

BOSTON WEST ACADEMY

DT KNOWLEDGE PROGRESSION OVERVIEW

Y1-Y6



DT Year 1		
Throughout the year children will gain knowledge on how to design products that have a clear purpose and intended user. They will know how to make products, refining the design as work progresses. They will know how to cut, peel or grate ingredients safely and hygienically. Children will know how to measure and weigh using measuring scales and electronic scales. They will know how to assemble and cook ingredients.		
<p>Term 1/2</p> <p>Mechanical unit Children will know how to use levers and sliders</p> <p>Structures unit Children will know strategies to build a strong structure Homes – Unit 1D Children will know how to build a shelter OL link Children will know how to knot a shoelace and granny knot</p>	<p>Prior Learning:</p> <p>Children will know how to construct with a purpose in mind, using a variety of resources. Children will know how to explore different materials freely, in order to develop their ideas about how to use them and what to make. Children will know how to develop their own ideas and then decide which materials to use to express them. Children will know how to use a range of small tools, including scissors, paintbrushes and cutlery.</p>	<p>Next Steps:</p> <p>Structures unit Children will know about the structure of the Eiffel tower and Gustave Eiffel. Children will know about strengthening structures by adding triangles to strengthen corners. Children will know how to build a strong stable structure.</p> <p>Mechanical unit Children will know how to use levers, sliders, wheels and axles Unit 2A Vehicles</p>
<p>Term 3/4</p> <p>Food Children will know where certain food comes from. Children will know how to follow instructions given one step at a time. Children will know how to spread soft ingredients with a butter knife. Children will know how to mix, whisk, rub and knead Children will know how to crush soft fruit with a potato masher or fork.</p>	<p>Children will know how to make things work by pressing parts or lifting flaps to achieve effects, such as sound, movements or new images</p>	<p>Food unit Children will know how to follow simple instructions supported by an adult. Children will know how to use a peeler with support. Children will know how to use a grater to grate soft foods such as cheese and cucumber. Children will know how to use a table knife safely.</p>
<p>Term 5/6</p> <p>Textiles unit Children know how to sew with a big needle Children will know how to sew onto binka using a running stitch. Children will know how to thread through holes OL link</p>		<p>Textiles unit Children will know how to sew with a large eyed needle. Children will know how to do a running stitch and cross stitch on binka. Children will know how to use a running stitch to join two pieces of felt. Children will know how to attach sequins and buttons.</p>
<p>Throughout each unit the design, make, evaluate process should be followed.</p>		

<p>Design</p> <p>Children will know how to design products for a reason.</p> <p>Children will be able to tell people about their ideas.</p>	<p>Make</p> <p>Children will know how to choose appropriately from a variety of equipment and materials to meet a design brief.</p>	<p>Evaluate</p> <p>Children will know how to evaluate their ideas and their final piece.</p>
<p>Vocabulary</p>		
<p>design equipment evaluate Levers sliders structure Instructions ingredients mix whisk rub knead</p> <p>Needle binka thread running stitch</p>		
<p>DT Year 2</p>		
<p>Throughout the year children will gain knowledge on how to design products that have a clear purpose and intended user. They will know how to make products, refining the design as work progresses. They will know how to cut materials safely using tools provided. They will know how to measure and mark out to the nearest centimetre. They will know how to demonstrate a range of cutting and shaping techniques such as tearing, cutting and folding and curling along with a range of joining techniques such as gluing, hinges or combining materials to strengthen. They will know how to create products using levers, wheels and winding mechanisms. Children will know how to use templates to make shapes and join textiles using running stitch. They will know how to decorate textiles by attaching decorations and buttons. Children will know how to use the basic principles of a healthy varied diet to prepare dishes. Children will learn to understand where food comes from.</p>		
<p>Term 1/2</p> <p>Structures unit</p> <p>Children will know about the structure of the Eiffel tower and Gustave Eiffel.</p> <p>Children will know about strengthening structures by adding triangles to strengthen corners.</p> <p>Children will know how to build a strong stable structure.</p>	<p>Prior Learning:</p> <p>Structures unit</p> <p>Children will know strategies to build a strong structure</p> <p>Homes – Unit 1D</p> <p>Children will know how to build a shelter OL link</p>	<p>Next Steps:</p> <p>Structures unit</p> <p>Children will know how to build a more complex structure – reinforced Roman fort</p> <p>Children will know how to build a lean to shelter OL</p> <p>Children will know how to make a shelter using natural resources – celtic round house OL</p>
<p>Term 3/4</p> <p>Food unit</p> <p>Children will know how to follow simple instructions supported by an adult.</p> <p>Children will know how to use a peeler with support.</p> <p>Children will know how to use a grater to grate soft foods such as cheese and cucumber.</p> <p>Children will know how to use a table knife safely.</p> <p>Structures</p> <p>Children will know how to knot a reef knot as well as practising prior learnt knotting skills (shoe lace, granny)</p>	<p>Food unit</p> <p>Children will know where certain food comes from.</p> <p>Children will know how to follow instructions given one step at a time.</p> <p>Children will know how to spread soft ingredients with a butter knife.</p> <p>Children will know how to mix, whisk, rub and knead</p> <p>Children will know how to crush soft fruit with a potato masher or fork.</p> <p>Structures</p> <p>Children will know how to knot a shoelace and granny knot</p>	<p>Food unit</p> <p>Children will know how to follow simple recipes with guidance from an adult</p> <p>Children will know how to use a knife to cut medium resistance food using a claw grip</p> <p>Children will know how to use a swivel peeler with adult supervision</p> <p>Children will know how to grate firmer foods such as carrots and apples</p> <p>Structures</p> <p>Children will know how to knot a clove hitch knot</p>

