

## Meadowfield Primary DT Long Term Plan (June 25)

The process in each unit needs to work through a process  
research – design – make – evaluate

From Year 3 onwards we also study designers who have worked in different periods of history and types of design

|                                       | Autumn  | Spring  | Summer   |
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| <b>Nursery</b>                        | In nursery our children will be given the opportunity to freely explore how to join materials using PVA glue, Sellotape and glue sticks. They will be able to construct using a range of reclaimed materials, plasticine, clay, building blocks and junk modelling materials. They will use these to make their own representations of real-life things and talk about what they are doing. Children will begin to learn how to hold scissors and cut safely with them. These opportunities are available across both the indoor and outdoor provision. |   |  |
| <b>Reception</b>                      | <b>Joining Materials</b><br>Join, stick, glue stick, Sellotape, staple, holepunch<br>I know that I need to use something to join my materials together<br>I can safely use glue, Sellotape, a hole punch and a stapler<br>I can use scissors safely to cut my materials   | <b>Food</b><br><b>Healthy Choices – Fruit Salad</b><br>Fruit, chop, slice, safely, knife, healthy, mix<br>I know I need to wash my hands to work with food<br>I know how to make healthy choices<br>I know how to safely hold a knife<br>I know how to chop and slice my fruit  | <b>Textiles</b><br><b>Seaside Hand Puppets</b><br>Needle, thread, material, stitch, running stitch, holes<br>I can design what I want to make<br>With help I can cut my pieces of material<br>I know how to join two pieces of material together<br>I can thread a needle<br>I can use a running stitch  |
| <b>Reception Materials and Tools.</b> | Hole punch, scissors, pva glue, stick glue, Sellotape, stapler, staples, paper, card  | Knife, chopping board, mixing bowl, juicer  | Binka, felt, fabric, plastic needle, needle, thread, pin. scissors, templates.   |
|                                       | Provision opportunities.<br>Throughout Reception provision the children have the opportunity to explore using a hammer and screwdrivers to hit materials with and to take items apart safely. They explore joining different materials using a range of possibilities including Sellotape, glue sticks and PVA. Building and construction materials are available at all times for children to construct their own designs and develop an understanding of what will balance on another object and how free-standing structures work.                   |   |  |
| <b>Year 1</b>                         | <b>Autumn 1 - Food</b><br><b>My favourite healthy snack</b><br>Cut, peel, grate, prepare, assemble, healthy, fruit, vegetables, hygienic<br>I know how to safely cut, peel and grate ingredients<br>I know that I need to eat five portions of fruit and veg a day<br>I know I need to eat different types of food to be healthy<br>I know how to prepare food hygienically<br>I know how to assemble and cook a healthy meal without a heat source.  | <b>Spring 1 - Mechanisms</b><br><b>Sliders and Levers</b><br><b>Transport – Rocket zooming off to space, Vehicle travelling along the road</b><br>Like, dislike, design, make, user, criteria, lever, slider, tools, measure, mark out, cut, shape, finish, improvement<br>I know what I like/dislike about products<br>I know what I am trying to design and make<br>I know who my product is for<br>I know how to use simple design criteria<br>I know how to use simple levers and sliders.<br>I can select tools for the job<br>I can measure, mark out, cut and shape materials<br>I can use a range of finishing techniques | <b>Summer 2 - Structures</b><br><b>Free Standing</b><br><b>London Cityscape</b><br>Materials, design, make, develop, assemble, join, combine<br>I know what materials products are made from<br>I know what I am trying to design and make<br>I know how to develop my ideas by talking and drawing<br>I can choose the best materials for the job<br>I can assemble, join and combine materials |

