



Yorke Mead Primary School

DT Curriculum



Early Years		
Key Theme: Cooking and nutrition		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
	<p>ELG Understand the importance of healthy food choices (PSED – managing self)</p> <ul style="list-style-type: none">• Explore fruits from around the world, follow a simple set of instructions to create a repeating pattern fruit kebab• Taste food and talk about our likes and dislikes• Food tasting opportunities at key times of year e.g. pancakes, Luna new year <p>Vocabulary: instructions, ingredients, method, healthy, names of fruit and countries of origin</p> <p><i>Information about how the curriculum develops across from Nursery to Reception is contained in the Early Years Planning detail</i></p>	

Early Years		
Key Theme : Joining and Shaping Materials		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
	<p>ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function</p> <p>Share their creations, explaining the processes they have used - EAD</p> <ul style="list-style-type: none">• Use a range of materials to create 3D models, making decisions about which resources to use – 3D Realistic Naughty Bus model display• Learn a range of joining techniques e.g. glue, tape, split pins to create movement – book making throughout topics, junk modelling in CIL, moving paper puppets	



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	<ul style="list-style-type: none"> Use scissors and other tools effectively – felt Christmas decoration, daily busy fingers, craft opportunities in CIL <p>Vocabulary: Naming of tools in class, attach, glue, tape, split pin, flange, fringe, link, join, explanation of process e.g. first</p> <p><i>Information about how the curriculum develops across from Nursery to Reception is contained in the Early Years Planning detail</i></p>	
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Year 1		
Key Theme : Cooking and nutrition - Making bread		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
<p>ELG Understand the importance of healthy food choices (PSED – managing self)</p> <ul style="list-style-type: none"> Explore fruits from around the world, follow a simple set of instructions to create a repeating pattern fruit kebab Taste food and talk about our likes and dislikes Food tasting opportunities at key times of year e.g. pancakes, Luna new year <p>Vocabulary: instructions, ingredients, method, healthy, names of fruit and countries of origin</p>	<p>Explore and investigate a range of bread products including taste, appearance, texture, smell. Explore the purpose of different bread products.</p> <p>Use the basic principles of a healthy diet to design their own bread product.</p> <p>Design – generate and communicate ideas in a plan</p> <p>Make – mixing, kneading, shaping.</p> <p>Awareness of food safety / hygiene.</p> <p>Cooking – prepare dough for adult to cook. Understand where bread comes from and how and why it is baked to create the finished product.</p> <p>Lesson 1: How can you use your sense of sight, taste, touch and smell to talk about the different bread products?</p> <p>Lesson 2: What types of bread are healthy?</p> <p>Lesson 3: How can you use your knowledge of healthy eating to design your own bread product?</p> <p>Lesson 4: What do you need to do to prepare you bread product safely?</p> <p>Lesson 5: How and why will you bake your bread in the oven?</p>	<p>Able to compare different breads, predict their purpose and justify their similarities and differences.</p> <p>Can extend and link ideas of a balanced diet with other foods.</p> <p>Links food safety and health.</p> <p>Considers the implications of under or over baking the bread.</p>



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Year 1 Key Theme : Textiles – peg dolls		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps



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<p>ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function</p> <p>Share their creations, explaining the processes they have used - EAD</p> <ul style="list-style-type: none">• Use a range of materials to create 3D models, making decisions about which resources to use – 3D Realistic Naughty Bus model display• Learn a range of joining techniques e.g. glue, tape, split pins to create movement – book making throughout topics, junk modelling in CIL, moving paper puppets• Use scissors and other tools effectively – felt Christmas decoration, daily busy fingers, craft opportunities in CIL <p>Vocabulary: Naming of tools in class, attach, glue, tape, split pin, flange, fringe, link, join, explanation of process e.g. first</p>	<p>Explore and investigate a range of simple textile toys, including their features and construction and who they were made for.</p> <p>Explore different joining techniques - glueing and sewing</p> <p>Design their own peg doll character, selecting from and using a range of materials according to their characteristics. Communicate their ideas through drawing and talking.</p> <p>Make their peg character selecting from and using a range of tools and equipment to perform practical tasks of cutting, joining, finishing.</p> <p>Create a template by drawing round a circle and cutting it out.</p> <p>Running stitch to attach the templates to make a dress.</p> <p>Evaluate ideas and finished product against design criteria</p> <p>Lesson 1: How are textiles used in toys?</p> <p>Lesson 2: How can sewing help us join fabrics and what is running stitch?</p> <p>Lesson 3: How will you design a peg doll character?</p> <p>Lesson 4: How will you make a peg doll character and a peg doll character dress?</p> <p>Lesson 5: What do you like about your peg doll character and what would you change?</p>	<p>Compare different toys, predicting their design purpose and justifying reasons for their similarities and differences.</p> <p>Explain and justify advantages and disadvantages of different joining methods.</p> <p>Justifies design choices with reference to ideas such as form, texture, contrast</p> <p>Considers advantages and disadvantages of tools and equipment, identifying limitations and other methods for performing practical tasks.</p> <p>Critically evaluate with specific detail.</p>
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Year 1
Key Theme : Winders – creating a moving superhero



