

Design and Technology Medium Term Plan		
EYFS – Foundation Stage One		
Creating with Materials	Construction	
<p>Key Concept – Joining / Exploring Materials</p> <p>Curricular Goal: Pupils can explore simple joining techniques through a range of given materials in order to begin to develop their ideas</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to explore different materials freely, in order to develop their ideas about how to use them and what to make To be able to develop their own ideas and then decide which materials to use to express them To be able to join different materials and explore different textures <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know that materials can be joined together using different types of glue. Know that some materials won't attach with glue and tape would be needed instead. Know how to express themselves creatively and to begin to talk about their ideas</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> Use a range of materials, tape and glue to explore joining Use a glue stick and a spatula to apply glue in different ways</p> <p>Key Vocabulary Join, glue-stick, paper, PVA glue, spatula</p>	<p>Key Concept – Building</p> <p>Curricular Goal: Pupils can use a range of blocks and construction materials to build a range of 'small worlds' imaginatively</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park To be able to explore different materials freely, in order to develop their ideas about how to use them and what to make <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know how to stack blocks and arrange them to create imaginative and complex 'small worlds'. Know that blocks and construction kits can be used alongside other resources to explore ideas that can be shared</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> Use blocks and construction kits to explore shape and pattern Use blocks to stack horizontally, vertically, building bridges and creating enclosures Use blocks and construction kits to create more complex designs</p> <p>Key Vocabulary Stack, blocks, construction, shape, pattern, 'small worlds'</p>	
EYFS – Foundation Stage Two		
Creating With Materials		
<p>Links to prior learning: Pupils can explore simple joining techniques through a range of given materials in order to begin to develop their ideas / Pupils can use a range of blocks and construction materials to build a range of 'small worlds' imaginatively</p> <p>Key Concept – Joining / Exploring Materials / Safety</p> <p>Curricular Goal: Pupils can use their imaginations to create a final piece, joining a variety of materials together and explain what they have made and how</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture form and function To be able to share their creations, explaining the process they have used To be able to make use of props and materials when role-playing characters in narratives and stories. <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know that materials can be joined together using a variety of ways including; tape, Cello tape, glue, split pins, string and paper clips. Know that different materials may need alternative joining methods. Know how to use their imagination to create a final product by adding finishing techniques. Know how to use their creations in their own play.</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> Use a variety of joining techniques to successfully create a final design</p> <p>Key Vocabulary Cello tape, split pins, string, paper clips, joining methods, final creation</p>		
Year 1		
Textiles	Food Technology	Construction
<p>Links to prior learning: Pupils to recall that there are multiple methods of joining and each for a different purpose.</p> <p>Key Concept – Joining</p> <p>Curricular Goal: Pupils can design and make a book mark</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to think of my own ideas for a design product, following a criteria To be able to talk about own and pre-existing products saying what is good or bad about them To be able to use pictures and words when planning To be able to cut fabric correctly and safely using a given tool To be able to join fabrics together using glue and a running stitch <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know how to become a designer of a bookmark, understanding its purpose and what it is used for. Know how to talk about pre-existing products deciding what is good and bad about them. Know how to talk about own work once it is complete and talk about whether it fits the design brief. Know why a running stitch is used in products</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> Use a given tool to cut fabric for a bookmark Use glue and a running stitch to join materials together</p> <p>Key Vocabulary Bookmark, join, running stitch, design brief, fabric, product</p>	<p>Links to prior learning: Pupils to recall the importance of hand washing before handling food and eating. Pupils to also recall their knowledge of healthy eating and what might happen if you don't.</p> <p>Key Concept – Hygiene and Safety / Healthy</p> <p>Curricular Goal: Pupils can combine ingredients to make a sandwich for a celebration picnic</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to think of my own ideas for a design product, following a criteria To be able to talk about own and pre-existing products saying what is good or bad about them To be able to use pictures and words when planning To be able to cut, peel and grate ingredients safely and hygienically To know that food originates from places other than a shop. <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know about healthy food products and why they are important to eat. Know about a celebration picnic and the types of foods people might take on them. Know how to prepare food hygienically and safely in order to create a sandwich. Know how to talk about pre-existing products deciding what is good and bad about them. Know how to talk about own work once it is complete and talk about whether it fits the design brief. Know ingredients are combined to make a food product. Know that food comes from different places.