

| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
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| Year 1 | <p><u>DESIGN TECHNOLOGY FOCUS: Structures</u> <u>Topic – castle structures</u></p> <p>NC big ideas:</p> <ul style="list-style-type: none"> structures (freestanding) design, make and evaluate a castle structure; e.g throne, bed, table, drawbridge <p>Specific knowledge:</p> <ul style="list-style-type: none"> different types of structures how to join, strengthen, stabilise structures expand on specific castle structures <p>Specific skills:</p> <ul style="list-style-type: none"> simple designing and labeling of castle structure cutting, sticking, gluing, joining, covering, decorating reflect and evaluate freestanding castle structure <p>Links: History – castles</p> <p>Visits/Experiences: use tower of London trip as a hook to remind them about different castle structures. Experience of using and playing with different constructions to make structures. School and playground walk to identify various structures in their environment.</p> <p>Number of lessons:</p> | | <p><u>DESIGN TECHNOLOGY FOCUS: Cooking</u> <u>Topic- healthy veg wrap</u></p> <p>NC big ideas:</p> <ul style="list-style-type: none"> Food (preparing veg) Design, make and evaluate a salad <p>Specific knowledge</p> <ul style="list-style-type: none"> understanding healthy eating hygiene, health and safety when making food different ways to prepare veg <p>Specific skills:</p> <ul style="list-style-type: none"> designing and labeling veg salad cutting, dicing, grating, deseeding,peeling, grating , mixing different veg reflect and evaluate the taste of veg combination <p>Links: science – healthy eating</p> <p>Visits/Experiences: tasting a variety of veg, including different veg- olives, red cabbage, sweet potato etc. Preparing different veg using different utensils- knife, grater, peeler etc.</p> <p>Number of lessons:</p> | | <p><u>DESIGN TECHNOLOGY FOCUS: Mechanisms</u> <u>Topic- West ham information Booklets</u></p> <p>NC big ideas:</p> <ul style="list-style-type: none"> Sliders and levers design, make and evaluate a booklets with different moving mechanisms e.g. a slider, lever, spinner, flap <p>Specific knowledge:</p> <ul style="list-style-type: none"> learn about different mechanisms and how they create different movement, eg slider, hinge, flaps and spins knowledge about the different part of west ham park <p>Specific skills:</p> <ul style="list-style-type: none"> creating mock up with paper of different moving mechanisms cutting, joining and drawing reflect and evaluate moving info booklet <p>Links: geography – Mapping at West Ham park</p> <p>Visits/Experiences: visit to west ham park Exploring different mechanisms around classroom and in books etc.</p> <p>Number of lessons:</p> | |

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| <p>Year 2</p> | <p><u>DESIGN TECHNOLOGY FOCUS: Mechanisms</u></p> <p><u>Topic- fire of London – Cart</u></p> <p>NC big ideas:</p> <ul style="list-style-type: none"> ● Mechanisms (Wheels and axles) ● Design, make and evaluate a moving cart <p>Specific knowledge</p> <ul style="list-style-type: none"> ● Fire of London Story ● Knowledge of vehicle parts and functions ● Understanding of axle, chassis and wheels purposes ● selecting different materials according to their properties <p>Specific skills:</p> <ul style="list-style-type: none"> ● technical drawing and labeling ● cutting, measuring and joining/ strengthening wood ● reflect and evaluate cart <p>Links: History- fire of London</p> <p>Visits/Experiences: Trip to the London museum Exposure to Fire of London story, time period etc. explore constructions to build vehicles</p> <p>Number of lessons:</p> | <p><u>DESIGN TECHNOLOGY FOCUS: Textiles</u></p> <p><u>Topic- Puppets</u></p> <p>NC big ideas:</p> <ul style="list-style-type: none"> ● textiles (joining) ● design, make and evaluate a hand puppet <p>Specific knowledge:</p> <ul style="list-style-type: none"> ● learn about types of puppets ● understand different materials according to their properties ● recognize different ways to join ● identifying features/ clothes/ equipment of different types of explorers <p>Specific skills:</p> <ul style="list-style-type: none"> ● simple designing and labeling of puppet ● joining, cutting, sewing, decorating, gluing ● reflect and evaluate final puppet <p>Links: Geography - Explorers</p> <p>Visits/Experiences: Exposure to different types of puppets and a range of textiles and decorative materials</p> <p>Number of lessons: 8</p> | |