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Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
<ul style="list-style-type: none">• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.• Share their creations, explaining the processes they have used○ <i>Use a range of materials to create 3D models, making decisions about which resources to use.</i>○ <i>Learn a range of joining techniques e.g. glue, tape, split pins to create movement</i>○ <i>Use scissors and other tools effectively</i> <p>Vocabulary: Naming of tools in class, attach, glue, tape, split pin, flange, fringe, link, join, explanation of process e.g. first</p>	<p>Explore the use winders in a range of existing products. Explore materials that we could use to create a winder for a moving superhero. Design their own appealing winder for a particular purpose, selecting from a range of materials. Develop and communicate their ideas through drawing and talking or a mock-up. I can join a handle to a piece of dowelling Make their product using their design. Select from and use a range of tools equipment to perform practical tasks of cutting, joining, finishing. I understand the bigger the drum, the faster the winder works I understand the drum acts as a winder to create movement up and down Share their work as they evaluate their and others finished work. Lesson 1: What are winders and where do we use them? Lesson 2: How do we make a winder and what materials would we need? Lesson 3: What will your moving toy look like and how will you use a winder to make it move up and down? Lesson 4: making the moving toy and adjustments Lesson 5: How successful was your winder and what changes did you have to make?</p>	<p>Predict their construction and movement. Compare and contrast products with justifying advantages and disadvantages. Explain and justify design choices. Identify problems in the making process and adapt and amend their design accordingly. Offer thoughtful, specific, helpful criticism.</p>



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Year 2 Spring

Key Theme: Cooking and nutrition – healthy snacks (can be adapted to particular topics or occasions by changing the types of fruit or vegetables, or changing the target group, or focusing on a particular product eg salads, soups, fruit jelly, fruit yoghurt, fruit drinks, fruit or vegetable skewers).

Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
<p>Yr 1 explore a range of existing food items using appropriate language</p> <p>Yr 1 design a dish using the basic principles of a healthy and varied diet. Communicate ideas.</p> <p>Yr 1 prepare food using basic hygiene principles</p> <p>Yr 1 evaluate their ideas</p>	<p>Explore, investigate and taste different foods and develop vocabulary to describe the appearance, taste, smell and texture and discover what children like best.</p> <p>Look at and classify foods on how and where they are grown. Look at different preparation requirements – washing, peeling, cutting etc.</p> <p>Develop design ideas based on their research.</p> <p>Decide what they intend to design and make and who it is for using the basic principles of a healthy and varied diet.</p> <p>Consider how their choices will be prepared and presented to be appealing.</p> <p>Communicate their ideas through talking, drawing and labelling.</p> <p>I know how to safely cut using a bridge cut.</p> <p>Using their plan and design, make their snacks. Apply basic hygienic practices and to use basic tools and equipment effectively and safely.</p> <p>Share their work and evaluate their design and finished product.</p> <p>Lesson 1: How does the season influence the fruits available to buy?</p> <p>Lesson 2: Are all fruits prepared in the same way?</p> <p>Lesson 3: Which fruits would you use to make an appetising fruit kebab for a 5-year-old? (tasting session)</p> <p>Lesson 4: How do I use a sharp knife safely and what is a bridge cut?</p> <p>Lesson 5: Can I explain what I like about my fruit kebab and how it can be improved?</p>	<p>Compare and contrast different foods, predicting how they may taste or be prepared based on prior learning and links.</p> <p>Justify design choices and relative emphasis on nutritional value, seasonality, taste and appearance.</p> <p>Make links between hygiene and food safety and health</p> <p>Critically evaluate with specific detail.</p>