</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> Use appropriate tools to cut, peel and grate ingredients safely</p> <p>Key Vocabulary design brief, product, healthy foods, celebration, picnic, cut, peel, grate, hygiene, safety, ingredients, sandwich</p>	<p>Links to prior learning: Pupils can recall how to build using different construction sets ensuring the build is stable.</p> <p>Key Concept – Strengthening</p> <p>Curricular Goal: Pupils can design and construct a maze toy with a travelling sphere</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to think of my own ideas for a design product, following a criteria To be able to talk about own and pre-existing products saying what is good or bad about them To be able to use pictures and words when planning To be able to make a maze toy with a travelling sphere To be able to make a product stronger <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know what the key features of a maze are and how a maze can be turned into a 3D toy. Know how to strengthen their work in order for the toy to be played with. Know how to talk about pre-existing products deciding what is good and bad about them. Know how to talk about own work once it is complete and talk about whether it fits the design brief.</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> Use appropriate tools to cut and join materials together in order to build and strengthen</p> <p>Key Vocabulary design brief, product, maze, 3D toy, strengthen, model, sphere</p>
Year 2		
Textiles	Food Technology	Construction

<p>Links to prior learning: Pupils can recall how to join materials in different ways including using running stitch.</p> <p>Key Concept – Joining</p> <p>Curricular Goal: Pupils can design and make bunting for a purpose.</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to think of my own ideas for a design product following a criteria and plan what to do next To be able to describe how own and pre-existing products work, evaluating what went well and what could be done differently To be able to plan a design using pictures, diagrams, models, mock-ups, words and ICT To be able to cut and join textiles together using a running stitch, over sewing or glue To be able to decorate using a range of items including buttons, sequins, beads and ribbons <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> <u>Know how to become a designer of bunting understanding its purpose and why it is used for celebrations. Know that products are made for different contexts and audiences and how this might affect their design choice. Know how to describe and evaluate how their own and pre-existing products work suggesting what went well and what could be done differently</u></p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Use tools to cut and join textiles to create bunting</u> <u>Use running stitch, over-sewing or glue to join materials together</u> <u>Use joining techniques to add decoration</u></p> <p>Key Vocabulary Bunting, celebration, describe, evaluate, over-sewing, decoration, design brief, audience</p>	<p>Links to prior learning: Pupils can recall ways to be hygienic and keep safe in a kitchen handling tools safely.</p> <p>Key Concept – Hygiene and Safety</p> <p>Curricular Goal: Pupils can design and bake a biscuit beginning to explain what went well and what could be done differently</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to think of my own ideas for a design product following a criteria and plan what to do next To be able to describe how own and pre-existing products work, evaluating what went well and what could be done differently To be able to plan a design using pictures, diagrams, models, mock-ups, words and ICT To be able to weigh ingredients to use in a recipe To be able to prepare food safely and hygienically and describe what this means To be able to rub butter and flour together to make a biscuit To be able to identify the original sources of some common foods. <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> <u>Know how to describe what it means to prepare food hygienically and safely when making a biscuit. Know what a recipe is and the importance of following the instructions. Know that products are made for different contexts and audiences and how this might affect their design choice. Know how to describe and evaluate how their own and pre-existing products work suggesting what went well and what could be done differently. Know flour comes from grain, butter from milk from the cow.</u></p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Use a recipe to make a product</u> <u>Use scales appropriately to weigh ingredients</u> <u>Use the rubbing-in method</u></p> <p>Key Vocabulary Recipe, weighing, scales, biscuit, bake, ingredients, rubbing-in, describe, evaluate, audience</p>	<p>Links to prior learning: Pupils can recall ways to strengthen a product they have made and ensure it fits the design brief.</p> <p>Key Concept – Strengthening</p> <p>Curricular Goal: Pupils can plan, design and construct a moving vehicle using wheels and axles beginning to explain what went well and what could be done differently</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to think of my own ideas for a design product for myself following a criteria and plan what to do next To be able to describe how own and pre-existing products work, evaluating what went well and what could be done differently To be able to plan a design using pictures, diagrams, models, mock-ups, words and ICT To be able to construct a vehicle using wheels and axles To be able to make a model stronger and more stable <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> <u>Know what a vehicle is and how it moves. Know and understand the role wheels and axles have in making a vehicle move. Know how to make the vehicle more stable using strengthening techniques. Know that products are made for different contexts and audiences and how this might affect their design choice. Know how to describe and evaluate how their own and pre-existing products work suggesting what went well and what could be done differently.</u></p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Use appropriate tools to cut and join materials, including wood, together</u> <u>Use appropriate methods to attach wheels and axles correctly</u> <u>Use a saw and sandpaper safely during the making process</u></p> <p>Key Vocabulary Vehicle, wheel, axle, stable, saw, sandpaper, describe, evaluate, audience</p>
