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| **Design and Technology Knowledge Overview** | **Unit Questions** | **National Curriculum Key Knowledge** | **Project Outline Focus and Skills** | **Key vocabulary** | **Outcome** |
| **EYFS**  **Nursery** | Lets explore – (what do I like to do best?)  All that glitters  (I can explore what I can see and feel)  Weather (What is it like to be warm and cold?)  Traditional tales  (What do my taste buds and nose tell me?)  Pirates  (What can I feel and touch?)  Growing  (How do things change when they grow?) | Early Learning Goals:-  Physical development (Fine Motor) Use a range of small tools, including scissors, paintbrushes and cutlery.  Expressive Arts and Design (Creating with Materials):- safely use and explore a ranges of materials, tools and techniques, experimenting with colour, design, texture, form and function.  Share their creations, explaining the process they have used.  **Characteristics of effective learning**  Show curiosity about objects, events and people  Questions why things happen  Engage in open-ended activity  Thinking of ideas  Find ways to solve problems / find new ways to do things / test their ideas  Use senses to explore the world around them  Create simple representations of events, people and objects  Planning, making decisions about how to approach a task, solve a problem and reach a goal  Checking how well their activities are going  Changing strategy as needed  Reviewing how well the approach worked  **Design**   * I can select materials from a limited range that meet a simple design criteria prompted by an adult, ie shiny * I can respond to an adults suggestion of what to make. * I can say what I want to make when I am playing. * I can explore ideas by rearranging materials.   **Make**   * I can use glue to join materials together with support. * I can use adapted scissors with support to make snips in paper. * I can sew onto a card using lace. * I can use glue to join materials together with increasing independence. * I can use scissors with support to cut along a straight line. * I can use a large plastic needle to sew with support. * I can use tape to join things together with support * I can use scissors with increasing independence to cut along a straight line. * I can attempt to thread a large plastic needle.   **Evaluate**   * I can tell you some of the things that I have created when playing. Such as a tower, a car etc * I can rebuild something when playing to improve it if it falls down or doesn’t work. * I can talk about what I have made naming some of the resources and simple techniques used with support.   **Technical knowledge**   * Structures * I can explore building simple towers and similar structures with support. (wooden blocks) * Mechanisms * I can explore a variety of toys showing interest in how they move. (Flaps, doors, leavers etc) * Structures * I can explore building towers and other structures using other kinds of construction kits with support. * (wooden blocks, duplo, magnetic construction) * Mechanisms * I can create a moving vehicle out of duplo or magnetic construction. * Structures * I can independently create towers and buildings by stacking and connecting bricks together. * Mechanisms * I can use a variety of construction toys that have wheels in them to create a vehicle that can move with some guidance.   **Cooking and nutrition**   * I can wash my hands before participating in food experience with support. * I can explore a range of tools in the dough area, such as rolling pins, cutters, dough wheels. * I can begin to explore some familiar foods in the role play area when playing. * I can wash my hands before a food experience with increasing independence. * I can use a spoon to mix and a knife to spread with support. * I can use a rolling pin and dough cutter with support. * I can wash my hands independently when prompted to do so. * I can use a knife to spread and a spoon to stir with increased independence. * I can attempt to peel my own fruit, satsuma, banana. * I can show increased strength and control when using a rolling pin and dough cutter. | Building houses using boxes and blocks, cutting and joining.  Playdough houses and self portraits  Using textured materials to create images  Cutting and printing with food.  Queens birthday picnic preparation  Creating animal homes and habitats  Cards to celebrate occasions.  Food/snack preperation | Stick  Join  Cut  Build  Construct  Size vocab  Better  Next time  I like | Early Learning Goals:-  Physical development (Fine Motor) Use a range of small tools, including scissors, paintbrushes and cutlery.  Expressive Arts and Design (Creating with Materials):- safely use and explore a ranges of materials, tools and techniques, experimenting with colour, design, texture, form and function.  Share their creations, explaining the process they have used. |