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Year 2 Spring

Key Theme: Mechanisms and mechanical systems – levers and sliders

Moving pictures

Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
<p>Y1 explore levers and sliders Y1 design with a lever and slider Y1 make a picture using a lever or slider Yr 1 evaluate their and others finished work.</p>	<p>Explore the use levers and pivots and sliders in a range of existing moving pictures</p> <p>Design their own functional, appealing moving picture for a particular purpose, selecting from a range of materials. Develop and communicate their ideas through drawing and talking or a mock-up.</p> <p>Make their moving pictures using a range of appropriate tools, equipment and finishing techniques.</p> <p>I know how levers can make a part moving use a pivot (split-pin). Share their work as they evaluate their and others finished work.</p> <p>Lesson 1: What is a slider, a lever and a pivot and how do they work? Lesson 2: How do we make sliders, levers and pivots? (practise stage) Lesson 3: How will I use a lever in a moving picture? Lesson 4: What materials and tools do I need to use in order to make my moving picture? (making stage) Lesson 5: What worked well on my moving picture and what do I need to improve?</p>	<p>Predict movement and mechanism Design with multiple moving parts Identify problems in the making process and adapt and amend their design accordingly. Critically evaluate with specific detail.</p>



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Year 2 Autumn		
Key Theme: Mechanisms and mechanical systems – wheels and axles		
Vehicles - Linked to Africa topic – make safari jeeps could link to colour mixing and camouflage		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
<p>Y1 investigate products with moving parts</p> <p>Yr 1 Design a product for a particular purpose</p> <p>Yr 1 select appropriate materials and tools to cut join and finish</p> <p>Yr 1 evaluate their ideas against design criteria.</p>	<p>Investigate and identify different vehicle features and functions. Explore wheels, axels and chassis and how they can be attached.</p> <p>Design own vehicle based on design criteria. Develop and communicate their ideas through talking and drawing.</p> <p>Select appropriate materials and tools for construction. Make vehicles using a variety of materials, tools and equipment to cut, join and finish.</p> <p>Evaluate finished vehicles against design criteria.</p> <p>I know how to attach my axle and adjust to make my wheels and axles turn.</p> <p>I know how to measure and saw safely using a hacksaw.</p> <p>I know the difference between a fixed and moving axle.</p> <p>I understand how to make a vehicle move using a fixed axle with rotating wheels or a moving axle with fixed wheels attached.</p> <p>Lesson 1/2: How do axles and wheels work? (fixed and non-fixed axles)</p> <p>Lesson 2: practise stage creating two different axles and deciding on one they wish to use</p> <p>Lesson 3: How will I use an axle in my vehicle design?</p> <p>Lesson 4: How can I make a cereal box suitable for painting? (learning to turn a box)</p> <p>Lesson 5: How do I safely measure and saw doweling?</p> <p>Lesson 6/7: Making stage applying skills</p> <p>Oral evaluations.</p>	<p>Critically evaluate different wheel and axel construction and movement.</p> <p>Identify and pre-empt problems in the making process and adapt and amend their design accordingly.</p>



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Year 3		
Key Theme: Cooking and nutrition - Sandwiches		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
Yr 1 investigating types of bread Yr 2 exploring where and how food is grown Yr 1 designing their own bread roll Yr 2 use the basic principles of a healthy and varied diet Yr 2 preparation techniques for fruit and vegetables Yr 2 hygienic practices and using kitchen tools and equipment effectively and safely	Explore the food pyramid and the principles of a varied and healthy diet. Investigate and taste different types of bread and ingredients. Decide who and what they will make their sandwich for. Plan and design their own sandwich selecting appropriate ingredients. Model and communicate their ideas in an exploded diagram of their sandwich. Demonstrate an understanding of working safely with food. Prepare their sandwich using appropriate tools and techniques. Evaluate their design and making process. Consider improvements. Lesson 1: What are the principles of a varied and healthy diet? Lesson 2: What are the types of bread and how do they taste? Lesson 3: How will I create a healthy sandwich? (revisit food groups) planning stage. Lesson 4: How can I safely prepare food using a fork cut and bridge cut, and spreading finely? Lesson 5: Can I evaluate my product and consider improvements?	Able to link to healthy food plate and use the technical vocabulary to express an opinion about how healthy the sandwich is. Articulate particular ingredients and why they are suitable for recipient. Articulates links between safe prep and understanding consequences Adjusts their plan as they go, based on evaluating errors during the making.