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Year 3

Textiles	Food Technology	Construction
<p>Links to prior learning: Pupils can recall how to join materials together using a range of stitches including running stitch and over sewing. Pupils can recall the benefits of evaluation and how this can help us in our practise.</p> <p>Key Concept – Joining</p> <p>Curricular Goal: Pupils can plan, design and make a sash for a purpose evaluating their own and pre-existing products</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to create a design that meets a range of requirements considering the equipment and tools needed when planning To be able to evaluate own and pre-existing products, suggesting what could be changed to improve a design, beginning to link this to a design brief To be able to plan a design using an accurately labelled diagram, models, mock-ups and in words To be able to accurately measure, mark out, cut and join materials together using a running stitch, over-sewing and back stitch. To be able to decorate by selecting items with differing textures and properties considering their influence on the final product <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> <u>Know how to consider the equipment and tools needed during the planning and making process. Know that products are made for different contexts and audiences and how this might affect their design choice. Know how to evaluate their own and pre-existing products work suggesting improvements that could be made linking to the design brief</u></p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Use some accuracy when measuring, marking out, assembling and joining materials</u> <u>Use a range of tools to accurately cut and join textiles to create a sash</u> <u>Use running stitch, over-sewing and back-stitch to join materials together</u> <u>Use joining techniques to add decoration</u></p> <p>Key Vocabulary Sash, back-stitch, accurately, evaluate, measuring, marking-out, textures, properties, assembling</p>	<p>Links to prior learning: Pupils can recall ways to be hygienic and keep safe in a kitchen handling tools and appliances safely. Pupils can recall the importance of following a recipe and instructions when cooking. Pupils can begin to explain what went well and what could be done differently.</p> <p>Key Concept – Hygiene and Safety / Healthy</p> <p>Curricular Goal: Pupils can follow a recipe to bake bread, evaluating their own and pre-existing products</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to create a design that meets a range of requirements considering the equipment and tools needed when planning To be able to evaluate own and pre-existing products, suggesting what could be changed to improve a design, beginning to link this to the design brief To be able to plan a design using an accurately labelled diagram, models, mock-ups and in words To be able to prepare food safely and hygienically and explain what this means To be able to weigh out ingredients and follow a given recipe to bake bread To be able to knead and shape dough to bake bread <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> <u>Know the origins of flour and how it is made. Know that bread is a carbohydrate and it is part of a healthy diet. Know how to follow a given recipe accurately when making bread and why this is important. Know how to consider the equipment and tools needed during the planning and making process. Know that products are made for different contexts and audiences and how this might affect their design choice. Know how to evaluate their own and pre-existing products, suggesting improvements that could be made linking to the design brief</u></p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Follow a recipe accurately</u> <u>Use the kneading process of working a dough mixture</u> <u>Use scales accurately to weigh ingredients</u></p> <p>Key Vocabulary Dough, wheat, flour, yeast, carbohydrate, knead, shape, accurately, evaluate, measuring, textures, properties</p>	<p>Links to prior learning: Pupils can recall how to plan, design and construct a product safely using strengthening techniques to ensure their product is stable. Pupils can begin to explain what went well and what could be done differently.</p> <p>Key Concept – Strengthening</p> <p>Curricular Goal: Pupils can investigate how to strengthen a bridge by stiffening a given part, or reinforcing a part of the structure and evaluate how successful this was</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to create a design that meets a range of requirements considering the equipment and tools needed when planning To be able to evaluate their own and pre-existing products, suggesting what could be changed to improve a design, beginning to link this to the design brief To be able to plan a design using an accurately labelled diagram, models, mock-ups and in words To be able to strengthen a product using a range of stiffening or reinforcing techniques To be able to use the ‘Cargo Bridge’ software to explore strengthening techniques <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> <u>Know the importance of strengthening a structure understanding what would happen if this did not take place. Know a variety of techniques that can be used to strengthen a final product. Know how software can be used to aid in the design process. Know how to consider the equipment and tools needed during the planning and making process. Know that products are made for different contexts and audiences and how this might affect their design choice. Know how to evaluate their own and pre-existing products work suggesting improvements that could be made linking to the design brief.</u></p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Use accuracy when measuring, marking out, assembling and joining materials</u> <u>Use a saw, sandpaper and a glue gun safely during the making process</u> <u>Use appropriate stiffening or reinforcing techniques</u></p> <p>Key Vocabulary saw, sandpaper, glue gun, software, reinforcing, stiffening, accurately, evaluate, measuring, marking-out, textures, properties, assembling</p>