| **EYFS**  **Reception**  *DT is part of the statutory framework in EYFS. It is part of EAD and PD.* | Colours  (What can I see changing)  Cold  (Who likes the cold?)  Extinct  (What happened to the dinosaurs?)  Heroes and villains  (Can villains be heroes)  Gods World  (Who are my woodland neighbours?)  Its good to be me  (How can I be the best I can be?) | Early Learning Goals:-  Physical development (Fine Motor) Use a range of small tools, including scissors, paintbrushes and cutlery.  Expressive Arts and Design (Creating with Materials):- safely use and explore a ranges of materials, tools and techniques, experimenting with colour, design, texture, form and function.  Share their creations, explaining the process they have used.  **Characteristics of effective learning**  Show curiosity about objects, events and people  Questions why things happen  Engage in open-ended activity  Thinking of ideas  Find ways to solve problems / find new ways to do things / test their ideas  Use senses to explore the world around them  Create simple representations of events, people and objects  Planning, making decisions about how to approach a task, solve a problem and reach a goal  Checking how well their activities are going  Changing strategy as needed  Reviewing how well the approach worked  Skills from the curriculum (hierarchical)  Design  I can select materials from a limited range that fit a particular criteria, such as shiny with independence.  I can select and name the tools needed to work the materials eg scissors for paper.  I can explain what I am making and which materials I am using.  I can discuss my work as it progresses.  Make  I can use a hammer with support.  I can use scissors independently to cut along a line.  I can use glue (prit stick and PVA)and sellotape to join materials  I can use a hammer to hammer a large headed nail.  I can use scissors to cut out a shape with curved sides.  I can use a hole punch to make holes in paper.  I can explore other ways of joining with support, treasury tags, split pins.  I can use a hammer safely to hammer a nail into wood.  I can select my own method of joining materials.  I can use scissors with care to cut a variety of shapes and materials.  Evaluate  I can talk with confidence about some things that I have made naming the resources and showing some understanding of the techniques that I have used.  I can rebuild something when playing to improve it if it falls down or doesn’t work.  I can talk about what I have made naming some of the resources and simple techniques used with support.  Technical knowledge  Structures  I can explore building simple towers and similar structures with support. (wooden blocks)  Mechanisms  I can explore a variety of toys showing interest in how they move. (Flaps, doors, leavers etc)  Structures  I can explore building towers and other structures using other kinds of construction kits with support.  (wooden blocks, duplo, magnetic construction)  Mechanisms  I can create a moving vehicle out of duplo or magnetic construction.  Structures  I can independently create towers and buildings by stacking and connecting bricks together.  Mechanisms  I can use a variety of construction toys that have wheels in them to create a vehicle that can move with some guidance.  Cooking and nutrition  I can wash my hands before participating in food experience with support.  I can explore a range of tools in the dough area, such as rolling pins, cutters, dough wheels.  I can begin to explore some familiar foods in the role play area when playing.  I can wash my hands before a food experience with increasing independence.  I can use a spoon to mix and a knife to spread with support.  I can use a rolling pin and dough cutter with support.  I can wash my hands independently when prompted to do so.  I can use a knife to spread and a spoon to stir with increased independence.  I can attempt to peel my own fruit, satsuma, banana.  I can show increased strength and control when using a rolling pin and dough cutter. | Collage using a variety of materials  Firework art – different medias  Christmas cards – joining, cutting, sticking, designing  Baking for Xmas, hand washing, using tools, planning, evaluating  Rubbings using different media  Playdough fossil exploration, digging, cover, printing  Models using different media  Building fairytale houses  Making food for picnics | Shape  Pattern  Colour  Texture  Describe  Weigh  Measure  Texture  Mixing  Design  Make  Evaluate | Early Learning Goals:-  Physical development (Fine Motor) Use a range of small tools, including scissors, paintbrushes and cutlery.  Expressive Arts and Design (Creating with Materials):- safely use and explore a ranges of materials, tools and techniques, experimenting with colour, design, texture, form and function.  Share their creations, explaining the process they have used. |
| Horizontal  Vertical  Design  Purpose  Texture  Taste  Sweet  Sour  Join  Cut  Better  Improve  Next time |
| **Year 1**  **Who am I, who can I be and how do I belong?** | **Autumn 2**  **Our World**  How can I understand the world and my place in it? | **Developing, planning and communicating ideas**  **Working with tools, equipment, materials and components to make quality products (including food)**  **Evaluating processes and products**  **Food Technology Knowledge** | Enterprise - something they can sell to parents/give to charity  **Textiles** | Design  Stencil  Equipment  Final Design  Mind Map  Pattern  Sketch  Material  Join | Sock Hand Puppet |
| **Spring 2**  **The Elements**  How have people harnessed the power of the elements? | Topic/ Curriculum linked  **Model making** | Scissors  Shaping  Designing  Ruler  Sliders  Mechanisms  Planning  Evaluation  Materials  Joining  Modelling  Plastic  Metal  Sketch | Make a boat that floats  Captain cook topic link |
|  | **Summer 2**  **Oh what a wonderful world**  How do I understand my locality and the changes I see? | Incidental  **Food technology** | Cut  Knife  Safety  Health  Fruit  Ingredients  fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing | Make a fruit salad |