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Year 3

Key Theme: Mechanisms and mechanical systems – pneumatics

Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
<p>Yr 2 explore and investigate products with moving parts</p> <p>Yr 2 select a variety of materials, tools and equipment to cut join and finish.</p>	<p>Explore a range of familiar products that use air to make them work eg. Whistles, party blowers, bicycle pumps. Investigate what air does and how it has been used in the design of these products.</p> <p>Experiment with different materials and different moving parts. Plan and design their own machine – developing, generating and communicating their ideas through discussion and annotated sketches.</p> <p>Make their pneumatic machine selecting and using a range of tools and equipment. Select appropriate materials and components based on their functional properties and aesthetic qualities.</p> <p>Evaluate against their own design criteria and consider improvements.</p> <p>Lesson 1: How does air make things move (exploration stage) and what products use air to work?</p> <p>Lesson 2: What is a pneumatic and how do these work? (knowledge and practise stage)</p> <p>Lesson 3: How will I use pneumatic in my design of pneumatic monster?</p> <p>Lesson 4: Building the pneumatic and problem solving (make stage)</p> <p>Lesson 5: How effectively did pneumatics work in my monster?</p>	<p>Understands pneumatics require a locked air system and that different size syringes have a different effect.</p> <p>Demonstrate an ability to alter designs and materials used to end up with a working product.</p>



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Year 3

Key Theme: Jinx frames (woodwork skills)

Completed in Spring 1 – decorated on Stone Age Day

Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
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<p>Year 1 Design a product for a particular purpose. Select from and use a range of tools equipment to perform practical tasks of cutting, joining, finishing..</p> <p>Year 2 Investigate and identify different vehicle features and functions. Safely measure and saw doweling. Develop and communicate their ideas through drawing and talking or a mock-up. Design a product for a particular purpose.</p> <p>Vocabulary Wood, hacksaw, clamp, bench hook, join, strengthening, corners, measuring, groove (how to start the cut)</p>	<p>Investigate and analyse a range of existing products exploring purpose and functionality, materials used and construction. Opportunity to explore a variety of photo frames (What are they made from? How do they stand up? How are they joined?) Consider audience. Design their own photo frame with labelling each part. Discuss how to strengthen the photo frame (use of cardboard corners/joins). Discuss how to join the wood (pva, pritstick, hot glue gun) Develop and communicate their ideas through discussion, annotated sketches and prototypes. Measure the wood accurately. Construct their own photo frame, selecting from a range of tools and equipment to cut, shape, join and finish accurately. Reflect on design and making process. Evaluate their own finished product against the design criteria and consider the views of others to improve their work.</p> <ol style="list-style-type: none">1. Can I identify features of photo frames, materials they are made from and how they are joined?2. Can I plan and design our photo frames?3. Can I measure and cut wood accurately? (Marking the wood, adding triangles for support, sawing technique)4. Can I join the wood to make jinx frames?5. Can I evaluate the finished product against the original design?	<p>Link to printing and graphics on photo frames. Linking photo frame materials and impact of their manufacture and waste on the environment. Designs show an understanding of aesthetics and functionality. Evaluate with appropriate suggestions that would improve the product substantially. Able to support others with suggestions.</p>
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Year 4