Year 4

Textiles	Food Technology	Construction
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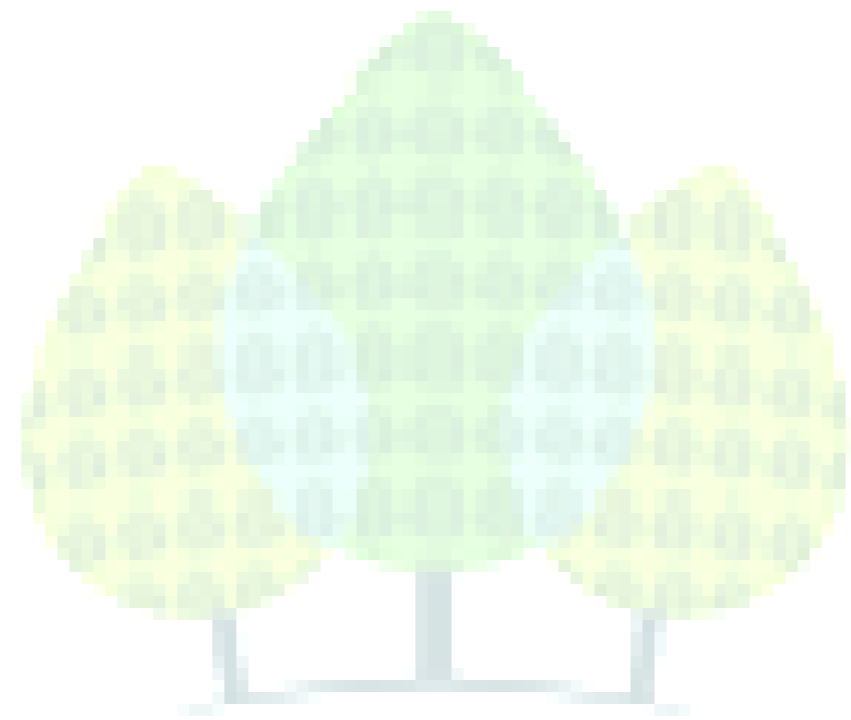
<p>Links to prior learning: Pupils can recall how to join materials together using a range of stitches including running stitch, over sewing and back stitch. Pupils can recall the benefits of evaluating their own and pre-existing products in the creation process.</p> <p>Key Concept – Joining</p> <p>Curricular Goal: Pupils can plan and design a panel for a patchwork quilt evaluating the appearance and usability of their own and pre-existing products</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to generate more than one idea for how to create a product To be able to gather information to help design a successful product by asking other’s views To be able to suggest improvements to develop and refine a planned idea To be able to produce a detailed plan with labelled diagrams, a written explanation and a step-by-step guide To be able to evaluate the appearance and usability of own and pre-existing products explaining how the design could be improved linking to the design brief To be able to accurately measure, mark out, cut and join materials together using a running stitch, over-sewing, back stitch or fastenings To be able to measure objects to apply using an applique <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know the importance of working as a team and how this can help on larger projects. Know what a patchwork quilt is and the stages involved in making it. Know how to use people’s opinions to influence the design process. Know how to evaluate the appearance and usability of their own and pre-existing products explaining improvements that could be made linked to the design brief. Know the value of generating multiple ideas in the creative process</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Use accuracy when measuring, marking out, assembling and joining materials</u> <u>Use a range of tools to accurately cut and join textiles to create a patchwork quilt</u> <u>Use running stitch, over-sewing, back-stitch and fastenings to join materials together</u> <u>Use applique to add decoration</u></p> <p>Key Vocabulary Patchwork, teamwork, fastenings, applique, market research, collaborative</p>	<p>Links to prior learning: Pupils can recall ways to be hygienic and keep safe in a kitchen handling tools and appliances safely. Pupils can recall the importance of following a recipe and instructions accurately when cooking. Pupils can recall the benefits of evaluating their own and pre-existing products to suggest improvements for future practise.</p> <p>Key Concept – Hygiene and Safety</p> <p>Curricular Goal: Pupils cake bake a cake Pupils can select ingredients to influence the flavour and presentation of a cake evaluating the appearance of own and others</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to generate more than one idea for how to create a product To be able to gather information to help design a successful product by asking other’s views To be able to suggest improvements to develop and refine a planned idea To be able to produce a detailed plan with labelled diagrams, a written explanation and a step-by-step guide To be able to evaluate the appearance and usability of own and pre-existing products explaining how the design could be improved linking to the design brief To be able to prepare food safely and hygienically and explain what this means To be able to weigh out ingredients and follow a given recipe to bake a cake To be able to cream butter and sugar together To be able to select ingredients to influence the flavour and presentation of a cake <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know the importance of appearance and flavour when designing and baking a cake. Know how to use people’s opinions to influence the design process. Know how to follow a given recipe accurately when baking a cake. Know how to evaluate the appearance and usability of their own and pre-existing products explaining improvements that could be made linked to the design brief. Know the importance of generating multiple ideas in the creative process</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Follow a recipe accurately</u> <u>Use the creaming method to combine ingredients</u> <u>Use scales accurately to weigh ingredients</u></p> <p>Key Vocabulary Cake, cream, flavour, appearance, presentation, market research, collaborative</p>	<p>Links to prior learning: Pupils can recall how to plan, design and construct a product safely using appropriate equipment and tools. Pupils can recall how software can be used to aid in the design process. Pupils can recall the benefits of evaluating their own and pre-existing products to suggest improvements for future practise</p> <p>Key Concept – Technology</p> <p>Curricular Goal: Pupils can create an alert system for an avalanche using the Crumble Kit evaluating the usability of the product</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to generate more than one idea for how to create a product To be able to gather information to help design a successful product by asking other’s views To be able to suggest improvements to develop and refine a planned idea To be able to produce a detailed plan with labelled diagrams, a