| **Year 2**  How do we change the world around us? Why should we care for our world? | **Autumn 2**  **Our World**  How can I understand the world and my place in it? | **Developing, planning and communicating ideas**  Generate ideas by drawing on their own and other people's experiences  Develop their design ideas through discussion, observation , drawing and modelling  Identify a purpose for what they intend to design and make  Identify simple design criteria  Make simple drawings and label parts  **Working with tools, equipment, materials and components to make quality products (including food)**  Begin to select tools and materials; use vocab' to name and describe them  Measure, cut and score with some accuracy  Use hand tools safely and appropriately  Assemble, join and combine materials in order to make a product  Cut, shape and join fabric to make a simple garment. Use basic sewing techniques  Follow safe procedures for food safety and hygiene  Choose and use appropriate finishing techniques  **Evaluating processes and products**  Evaluate against their design criteria  Evaluate their products as they are developed, identifying strengths and possible changes they might make  Talk about their ideas, saying what they like and dislike about them  **Food Technology Knowledge**  Understand where a range of  fruit and vegetables come  from e.g. farmed or grown at  home.  Understand and use basic  principles of a healthy and  varied diet to prepare dishes,  including how fruit and  vegetables are part of *The*  *eatwell plate*.  Know and use technical and  sensory vocabulary relevant  to the project. | Enterprise - something they can sell to parents/give to charity  **Food technology** | names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients | Cakes- design and make - Christmas theme |
| **Spring 2**  **The Elements**  How have people harnessed the power of the elements? | Topic/ Curriculum linked  **Model** | Net  Tabs  Construction  Scoring  Properties  Testing  Components List  Research  Labelling  Development  Modify | Design and Make a house – Wooden Houses  Great Fire of London |
| **Summer 2**  **Oh what a wonderful world**  How do I understand my locality and the changes I see? | Incidental  **Clay modelling** | Mould  Slip  Join  Candle holder  Design  Make  Evaluate | Candle/ tea light holders |
| **Year 3**  How has the world around us shaped us as communities? | **Autumn 2**  How has Britain’s climate and topography affected human activity from the stone age to the iron age? | **Developing, planning and communicating ideas**  Generate ideas for an item, considering its purpose and the user/s  Identify a purpose and establish criteria for a successful product.  Plan the order of their work before starting  Explore, develop and communicate design proposals by modelling ideas  Make drawings with labels when designing  **Working with tools, equipment, materials and components to make quality products (including food)**  Select tools and techniques for making their product  Measure, mark out, cut, score and assemble components with more accuracy  Work safely and accurately with a range of simple tools  Think about their ideas as they make progress and be willing change things if this helps them improve their work  Measure, tape or pin, cut and join fabric with some accuracy  Demonstrate hygienic food preparation and storage  Use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT  **Evaluating processes and products**  Evaluate their product against original design criteria e.g. how well it meets its intended purpose  Disassemble and evaluate familiar products  **Food Technology Knowledge**  Know how to use  appropriate equipment and  utensils to prepare and  combine food.  Know about a range of  fresh and processed  ingredients appropriate for  their product, and whether  they are grown, reared or  caught.  Know and use relevant  technical and sensory  vocabulary appropriately. | Enterprise - something they can sell to parents/give to charity  **Product** | Market research  Enterprise  Charity  Sell  Function  Target audience  Product  name of products, names of equipment, utensils, techniques and ingredients texture, appearance, preference, greasy, moist | Salt dough Christmas decorations |
| **Spring 2**  How has Britain’s climate and topography affected human activity from the stone age to the iron age? | Topic/ Curriculum linked  **Model making** | Plan  Annotations  Criteria  Design Proposal  Engineering  Tessellations  Reclaimed Materials  Framework  Mechanism  Mark Out  Function  Disassembly  Annotated Diagram  Hillfort | Design and make a hillfort |
| **Summer 2**  How did the British landscape impact on the Roman invasion and how did the Romans impact on Britain and the British? | Incidental  **Textiles with a function** | Aesthetics  Prototype  Needles  Running Stitch  Function  Mock-Up  Draw string  Romans | Make a draw string purse (Romans) |
| **Year 4**  Are we stronger if we are together? | **Autumn 2**  What did the Anglo-Saxons bring to Britain? | **Developing, planning and communicating ideas**  Generate ideas, considering the purposes for which they are designing  Make labelled drawings from different views showing specific features  Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail  Evaluate products and identify criteria that can be used for their own designs  **Working with tools, equipment, materials and components to make quality products (including food)**  Select appropriate tools and techniques for making their product  Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques  Join and combine materials and components accurately in temporary and permanent ways  Sew using a range of different stitches, weave and knit  **Evaluating processes and products**  Evaluate their work both during and at the end of the assignment  Evaluate their products carrying out appropriate tests  **Food Technology Knowledge**  Know how to use  appropriate equipment and  utensils to prepare and  combine food.  Know about a range of  fresh and processed  ingredients appropriate for  their product, and whether  they are grown, reared or  caught.  Know and use relevant  technical and sensory  vocabulary appropriately. | **Enterprise - something they can sell to parents/give to charity**  **Product**  Target audience- Christmas gift | Market research  Enterprise  Charity  Sell  Function  Target audience  Product | A freestanding photo frame |