Key Theme: Cooking and Nutrition – vegetarian filo parcels



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Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
<p>Yr 3 explore the principles of a varied and healthy diet.</p> <p>Yr 3 Plan and design a food item selecting appropriate ingredients</p> <p>Yr 3 working safely with food</p>	<p>Explore and understand what seasonality is – look at what UK foods are at their best at this time of year and why foods are available all year round (focusing on fruits and vegetables). Understand the importance of fresh fruit and vegetables as part of a healthy diet – touching on how cake fits in to a healthy diet. Explore different seasonal fruit & vegetable by touch, taste, smell, sight.</p> <p>Demonstrate an understanding of working safely with food. Prepare and cook using appropriate tools and techniques. Weigh, mix, grate, squeeze accurately using appropriate equipment safely.</p> <p>Lesson 1: What is seasonality and how does it change between countries?</p> <p>Lesson 2: Why are fresh fruit and vegetables important for part of a healthy diet?</p> <p>Lesson 3: Can you plan and design your own vegetarian filo parcel?</p> <p>Lesson 4: How can you safely prepare your filling for your parcel? (revisit safe cuts and introduce grating)</p> <p>Lesson 5: How effectively did the flavours combine in your parcel?</p>	<p>Link healthy eating with a healthy body.</p> <p>Link healthy eating from local sources with links to improving the environment.</p> <p>Use the vocabulary of senses accurately.</p> <p>Diagrams and models show clear ideas on the construction, using the research.</p> <p>Models/ Diagrams should look plausible and accurate.</p> <p>Understand the use of different prep techniques and suggesting the best technique for the prep of food.</p> <p>Improvement suggestions are appropriate with a clear understanding of why they have suggested the improvements and that the improvements will make a significant difference.</p>



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Year 4 Key Theme: Sewing Units		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
Continue to master stitches from year 1, running stitch. Develop accurate cross stitch Use 2 stitches in the product	Understand different stitches can join two pieces of fabric Select stitches to create a pattern Understand how to begin and finish stitching with an overlock stitch Develop greater independence with threading a needle Lesson 1: How do stitches create patterns (cross stitch, back stitch, overlock) Lesson 2: Can I use my knowledge of stitches to create a simple design and pattern. Lesson 3 and 4: Can I follow my pattern and use sewing skills to create a bookmark Lesson 5: Do I know what I would do better next time	Use a range of stitches e.g. running, backstitch, cross stitch and overlock stitch. Use them effectively to design a border and pattern. Independent approach to threading, sewing, starting and finishing stitches and problem solving when stitches go wrong.



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Year 4		
Key Theme: Light-up landmark / lightbox		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
Yr 4 – link to science unit on electricity – creating a circuit - investigating and making switches Yr 4 – link to science unit on electricity – creating a circuit - investigating and making switches Yr 3 – Evaluating a structure against design criteria	<p>Investigate a range of light up products, explore the different components and how they are designed to suit a particular purpose.</p> <p>Design their own light up product fit for purpose, including a switch to suit their design, from a range of suitable materials. Generate, develop and communicate their ideas through discussion and annotated diagrams.</p> <p>Understand and use an electrical system with bulb, wire, batteries and switch (link to science unit) to make their product using a range of tools and equipment accurately. Construct their landmark from a range of appropriate tools and equipment.</p> <p>Evaluate their idea and finished product against their own design criteria and consider improvements.</p> <p>Lesson 1: How are switches used in a circuit?</p> <p>Lesson 2: How can I communicate my ideas to create a light?</p> <p>Lesson 2: How does coding allow control of a lighting sequence?</p> <p>Lesson 3: How will you use the lighting sequence in a landmark silhouette?</p> <p>Lesson 4: Making and problem solving</p> <p>Lesson 5: How effectively did the light box and the coding sequence work?</p>	<p>Predict the circuit and components used in products.</p> <p>Develop circuit design exploring concepts such as series or parallel circuits with multiple components and predicting outcomes.</p> <p>Develop finishing and decorating techniques to enhance quality of finished product.</p>



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Year 5 Key Theme : Mars Rovers		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
Yr 2 explore and investigate a range of vehicles, including how wheels can be attached Yr 4 electrical system with switch Yr 2 Design a moving vehicle with wheels, axels and chassis Yr 4 Reinforcing structures Yr 2 Construct a moving vehicle with wheels, axels and chassis	Explore and investigate lunar rovers/vehicles. Identify functionality and purpose Understand and use electrical system with motor and switch. Design product fit for a specific purpose. Design a moving vehicle selecting from a range of appropriate material. Build reinforced chassis with axels and wheels using a range of appropriate tools with accuracy Evaluate the quality of the finished product against their own design criteria. Identify areas of strength and consider ways to improve their work. Lesson 1: What is the specific functionality and purpose of a Mars Rover? Lesson 2: Why is a motor needed to power the Mars Rover? Lesson 3: How can you make sure that you meet a design brief? Lesson 4: How can you use tools accurately and safely? Lesson 5: What went well with your project? How could you make it even better?	Explains specific design choices with reference to product purpose and operating environment. Can troubleshoot difficulties with the electric circuit to ensure a working product. Will make adaptations to the vehicle to ensure the specific purpose criteria is met. Understands where and how to reinforce the produce appropriately without prompts. Suggestions for improvements come from an accurate evaluation and the improvements will make a genuine difference.