written explanation and a step-by-step guide To be able to evaluate the appearance and usability of own and pre-existing products explaining how the design could be improved linking to the design brief To be able to use the Crumble Kit to create an alert system linking in scientific knowledge of lights, switches and buzzers <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know what an alarm is and why they are used. Know how to apply their Geography knowledge to the brief. Know some of the uses of ICT in construction and the benefits these can have. Know the components of a circuit. Know how to use people’s opinions to influence the design process. Know how to evaluate the appearance and usability of their own and pre-existing products explaining improvements that could be made linked to the design brief. Know the importance of generating multiple ideas in the creative process</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Use the Crumble Kit accurately to create an alert system</u> <u>Use the Crumble Kit to construct a circuit accurately</u></p> <p>Key Vocabulary Alarm, alert system, Crumble Kit, circuit, light switch, buzzer, avalanche, collaborative</p>
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Year 5		
Textiles	Food Technology	Construction
<p>Links to prior learning: Pupils can recall how to join materials together using a range of stitches including running stitch, over sewing, back stitch and applique. Pupils can recall the benefits of evaluating the appearance and usability of their own and pre-existing products.</p> <p>Key Concept – Joining</p> <p>Curricular Goal: Pupils can plan, design and make a bracelet ensuring it is fit for purpose whilst considering the aesthetic qualities and functionality.</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to generate a range of ideas after collating relevant user views To be able to produce a detailed plan with step-by-step instructions, cross sectional diagrams and prototypes To be able to suggest alternative plans considering the positive aspects and drawbacks of each To be able to consider the aesthetic qualities and functionality of my own work To be able to evaluate the appearance and function of own and pre-existing products against the original criteria saying whether it is fit for purpose and explaining how the design could be improved considering materials and methods used To be able to measure and cut materials with precision To be able to use and apply previous taught stitches and learn a blanket stitch To be able to join materials with temporary, fixed and moving joints <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know which factors in the design process need to be considered when creating a product to sell. Know the main features of a bracelet and why these need to be included in the design. Know how to use people’s opinions to influence the design process. Know how to evaluate the appearance and function of their own and pre-existing products explaining whether it is fit for purpose and what that entails. Know the importance of generating multiple ideas in the creative process</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Use precision when measuring, marking out, assembling and joining materials</u> <u>Use a range of tools with precision to cut and join textiles to create a bracelet</u> <u>Use running stitch, over-sewing, back-stitch and blanket stitch to join materials together with temporary, fixed and moving joints</u></p> <p>Key Vocabulary Bracelet, aesthetic qualities, functionality, user views, cross-sectional diagram, prototype, fit for purpose, blanket stitch, precision</p>	<p>Links to prior learning: Pupils can recall ways to be hygienic and keep safe in a kitchen handling raw food, tools and appliances safely. Pupils can recall the importance of following a recipe and instructions accurately when cooking. Pupils can recall the benefits of evaluating the appearance and usability of their own and pre-existing products.</p> <p>Key Concept – Hygiene and Safety / Healthy</p> <p>Curricular Goal: Pupils can make a sausage roll observing the correct food hygiene processes and assess any improvements in practice that could have been made</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to generate a range of ideas after collating relevant user views To be able to produce a detailed plan with step-by-step instructions, cross sectional diagrams and prototypes To be able to suggest alternative plans considering the positive aspects and drawbacks of each To be able to use a range of tools and equipment precisely To be able to consider the aesthetic qualities and functionality of my own work when making To be able to evaluate the appearance and function of own and pre-existing products against the original criteria saying whether it is fit for purpose explaining how the design could be improved considering materials and methods used To be able to handle and cook raw meat in accordance with food hygiene guidance To be able to make pastry and combine with a suitable filling to make rolls <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know the dangers of mishandling raw meat and why this should be avoided. Know a range of products where pastry is the key ingredient and that this can be sweet or savoury. Know how to use people’s opinions to influence the design process. Know how to evaluate the appearance and function of their own and pre-existing products explaining whether it is fit for purpose and what that entails. Know the importance of generating multiple ideas in the creative process</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Follow a recipe precisely</u> <u>Use the correct food hygiene processes when handling raw meat</u> <u>Use scales accurately to weigh ingredients</u> <u>Use taught skills to combine ingredients to make pastry</u></p> <p>Key Vocabulary Food hygiene, risk, raw meat, sweet, savoury, pastry, cross-sectional diagram, prototype, precision</p>	<p>Links to prior learning: Pupils can recall how to plan, design and construct a product safely using appropriate equipment and tools. Pupils can recall how the Crumble Kit can be used to aid in the design and creation process. Pupils can recall the benefits of evaluating the appearance and usability of their own and pre-existing products.