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| <p>Year 3</p> | <p style="text-align: center;">DESIGN TECHNOLOGY FOCUS: Structures</p> <p style="text-align: center;">Topic- Stone age Shelters</p> <p>NC big ideas:</p> <ul style="list-style-type: none"> • structures (frame structures) • design, make and evaluate a shelter <p>Specific knowledge:</p> <ul style="list-style-type: none"> • research different home structures/ frames; the formation and the purposes of these shelters • investigate a range of materials, strengthening and joining techniques to make informed decisions for their shelter design • understanding how to strengthen, stiffen and reinforce 3D frameworks <p>Specific skills:</p> <ul style="list-style-type: none"> • technical drawing and annotation of shelter design • measuring, cutting, joining, shaping and finishing techniques with different material • evaluate their final shelter critically, identifying strengths and areas of weaknesses <p>Links: History- stone age</p> <p>Visits/Experiences: Stone age/ shelters PowerPoint Exploring and range of building and joining materials</p> <p>Number of lessons:</p> | | <p style="text-align: center;">DESIGN TECHNOLOGY FOCUS: Cooking (food tarts)</p> <p style="text-align: center;">Topic- Olympic Torch</p> <p>NC big ideas:</p> <ul style="list-style-type: none"> • electrical systems (simple circuits/ switches) • design, make and evaluate an electrical torch for modern day Olympics <p>Specific knowledge</p> <ul style="list-style-type: none"> • understanding of the origins of Olympics from Ancient Greece through computer research • identifying the components such as bulbs, wire, switches and their functions to make a simple working circuit • knowledge of torches and their part/ functions <p>Specific skills:</p> <ul style="list-style-type: none"> • constructing various electric circuits with different components • technical drawing and annotation of torch • creating torch using different materials • evaluate their final torch critically, identifying strengths and areas of weaknesses <p>Links: History – Ancient Greece Computing – internet</p> <p>Visits/Experiences: - exploring electrical components and materials that can conduct electricity. Making various types of circuits.</p> <p>Number of lessons:</p> |
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| <p>Year 4</p> | <p>DESIGN TECHNOLOGY FOCUS: Electrical systems (Torches)</p> <p>Topic- Romans</p> <p>NC big ideas:</p> <ul style="list-style-type: none"> mechanisms (levers and linkages) design, make and evaluate a roman soldier on a horse with moving mechanisms. <p>Specific knowledge:</p> <ul style="list-style-type: none"> understand and use of different lever and linkages mechanisms and movements distinguish between fixed and loose pivots knowledge about the Romans <p>Specific skills:</p> <ul style="list-style-type: none"> technical drawing and annotation of different mechanisms cut, shape and join paper and card to create mechanisms evaluate their final mechanism products critically, identifying strengths and areas of weaknesses <p>Links: History-Romans</p> <p>Visits/Experiences: investigating different mechanisms around classroom, products and in books etc.</p> <p>Number of lessons:</p> | <p>DESIGN TECHNOLOGY FOCUS: Topic- rice dish</p> <p>NC big ideas:</p> <ul style="list-style-type: none"> food (healthy/varied diet) design, make and evaluate a healthy rice dish <p>Specific knowledge:</p> <ul style="list-style-type: none"> understanding of how rice grows in wet climates nutrition value of different types of rice understanding healthy eating and varied and balanced diets hygiene, health and safety when making food <p>Specific skills:</p> <ul style="list-style-type: none"> researching, designing and annotating rice dish cut, measure, combine different ingredients evaluate their rich dish critically, identifying strengths and areas of weaknesses <p>Links: geography – climate change Science – healthy eating</p> <p>Visits/Experiences: Preparing using different utensils-, rice cooker, stove, knife, grater, peeler etc. Tasting a variety of differing dishes with different vegetable</p> <p>Number of lessons:</p> | <p>Topic- William Morris cushion cover</p> <p>NC big ideas:</p> <ul style="list-style-type: none"> textiles (2D shape – 3D product) design, make and evaluate a Victorian style cushion cover using computing to make repeating patterns <p>Specific knowledge:</p> <ul style="list-style-type: none"> Victorian times and William Morris designs Understanding how to make a flat piece of fabric into a 3d product Learning how to make stamps on dazzle understand different materials according to their properties recognize different ways to join and fasten <p>Specific skills:</p> <ul style="list-style-type: none"> technical drawing and annotation of cushion cutting, stitching, joining, Using dazzle to make repeating pattern stamps evaluate cushion cover critically, identifying strengths and areas of weaknesses <p>Links: History – Victorians Computing - dazzle</p> <p>Visits/Experiences: Visit to the William Morris gallery, visit to Ragged School museum in Stepney. Exploring range of materials and dazzle</p> <p>Number of lessons:</p> |