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| <b>Year 1 –<br/>Materials<br/>and Tools</b> | Fruit and vegetables, grater, vegetable peeler, chopping board, knives, skewers   | I can suggest how my product could be improved<br>Cardboard, scissors, masking tape, paper fasteners, stick glue, pva glue, felt tips, colouring pencils.  |   | Paper, card, art straws, cardboard, reclaimed boxes, masking tape, pva glue, glue sticks, string, hole punch, scissors   |
| <b>Year 2</b>                               | Autumn 2 - Mechanisms<br>Wheels and Axles<br><b>Fire Truck – Great Fire of London</b><br>Criteria, develop, design, measure, mark out, cut, shape, assemble, wheels, axels, strong, stiff, stable, finish<br>I know how to use a simple design criteria<br>I know how to talk to others to explain my design and develop it<br>I can measure, mark out, cut and shape materials using a saw and bench hook.<br>I can assemble, join and combine materials using glue guns<br>I can explore and use wheels and axels in my products<br>I can use a range of finishing techniques<br>I can say how I could make my structure stronger, stiffer or more stable | Spring 1 - Textiles<br><b>Victorian Doll/Toy/Teddy</b><br>Design, make, user, materials, assemble, join, combine, improvements<br>I know what I am trying to design and make<br>I know who my product is for<br>I can select the best materials for the job<br>I can assemble, join and combine materials<br>I can suggest how my product could be improved<br>I can use the running stitch and back stitch  |   | Summer 1 - Food<br><b>African Dish</b><br>Measure, weigh, assemble, healthy, cook, heat source, food groups, Eatwell plate<br>I know that meat and fish come from animals<br>I know where vegetables and fruit come from<br>I know how to assemble and cook a healthy meal with a heat source<br>I know how to measure or weigh ingredients accurately<br>I know what the 'Eatwell plate' is and can explain it  |
| <b>Year 2 –<br/>Materials<br/>and Tools</b> | Wooden dowel, wooden and cardboard wheels, bench hook, saw, glue gun, wood glue, drill, drill bit, plasticine   | Thread, pins, needles, template, scissors (sharp textile), felt, buttons, sequins, wool  | Weighing scales, knives, chopping board, grater, vegetable peeler |  |
| <b>Year 3</b>                               | Autumn 1 - Food<br><b>One Pot Recipe (Stone Age)</b><br>Eatwell plate, grown, reared caught, prepare, cook, savoury, peel, slice, grate, mix<br>I know what the 'Eatwell plate' is and can explain it<br>I know that food is grown, reared and caught in the UK, Europe and the wider world.<br>I know how to prepare and cook a variety of savoury dishes safely and hygienically<br>I know how to use a range of techniques including peeling, slicing, grating and mixing.   | Spring 2 - Structures<br>Shell Structures<br><b>Egyptians</b><br>Tools, stages, measure, cut, shape, materials, assemble, join, combine, strong, stiff, shell, structure, reinforce, strengthen<br>I can use cross sectional drawings to develop and communicate my ideas.<br>I know how to select appropriate tools for the task<br>I can plan and order the stages of making<br>I can measure, cut and shape materials with some accuracy<br>I can assemble, join and combine materials<br>I know how to make a strong, stiff shell structure.<br>I know how to reinforce and strengthen a 3d framework. |   | Summer 2 - Textiles<br><b>Carnival Costumes/ Headdress</b><br>Textile, user, ideas, measure, mark out, cut, shape, assemble, join, combine, finish, thread, needle, material, prototype<br>I know how to gather information about the needs and wants of individuals.<br>I can generate realistic ideas, focusing on the needs of the user.<br>I can measure, mark out, cut and shape materials with some accuracy.<br>I can assemble, join and combine materials.<br>I can apply a range of finishing techniques.<br>I know how to evaluate the strengths and areas for development in my ideas and products. |