</p> <p>Key Concept – Technology</p> <p>Curricular Goal: Pupils can construct a vehicle with safety features using the Crumble Kit whilst considering its functionality and assessing whether it is fit for purpose</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to generate a range of ideas after collating relevant user views To be able to produce a detailed plan with step-by-step instructions, cross sectional diagrams and prototypes To be able to suggest alternative plans considering the positive aspects and drawbacks of each To be able to use a range of tools and equipment precisely To be able to consider the aesthetic qualities and functionality of my own work To be able to evaluate the appearance and function of own and pre-existing products against the original criteria saying whether it is fit for purpose explaining how the design could be improved considering materials and methods used To be able to use the Crumble Kit to construct a vehicle with safety features linking in scientific knowledge of motors To be able to evaluate the effectiveness of a design (via blogging) <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> Know alternative means of powering a vehicle and the benefits of these. Know a range of safety features on a vehicle and how these could be incorporated into a design. Know how to use a more complex ICT program in construction and how this can enhance the quality of the product. Know how a blog can be used in the evaluation process. Know how to use people’s opinions to influence the design process. Know how to evaluate the appearance and function of their own and pre-existing products explaining whether it is fit for purpose and what that entails. Know the importance of generating multiple ideas in the creative process</p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>Use the Crumble Kit accurately to create a wind up vehicle with safety features</u> <u>Use the Crumble Kit to construct a circuit accurately with a motor</u> Use a blog for evaluation</p> <p>Key Vocabulary Electric, wind up vehicle, safety features, Crumble Kit, motor, blog, prototype, precision, fit for purpose,</p>

Year 6		
Textiles	Food Technology	Construction
<p>Links to prior learning: Pupils can recall how to join materials together using a range of stitches including running stitch, over sewing, back stitch, applique and blanket stitch. Pupils can recall the benefits of evaluating the appearance and usability of their own and pre-existing product and assessing whether the product is fit for purpose.</p> <p>Key Concept – Joining</p> <p>Curricular Goal: Pupils can work within a budget to produce a cushion for commercial use - justifying their choices based upon sustainability, functionality and costing</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to use market research to inform and produce a detailed design plan with cross-sectional diagrams and computer generated designs, working within constraints and refining and justifying plans as necessary To be able to use a range of tools and equipment with precision and skill To be able to continually assess the aesthetic qualities and functionality of the product during the making phase, refining details as necessary To be able to evaluate the appearance and test the function of own and pre-existing products against the original criteria saying whether it is fit for purpose, explaining how the design could be improved considering materials, methods, sustainability and the production cost To be able to cut materials with precision and skill to refine the finish To be able to use patterns and seam allowances when joining fabrics to make quality products To be able to work within a budget to make a commercial product <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> <u>Know what a budget is and why it is important for businesses to stay within it. Know which factors in the design process need to be considered when creating a commercial product how this differs from a product made for personal use. Know what sustainability is and why this is important in society. Know how to evaluate the appearance and test the function of their own and pre-existing products justifying whether it is fit for purpose considering materials, methods, sustainability and production costs</u></p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> <u>When joining materials together pin and tack fabrics before using previously taught stitches</u> <u>Use a range of tools with precision and skill cut and join materials to create a cushion</u> Use a budget to create a commercial product</p> <p>Key Vocabulary Market research: surveys, interviews, questionnaires, web-based resources, business, expertise, budget, commercial use, sustainability, functionality, costing, computer generated designs, refine, patterns, seam allowances, pin and tack, expertly</p>	<p>Links to prior learning: Pupils can recall ways to be hygienic and keep safe in a kitchen handling raw food, tools and appliances safely. Pupils can recall the importance of following a recipe and instructions accurately when using a range of cooking methods. Pupils can recall the benefits of evaluating the appearance and usability of their own and pre-existing product and assessing whether the product is fit for purpose.</p> <p>Key Concept – Hygiene and Safety / Healthy</p> <p>Curricular Goal: Pupils can work within a budget to safely produce a two course meal for guests justifying their choices based upon sustainability, costing and aesthetic qualities.