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| <p>Year 5</p> | <p>DESIGN TECHNOLOGY FOCUS: Mechanical Systems Pop up books</p> <p>Topic- canvas bag</p> <p>NC big ideas:</p> <ul style="list-style-type: none"> ● textiles (combining different fabric shapes) ● design, make and evaluate bag <p>Specific knowledge:</p> <ul style="list-style-type: none"> ● learn about canvas bags and their pattern pieces ● understand different materials according to their properties and how to strengthen, stiffen or reinforce fabrics ● recognize different ways to sew to join and decorate (running stitch, hem stitch, applique stitch, satin stitch) ● produce detailed list of equipment, fabric and methodology ● <p>Specific skills:</p> <ul style="list-style-type: none"> ● create a paper prototype to model how show will be constructed ● detailed technical drawing and annotation of bag with reasoning ● sewing, cutting, joining and decorating ● compare to original design, test and evaluate their final slippers critically, identifying strengths and areas of weaknesses and how to improve it <p>Links: geography – sustainability/ eco- friendly</p> <p>Visits/Experiences: Exploring an range of fabrics and joining/ decorating techniques</p> <p>Number of lessons:</p> | <p>DESIGN TECHNOLOGY FOCUS: Cooking (Developing a recipe)</p> <p>Topic- moon buggies</p> <p>NC big ideas:</p> <ul style="list-style-type: none"> ● mechanisms (pulleys and gears) ● design, make and evaluate moon buggies <p>Specific knowledge:</p> <ul style="list-style-type: none"> ● learning about everyday products and toys that use pulleys to work ● understand that mechanical systems have an input, process and output ● produce detailed list of equipment, materials and methodology <p>Specific skills:</p> <ul style="list-style-type: none"> ● detailed technical drawing and annotation of moon buggy with reasoning ● measuring, sawing, joining, strengthening and stiffening ● compare to original design, test and evaluate their moon buggies critically, identifying strengths and areas of weaknesses and how to improve it <p>Links: Science – Space</p> <p>Visits/Experiences: Exploring different products and toys that use pulleys and gears to work. Watching videos and photographs of products that cannot be explored through firsthand experience.</p> <p>Number of lessons:</p> | |
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| <p>Year 6</p> | <p><u>DESIGN TECHNOLOGY FOCUS: Structures (playgrounds/ bridges (Y5 Unit)</u></p> <p><u>Topic- tea blending and packaging</u></p> <p>NC big ideas:</p> <ul style="list-style-type: none"> ● food (celebrating culture/ seasonality) ● structures (shell structures) ● design, make and evaluate tea blend/ package <p>Specific knowledge:</p> <ul style="list-style-type: none"> ● learn about tea and how to blend and create different flavours ● understand different materials and their properties ● develop knowledge of nets of different shapes ● understand how to construct stiff, shell structures ● produce detailed list of equipment, fabric and methodology ● <p>Specific skills:</p> <ul style="list-style-type: none"> ● detailed technical drawing and annotation of tea bag/ packaging with reasoning ● testing and blend different tea combinations and flavours ● using computing software- Photoshop to develop packaging/ adverts ● compare to original design, test and evaluate their tea and packaging critically, identifying strengths and areas of weaknesses and how to improve it <p>Links: History – tea Computing – Photoshop</p> <p>Visits/Experiences: Visiting Cutty Sark Tasting different teas and blending tea first hand. Exploring a range of materials</p> | <p><u>Topic</u></p> <p>NC big ideas:</p> <ul style="list-style-type: none"> ● electrical systems (complex switches/ circuits, incl. computing) ● design, make and evaluate a burglar alarm <p>Specific knowledge:</p> <ul style="list-style-type: none"> ● identify the components such as bulbs, wire, switches and their functions to make different electrical circuits ● knowledge of burglar alarms and parts/ functions ● produce detailed list of equipment, components and methodology ● understand how through ‘crumbl’ computing can program, monitor and control their burglar alarm <p>Specific skills:</p> <ul style="list-style-type: none"> ● explore constructing various electric circuits with different components ● detailed technical drawing and annotation of burglar alarm with reasoning ● select and accurately create a burglar alarm using different materials/ components ● compare to original design, test and evaluate their burglar alarm critically, identifying strengths and areas of weaknesses and how to improve it <p>Links: Science – Electricity Computing- Crumbl</p> <p>Visits/Experiences: Exploring electrical components to make various circuits</p> <p>Number of lessons:</p> | <p><u>DESIGN TECHNOLOGY FOCUS: CAD</u></p> |
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