| **Spring 2**  What did the Vikings bring to Anglo-Saxon Britain? | Topic/ Curriculum linked  **Model making** |  | Anglo Saxon Village – round house |
| **Summer 2**  How have the cities of York and New York been shaped by people coming together? | Incidental  **Food technology** | Hygiene  Seasonality  Savoury  Preparation  Eatwell Guide  Food Groups  name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet | Making biscuits with Viking shield design |
| **Year 5**  How can people come together to shape the world around them? | **Autumn 2**  How has ancient Greece helped to shape the modern Western World? | **Developing, planning and communicating ideas**  Generate ideas through brainstorming and identify a purpose for their product  Draw up a specification for their design  Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail  Use results of investigations, information sources, including ICT when developing design ideas  **Working with tools, equipment, materials and components to make quality products (including food)**  Select appropriate materials, tools and techniques  Measure and mark out accurately  Use skills in using different tools and equipment safely and accurately weigh and measure accurately (time, dry ingredients, liquids)  Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens  Cut and join with accuracy to ensure a good-quality finish to the product  **Evaluating processes and products**  Evaluate a product against the original design specification  Evaluate it personally and seek evaluation from others  **Food Technology Knowledge**  Know how to use utensils  and equipment including heat  sources to prepare and cook  food.  Understand about  seasonality in relation to food  products and the source of  different food products.  Know and use relevant  technical and sensory  vocabulary. | Enterprise - something they can sell to parents/give to charity  **Model with moving part** | Market research  Enterprise  Charity  Sell  Function  Target audience  Product | Greet Card – pop up/ sliding doors |
| **Spring 2**  How has the suffrage movement shaped our country since 1066? | Topic/ Curriculum linked  **Textiles** |  | Decorative works based on The Bayeux Tapestry depicting an episode in the development of British parliamentary democracy. |
| **Summer 2**  How is the movement for environmental change shaping our world? | Incidental  **Food technology** | Measure  Weighing Scale  Proportion  Varied Diet  Reared  Processed  ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble | Plan and create a celebration buffet for Y6 leavers. |
| **Year 6**  How can individual people shape the world around them? | **Autumn 2**  Who was Charles Darwin and how did he change the world? | **Developing, planning and communicating ideas**  Communicate their ideas through detailed labelled drawings  Develop a design specification  Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways  Plan the order of their work, choosing appropriate materials, tools and techniques  **Working with tools, equipment, materials and components to make quality products (including food)**  Select appropriate tools, materials, components and techniques  Assemble components make working models  Use tools safely and accurately  Construct products using permanent joining techniques  Make modifications as they go along  Pin, sew and stitch materials together create a product  Achieve a quality product  **Evaluating processes and products**  Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests  Record their evaluations using drawings with labels    Evaluate against their original criteria and suggest ways that their product could be improved  **Food Technology Knowledge**  Know how to use utensils  and equipment including heat  sources to prepare and cook  food.  Understand about  seasonality in relation to food  products and the source of  different food products.  Know and use relevant  technical and sensory  vocabulary. | Enterprise - something they can sell to parents/give to charity  **Food Technology** | Market research  Enterprise  Charity  Sell  Function  Target audience  Product  ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble | Pizza |
| **Spring 2**  How did Howard Carter change the world? | Topic/ Curriculum linked  **Model making**– papier mache | Model  Make  Assemble  Design  Make  Evaluate  Texture  Mix  Create | Design and make an Eygyption mask  Balloons and paper mache |
| **Summer 2**  How did Wiliam Wilberforce, Rosa Parks, Martin Luther King, Paul Stephenson, Floella Benjamin. Amelia Gentlemen and David Lammy shape the world we live in? | Incidental  **Textiles** | Textiles  Materials  Design  Make  Evaluate  Social justice  Banner  Poster | Use of textiles in social justice and protest movements e.g. ‘Kick it Out’  Children create textile banners |