</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to use market research to inform and produce a detailed design plan with cross-sectional diagrams and computer generated designs, working within constraints and refining and justifying plans as necessary To be able to use a range of tools and equipment with precision and skill To be able to continually assess the aesthetic qualities and functionality of the product during the making phase, refining details as necessary To be able to evaluate the appearance and test the function of own and pre-existing products against the original criteria saying whether it is fit for purpose, explaining how the design could be improved considering materials, methods, sustainability and the production cost To be able to explain how food ingredients should be stored and give reasons To be able to work within a budget to create a two course meal To be able to understand the difference between a sweet and a savoury dish <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> <u>Know what a budget is and why it is important to stay within it. Know the importance of storing food ingredients correctly. Know and understand the difference between a sweet and a savoury dish and when you have one of each this is considered a two course meal. Know how to evaluate the appearance of their own and pre-existing products justifying whether it is fit for purpose considering ingredients, methods, sustainability and production costs</u></p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> Use and apply previously taught skills to plan a meal with two courses <u>Use scales precisely to weigh ingredients</u> <u>Use the correct food hygiene procedure when preparing food</u></p> <p>Key Vocabulary Market research: surveys, interviews, questionnaires, web-based resources, sustainability, costing, budget, expertise, two course meal, sweet and savoury, methods, store</p>	<p>Links to prior learning: Pupils can recall how to plan, design and construct a product safely. Pupils can recall how to use appropriate equipment and tools in order to strengthen and reinforce a product. Pupils can recall how the Crumble Kit can be used to aid in the design and creation process. Pupils can recall the benefits of evaluating the appearance and usability of their own and pre-existing product and assessing whether the product is fit for purpose.</p> <p>Key Concept – Strengthening / Technology</p> <p>Curricular Goal: Pupils can construct a WWII moving vehicle considering the strength of the product and enhancing with an electrical system using the Crumble Kit justifying their choices based upon its functionality</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> To be able to use market research to inform and produce a detailed design plan with cross-sectional diagrams and computer generated designs, working within constraints refining and justifying plans as necessary To be able to use a range of tools and equipment with precision and skill To be able to continually assess the aesthetic qualities and functionality of the product during the making phase, refining details as necessary To be able to evaluate the appearance and test the function of own and pre-existing products against the original criteria saying whether it is fit for purpose, explaining how the design could be improved considering materials, methods, sustainability and the production cost To be able to use the Crumble Kit to construct a moving model that fulfils a design criteria that can be enhanced with electrical systems To be able to improve the product by strengthening, stiffening and reinforcing <p>Substantive Knowledge (Sticky Knowledge) <i>(To know and remember)</i> <u>Know why market research is important in the design process. Know different ways a vehicle can be strengthened, stiffened or reinforced. Know which ICT product would further enhance the quality of a specific product. Know how to evaluate the appearance and test the function of their own and pre-existing products justifying whether it is fit for purpose considering materials, methods, sustainability and production costs.</u></p> <p>Disciplinary Knowledge <i>(Being a Designer)</i> Use the Crumble Kit precisely to create a WWII moving vehicle <u>Use the Crumble Kit to construct an electrical system</u></p> <p>Key Vocabulary Market research: surveys, interviews, questionnaires, web-based resources, expertise, WWII, combat, reinforcing, stiffening, strengthening,</p>

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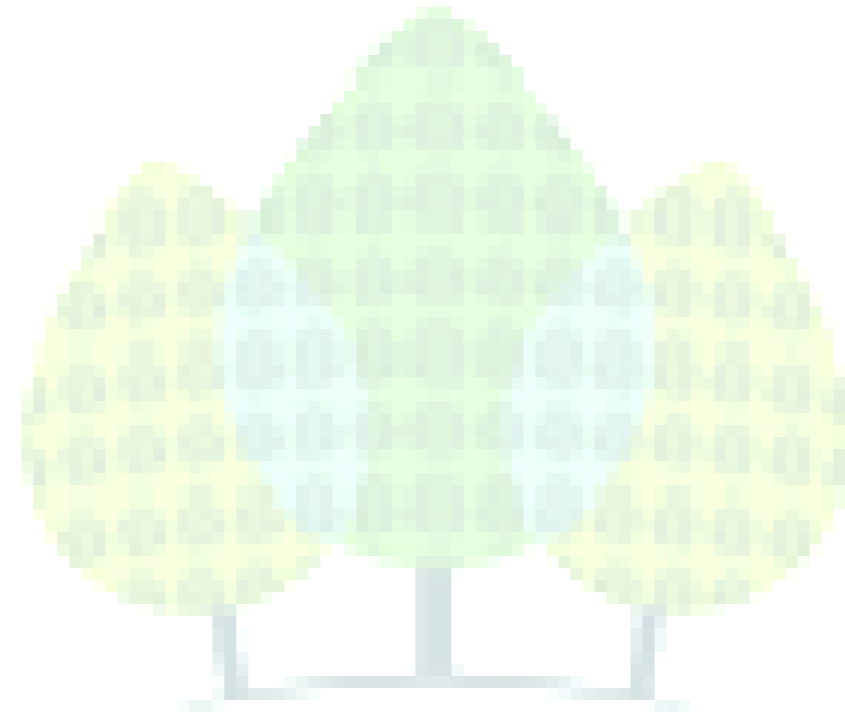


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Design & Technology						
ASD	Working Memory	Dyslexia	SEMH	Speech Language & Communication	Physical Difficulties	Hearing Impaired
<p>Support could include: " carrying out activities by following the pupil's instructions " specific support so that pupils can engage in certain practical activities, eg translating design ideas into a drawing.</p> <p>Additional adults should promote pupils' independence by giving guidance and asking questions that enable pupils to: " think for themselves – pupils should not always be following a designing and making process step by step, with the teacher/ additional adult doing most of the thinking, and " perform tasks for themselves – there is a fine line between intervention and taking over a pupil's project. Additional adults should be clear about: " the order and importance of processes in a task " the skills and knowledge they must promote, and " the health and safety rules, eg basic food hygiene.</p> <p>Pupils could contribute to product evaluation, where appropriate, using simple choice cards with words and/or symbols, eg for like/dislike, simple ranking or recording sheets.</p> <p>Break down the designing and making stages into small manageable steps, and incorporate designing into 'mini making' tasks with specific targets. Use a tick list or wallchart so that pupils are clear about what they are working towards and how far they have got in relation to completing the project.</p>	<p>Prepare visual prompts, using images, photos or symbols, showing the order to carry out a sequence of activities for a particular process. Checklists allow pupils to see what they have completed, what to do next and where to finish.