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| <b>Year 3 –<br/>Materials<br/>and Tools</b> | Grater, vegetable peeler, knives, chopping board, pan  | Card, squared paper, scissors, pva glue, masking tape, glue guns, Stanley knives, metal ruler, cutting mat.   | Tailors chalk, pins, needles, thread, felt, glue gun, feathers, mask blank, material, running stitch, back stitch, blanket stitch.  |
| <b>Year 3<br/>Designers</b>                 |  | Antoni Gaudi  | Clary Salandy/ Bethany Williams   |
| <b>Year 4</b>                               | <p>Autumn 1 - Mechanical Systems<br/>Levers and Linkages<br/>Greetings Cards</p> <p>mechanism, lever, linkage, pivot, slot, bridge, guide, system, input, process, output, join, cross section</p> <p>I can explain how particular parts of my product work.<br/>I can use annotated sketches to communicate my ideas.<br/>I can assemble, join and combine materials with some accuracy.<br/>I can apply a range of finishing techniques.</p> | <p>Spring 2 - Electrical Systems<br/>Circuits and Switches<br/>Torches for Explorers</p> <p>Circuit, functionality, aesthetics, materials, process, Cell, wire, bulb, circuit, break, switch, join, attach, fix</p> <p>I can select materials and components suitable for the task.<br/>I can evaluate my design against its design criteria.<br/>I know how my learning across the curriculum can help me in this design process.<br/>I know how to create a simple electrical circuit to use in my product.</p> | <p>Summer 2 - Food<br/>Yorkshire Dish</p> <p>Active, healthy, recipe, adapt, appearance, texture, taste, aroma, grate, bake, slice, mix, chop</p> <p>I know that to be active and healthy food and drink are needed.<br/>I know that recipes can be adapted to change the appearance, taste, texture and aroma.<br/>I know how to use a range of techniques – grating, mixing, baking, chopping, slicing.</p> |
| <b>Year 4<br/>Materials<br/>and Tools</b>   | Cardboard, paper fasteners, fabric, string, glue gun, Stanley knives, cutting mats, metal rulers.  | Wire, bulb, cell, switch, cardboard, glue gun, pva glue, hole punch, string, screwdriver, Stanley knife, cutting mat, metal ruler.  | Oven, grater, knives, chopping board, measuring jug, weighing scales, tablespoon, teaspoon, oven gloves   |
| <b>Year 4<br/>Designers</b>                 | Charles and Ray Eames  | Trevor Bayliss  |   |
| <b>Year 5</b>                               | <p>Autumn 1 - Mechanical Systems<br/>Cams<br/>Vikings/Anglo Saxons</p> <p>Cam, follower, axle, shaft, crank, handle, housing, framework, annotate, join, combine, design specification</p> <p>I can use exploded diagrams to communicate my design ideas.<br/>I know how to use cams to generate movement in my product.<br/>I know how to accurately assemble join and combine materials.</p>   | <p>Spring 2 - Food<br/>Dishes of the UK countries</p> <p>Season, process, ingredients, peel, spread, knead</p> <p>I know that seasons may impact on the food that is available.<br/>I understand how food is processed into ingredients that can be eaten and used in cooking.<br/>I know how to use a range of techniques – peeling, spreading and kneading.</p>   | <p>Summer 1 - Textiles<br/>Whitby Cushions</p> <p>seam, seam allowance, wadding, right side, wrong side, template, pattern pieces, fastening, thread</p> <p>I can use pattern pieces to develop my ideas.<br/>I can accurately measure, mark out, cut and shape materials and components.<br/>I can join materials accurately to give a good finish.<br/>I can generate ideas drawing on research.</p>        |

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| <b>Year 5 –<br/>Materials<br/>and Tools</b> | Saw, bench hook, drill, drill bits, glue gun, nails, hammer   | Grater, vegetables peeler, pan, wooden spoon, knives, chopping board, whisk   | Blanket stitch, running stitch, back stitch, tailor's chalk, pins, scissors(sharp), felt, fabric, stuffing, needle, thread, paper – template, scissors.  |
| <b>Year 5<br/>Designers</b>                 | Isambard Kingdom Brunel   |   | William Morris   |
| <b>Year 6</b>                               | <p>Autumn 2 - Structures<br/>Frame Structures<br/>Anderson Shelters</p> <p>frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent</p> <p>I can explain my choice of materials according to their functional properties and aesthetic properties.</p> <p>I can use exploded diagrams to communicate my design ideas.</p> <p>I know how to make strong, stiff structures.</p> | <p>Spring 2 - CAD<br/>Textiles Computer aided design</p> <p>frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent</p> <p>I can use computer aided design to develop and communicate my ideas.</p> <p>I know how to program a computer to control my product.</p> <p>I can evaluate the quality of my design and its fitness for purpose.</p> | <p>Summer 2 - Food<br/>Indian Food</p> <p>Nutrient, water, fibre, adapt, appearance, texture, taste, aroma</p> <p>I know how to prepare and cook a variety of savoury dishes using a heat source.</p> <p>I know that recipes can be adapted to change the appearance, taste, texture and aroma.</p> <p>I know that different food and drink contains different substances – nutrient, water, fibre – that are all needed for health.</p> |
| <b>Year 6 –<br/>Materials<br/>and Tools</b> | Square cut timber, corrugated card, nails, saw, bench hook, hammer, Stanley knife, cutting mat, glue gun, metal ruler   | Paper template, computer, computer program(still under review), fabric, felt, needle, thread, running stitch, back stitch, blanket stitch, pins, tailor's chalk   | Knives, grater, vegetable peeler, pan, oven, oven gloves, garlic press, juicer, mixing bowl, wooden spoon.   |
| <b>Year 6<br/>Designers</b>                 | Alvar Aalto   | Charles Rennie Mackintosh   |  |