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Year 5 Key Theme : Moving toys – cams mechanisms		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
Yr 5 Link to forces science unit Yr 4 design a product fit for purpose Yr 4 Select and use a range of tools and equipment to strengthen, stiffen and reinforce as appropriate, performing cutting, shaping, joining and finishing accurately.	<p>Understand that a cam mechanism is a linkage system which converts rotary movement to linear movement. Explore different examples in moving toys. Through research, consider how the shape and size of different cams affect the movement.</p> <p>Design their own toy with a cam mechanism, considering function, appeal and ensuring it is fit for purpose. Communicate their design through annotated sketches.</p> <p>Follow their design to make their toy, using a range of tools and equipment accurately; selecting from appropriate materials according to their functional properties and aesthetic qualities.</p> <p>Evaluate the quality of the finished product against their own design criteria. Identify areas of strength and consider ways to improve their work.</p> <p>Lesson 1: What shapes and movement do different CAMs make?</p> <p>Lesson 2: What is the purpose of the guide and the follower in effective CAMs movements?</p> <p>Lesson 3: How will you use a CAM in your moving toy design?</p> <p>Lesson 4: How can you set up a work station and measure and cut safely and accurately ?</p> <p>Lesson 5: How effective was your finished product?</p>	<p>Link gears and cams mechanisms to their use in other everyday items such as bikes, clock mechanism.</p> <p>Able to predict the movement generated from more complicated cam shapes.</p> <p>Design their own cam shape</p> <p>Design incorporating multiple cams</p> <p>Develop and enhance the quality and accuracy of the finishing and decoration.</p>



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Year 5		
Key Theme : London Landmarks - CAD – ICT morphing image		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
Using a range of ICT software for different purposes Prior learning in maths investigating nets of different shapes	<p>In ICT develop skills using design software 'sketchup' What are nets and how can they be applied to design? Investigate nets of shapes and how they could be applied to their design (link to maths). Design their own London landmark, developing their own design criteria and considering the purpose of their building, using sketchup Construct their building selecting from a range of appropriate materials and tools - transferring their design to a model Evaluate their finished model against their own design criteria. Identify areas of strength and consider ways to improve their work.</p> <p>Lesson 1: What is the 2Design and Make tool? Lesson 2: How does the 2Design and Make tool work? (exploration stage) Lesson 3: Can you design a London landmark using sketchup? Lesson 4: Are you able to use 2Design and make to make a 3D model? Lesson 5: What went well and how you could improve your work?</p>	<p>Able to explore in depth the functionality of sketchup independently Able to predict/visualise the nets of more complex shapes Explains inspiration for design and justifies design choices and influences. During the making process, able to troubleshoot, and make adaptations during the making process that improve the outcomes. Evaluations make accurate assessments and suggestions for improvements come from an understanding of the research to make a good produce.</p>



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Year 6		
Key Theme : Earthquake proof structures		
Link to Year 6 geography unit on extreme earth		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
<p>Yr 5 Consider how to strengthen and build structures</p> <p>Yr 5 select appropriate materials according to their functional properties.</p> <p>Yr 5 select appropriate tools and techniques to strengthen and reinforce</p>	<p>Research different buildings around the world that have incorporated some form of design element to withstand the shaking and stresses from an earthquake. Can they identify any shapes used in their construction.</p> <p>Investigate and test a variety of different shapes, identifying the strongest shapes.</p> <p>Design their own earthquake proof building. Select appropriate materials and joining techniques from testing a range of prototypes, developing ways they could strengthen, stiffen and reinforce their building. Communicate their ideas through sketches and including cross-sectional diagrams.</p> <p>Make their building using a range of tools and equipment to cut and join accurately.</p> <p>Test and evaluate the effectiveness of their design. Identify areas of weakness and strength and suggest improvements.</p> <p>Lesson 1: How are buildings designed to make them earthquake proof?</p> <p>Lesson 2: How can materials be joined and shapes be strengthened?</p> <p>Lesson 3: How will you design a structure which is 3 storeys tall, free-standing and 'earthquake' proof?</p> <p>Lesson 4: How will you apply your skills to turn your design into reality?</p> <p>Lesson 5: Is your structure fit for purpose and how could you improve it?</p>	<p>Predict how different shapes react under different types of forces and stresses.</p> <p>Link to Yr 6 geography unit extreme earth - use their understanding of the forces, processes and mechanics of earthquakes to inform the design process.</p> <p>Identify, pre-empt and solve problems arising during construction, adjusting and adapting design as required.</p>