</p> <p>Using digital cameras to record each stage of designing and making, then sequencing the photos, can be a useful tool to aid pupils' memory of the stages of completing the work. Display step-by-step reminders of key processes. Regularly repeat and reinforce previously learnt skills and processes.</p>	<ul style="list-style-type: none"> Prepare visual prompts, using images, photos or symbols, showing the order to carry out a sequence of activities for a particular process. Checklists allow pupils to see what they have completed, what to do next and where to finish. ICT can: " help pupils model ideas and design products – eg using graphics, computer-aided design (CAD) software or spreadsheets " support making activities using computer-aided manufacturing (CAM) equipment such as embroidery machines, plotter/ cutters etc, and " be used to develop symbol-supported recipes or instruction. Clarify technical terms that have different meanings in other contexts, for example 'knead'/'need', 'grain', 'glaze', 'form', 'saw', 'seam', etc. Labels placed around the room, lists of key words, posters, etc can help pupils to recognise and spell the names of important pieces of equipment. Flow diagrams of key processes, time plans or design prompts with graphics may also be helpful. Ask pupils open-ended questions at first, for example to elicit original ideas and get a feel for their level of experience – eg "Has anybody got any ideas of other foods we could add to this bread to make it different?" If ideas are not forthcoming or are limited, have real examples ready. 	<ul style="list-style-type: none"> Break down the designing and making stages into small manageable steps, and incorporate designing into 'mini making' tasks with specific targets. Use a tick list or wallchart so that pupils are clear about what they are working towards and how far they have got in relation to completing the project. Short, focused practical tasks (FPTs) are closely structured and led by the teacher. They allow pupils to practise and succeed in one or more design and technology processes. They build pupils' confidence and can give them ideas for their design – eg doing a series of biscuit-making activities before pupils consider how to design and make a new biscuit. These 'mini making' activities are highly motivating for pupils as they can see the results of their progress and efforts immediately. Design and make assignments give pupils the chance to put their knowledge and skills to the test in meeting challenges that address real needs and wants, and to apply design ideas and concepts in real and practical ways. If pupils only produce few or stereotypic ideas because they do not want to risk failure, provide plenty of stimuli, ideas and alternatives, including design solutions. These stimuli might include: " FPTs (see above) " visits as a stimulus for design contexts " experts working alongside pupils (make sure they are well briefed), and " tasks related to pupils' hobbies, interests and strengths. Some pupils could join a project part-way through, eg after the research is complete, so they can get into modelling and making more quickly. Where pupils' experience is limited, ask them to adapt, make improvements or add a new feature to the design of an existing product rather than 'invent' a whole new product. Devise activities for some pupils based on their strengths and successes. For example, this may mean centring activities around 'making', and letting other important processes be incorporated through and around making – for example, using three-dimensional 'mock-ups' rather than drawings. When a pupil only wants to 'make', choose a task 	<ul style="list-style-type: none"> Prepare visual prompts, using images, photos or symbols, showing the order to carry out a sequence of activities for a particular process. Checklists allow pupils to see what they have completed, what to do next and where to finish. ICT can: " help pupils model ideas and design products – eg using graphics, computer-aided design (CAD) software or spreadsheets " support making activities using computer-aided manufacturing (CAM) equipment such as embroidery machines, plotter/ cutters etc, and " be used to develop symbol-supported recipes or instruction Clarify technical terms that have different meanings in other contexts, for example 'knead'/'need', 'grain', 'glaze', 'form', 'saw', 'seam', etc. Labels placed around the room, lists of key words, posters, etc can help pupils to recognise and spell the names of important pieces of equipment. Flow diagrams of key processes, time plans or design prompts with graphics may also be helpful. Ask pupils open-ended questions at first, for example to elicit original ideas and get a feel for their level of experience – eg "Has anybody got any ideas of other foods we could add to this bread to make it different?" If ideas are not forthcoming or are limited, have real examples ready. Pupils could contribute to product evaluation, where appropriate, using simple choice cards with words and/or symbols, eg for like/dislike, simple ranking or recording sheets. 	<ul style="list-style-type: none"> Use systems such as racks so that items such as tools can be found and put away easily. To make tasks accessible, pupils use, where appropriate: " specialist aids – eg talking weighing scales, jigs to aid cutting, templates, patterns, ready-made parts, kettle tipping devices, sprung or electric scissors, and " generic aids – eg jumbo pencils if hand control is weak, non-slip mats (dycem) to hold papers, books and equipment in place, BluTac to hold small items or as a temporary fixing (eg for rulers when drawing). 	<ul style="list-style-type: none"> video presentations have subtitles for deaf or hearing impaired pupils and those with communication difficulties, where required.

			that will only work if some designing is done.			
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