To research more complex crane designs in Ancient Egypt eg: building of the pyramids. To know how mechanical systems such as levers and linkages create movement; To know what cranes and pulleys are. To design their own crane using levers and pulleys. To evaluate technological developments and | Skills <ul style="list-style-type: none"> To select from a range of tools and equipment, explaining their choices; To select from a range of materials and components according to their functional properties. To build their own shaduf using different materials eg: lego, pencils, sticks, dowling, yogurt pots, stones, blu tak. To build a more complex crane using levers and pulleys. Place the main stages of making in a systematic order; To use a range of tools and equipment safely, appropriately and accurately. To use a wider range of materials and components, including construction materials and kits and mechanical components; To measure and mark out to the nearest cm. To assemble, join and combine material and components with some degree of accuracy. To evaluate their product against their original design criteria; | Research Pulleys Cranes Pully system Shaduf Irrigation Crops Construction Stone Blocks Pyramid Sphinx Mechanical Mechanics Levers Linkages Movement Simple Complex Evaluate |

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| | designs that have helped shape the world of construction. | | |
| Year 5 Electronics 'Lego Dacta' project | Knowledge <ul style="list-style-type: none"> • To research mechanical construction equipment. • To use research to inform and develop detailed design criteria. • To design an innovative and appealing product. • To use their knowledge of a broad range of existing products to help generate their ideas. • To use annotated sketches, and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas; • To generate a range of design ideas and clearly communicate final designs; • To critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make; • Evaluate their ideas and products against the original design criteria, making changes as needed. | Skills <ul style="list-style-type: none"> • To learn to use a range of tools and equipment safely and appropriately. • To use a full range of materials and components, including construction materials and kits and mechanical components; • To assemble, join and combine materials and components with accuracy; • To understand and demonstrate that mechanical and electrical systems have an input, process and output; • To explain how mechanical systems, such as cams, create movement and use mechanical systems in their products; • To apply their understanding of computing to program, monitor and control a product. | Mechanical construction Kits Components Construction materials Computing Program Monitor Control Cams Movement Electrical system Input Process Output Product Control Competitor analysis Critically evaluate |

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| <p>Year 6</p> <p>Food Biscuit project</p> | <p><u>Knowledge</u></p> <ul style="list-style-type: none"> • To research popular biscuits. • To understand that food is processed into ingredients that can be eaten or used in cooking; • To explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes; • To know what a competitor analysis is of other products on the market; • To know who their target market is. • To consider the availability and costings of resources when planning out designs; • To evaluate their ideas and products against the original design criteria, making changes as needed. | <p><u>Skills</u></p> <ul style="list-style-type: none"> • To create a recipe based on research in popular biscuits. • To independently follow a biscuit recipe. • To demonstrate how to prepare and cook a biscuit safely and hygienically including, where appropriate, the use of a heat source; • To adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma; • To alter methods, cooking times and/or temperatures; • To measure accurately and calculate ratios of ingredients to scale up or down from a recipe; • To complete a detailed analysis of other products on the market; • To critically evaluate the quality of design. <p>Example: Design biscuit packaging. 'Bake off' themed topic.</p> | <p>Biscuits Home grown food Farmed food Mass produced food Processed food Raw Cooked Seasonality Availability Healthy diet Eatwell guide Food groups Balanced diet Substances Protein Fats Sugars Carbohydrates Minerals Vitamins Target market Competitor analysis Hygiene Savoury</p> |

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| | | | Sweet Substitution Adjust Temperature Scale up / down Ratio |
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