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Year 6		
Key Theme : Textiles – slippers		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
<p>Yr 5 explore and investigate a range of existing products, identifying design aspects and technical construction</p> <p>Y1 textiles sewing</p> <p>Sewing xmas decorations – Yr3? Yr 4?</p> <p>Yr 5 design an appealing functional product for a specific purpose considering end user, considering appropriate materials and tools</p> <p>Yr 5 make an appealing functional product for a specific purpose considering end user, considering appropriate materials and tools</p>	<p>Explore a range of slippers – who they are designed for, the function, the material used and the different parts.</p> <p>Explore the process of making slippers looking at paper patterns.</p> <p>Explore different sewing stitches – the function, purpose and practise sewing them.</p> <p>Design and plan their own slippers. Develop criteria to design an innovative, functional, and appealing product, aimed at a particular group or individual. Communicate their ideas through annotated sketches and generate pattern pieces.</p> <p>Make their slippers using a range of tools and equipment accurately; selecting from appropriate materials according to their functional properties and aesthetic qualities.</p> <p>Evaluate the quality of the finished product against their own design criteria. Identify areas of strength and consider ways to improve their work.</p> <p>Lesson 1: What makes a slipper fit for purpose? What is a pattern and how can you make it accurate?</p> <p>Lesson 2: What are the different stitches (running, backstitch and blanket) and how are these useful?</p> <p>Lesson 3: Can you design a slipper that is both functional and appealing?</p> <p>Lesson 4 and Lesson 5: Can you use your knowledge of stitches to join fabric and add decoration to make a slipper fit for purpose? Lesson 6: How would you improve your slipper?</p>	<p>Able to sew more complex stitches and identify and explain how and why they may suit other specific functions and purposes</p> <p>Design a more complicated pattern and incorporate design features to enhance the functionality of the finished product.</p> <p>Consider and develop other methods for joining to enhance the quality of the finished product.</p> <p>Develop and enhance the quality of the finishing and decoration – taking inspiration from other styles and designs, explaining their influence.</p> <p>Able to problem solve, enhance and adapt their plan and design as they make, explaining their reasoning and choices.</p>



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Year 6		
Key Theme : Cooking and nutrition - British dishes		
Previous Learning To be reinforced	Core Learning Intentions Age Related	Extension Opportunities Next steps
Yr 4 build on previous knowledge on seasonality Yr 3 use basic principles of a healthy diet Yr 4 plan and design a savoury dish Yr 4 weigh, mix ingredients, hygiene and safety in cooking (Xmas café cooking every year group)	Explore national savoury dishes of England, looking at its origin and consider how healthy it is. Explore national sweet dishes of England and look at how healthy it is consider sugars and natural sugars. Link to seasonal fruits. Explore national Scottish dishes looking at how crops are grown, harvested and processed. Design their own savoury dishes, selecting appropriate ingredients and applying the principles of a healthy and varied diet. Communicate their design appropriately. Prepare and cook a savoury dish using a range of cooking techniques. Weigh and mix ingredients accurately using appropriate equipment. Evaluate their dish for taste and appearance against their design criteria. Identify areas of strength and ways it could be improved. Lesson 1: What are the origins of some English savoury dishes and how healthy are they? How does seasonality impact these? Lesson 2: How are crops grown, harvested and processed in a Scottish dish? Lesson 3: How healthy (in terms of sugar) are some English national dishes? Lesson 4: Can you plan and cook a savoury Welsh dish, selecting and weighing ingredients accurately? Lesson 5: How could the taste or the appearance of your dish be improved?	Able to identify links between national dishes and their heritage and cultural development over time. Able to link seasonality to concepts in physical and human geography. Able to consider the different food groups and the nutritional value of different food items and ingredients using technical vocabulary such as macro and micro nutrients and links with science topics. Able to identify characteristics of different cooking methods and understand and explain the effect they may have on the finished product. Able to identify and explain how and why specific ingredients could be changed or replaced to enhance finished product.



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