<p>Term 5/6</p> <p>Textiles unit Children will know how to sew with a large eyed needle. Children will know how to do a running stitch and cross stitch on binka. Children will know how to use a running stitch to join two pieces of felt. Children will know how to attach sequins and buttons.</p> <p>Mechanical unit Children will know how to use levers, sliders, wheels and axles Unit 2A Vehicles</p>	<p>Textiles unit Children know how to sew with a big needle Children will know how to sew onto binka using a running stitch. Children will know how to thread through holes OL link</p> <p>Mechanical unit Children will know how to use levers and sliders</p>	<p>Textiles unit Children will know how to thread smaller needles with the support of a needle threader Children will know how to use smaller needles to sew a running stitch and cross stitch on felt. Children will know how to attach beads, felt, sequins and buttons to add finer details</p> <p>Mechanisms unit (use moving monsters unit 3c for guidance) Children will know how to assemble simple pneumatic systems Children will know ways of using pneumatic systems in conjunction with simple levers to control movement</p>
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Throughout each unit the design, make, evaluate process should be followed.

<p>Design</p> <p>Children will know how to design products for a reason. Children will be able to tell people about their ideas.</p>	<p>Make</p> <p>Children will know how to choose appropriately from a variety of equipment and materials to meet a design brief.</p>	<p>Evaluate</p> <p>Children will know how to evaluate their ideas and their final piece. Children will know how to take steps to improve their product.</p>
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Vocabulary

Design evaluate product Structure strengthen Levers sliders wheels axes Grate peel
Reef knott Needle thread running stitch cross stitch Join attach

DT Year 3

Throughout the year children will gain knowledge on how to design products with a purpose by identifying opportunities to design. They will know how to make products by working efficiently such as by carefully selecting materials. Children will know how to refine work and techniques as work progresses, continually evaluating the product design. They will know how to create a series and parallel circuit. Children will know how to choose suitable techniques to construct products or to repair items. They will know how to strengthen materials using suitable techniques. Children will know and apply the principles of a healthy and varied diet. They will know how to prepare and cook savoury dishes using a range of cooking techniques. Children will know about seasonality and know how and where a variety of ingredients are grown, reared, caught and processed.

<p>Term 1/2 Food unit Children will know how to follow simple recipes with guidance from an adult Children will know how to use a knife to cut medium resistance food using a claw grip Children will know how to use a swivel peeler with adult supervision Children will know how to grate firmer foods such as carrots and apples</p>	<p>Prior Learning: Food unit Children will know how to follow simple instructions supported by an adult. Children will know how to use a peeler with support. Children will know how to use a grater to grate soft foods such as cheese and cucumber. Children will know how to use a table knife safely.</p>	<p>Next Steps: Food unit Children will know how to follow simple recipes with guidance from an adult Children will know how to use a knife safely and cut medium resistance food using a claw grip and a bridge grip Children will know how to use a hand whisk Children will know how to snip with kitchen scissors (herbs, spring onions, lettuce and cabbage) with control</p>
<p>Term 3/4 Mechanisms unit (use moving monsters unit 3c for guidance) Children will know how to assemble simple pneumatic systems Children will know ways of using pneumatic systems in conjunction with simple leversto control movement</p> <p>Electrical (Science x curricular link) Children will know how to create a series circuit, parallel circuit and add an electrical system with either a bulb, buzzer or motor to a product (in science learning time)</p> <p>Food unit Children will know how to follow simple recipes with guidance from an adult Children will know how to use a knife to cut medium resistance food using a claw grip Children will know how to use a swivel peeler with adult supervision Children will know how to grate firmer foods such as carrots and apples</p>	<p>Mechanical unit Children will know how to use levers, sliders, wheels and axles Unit 2A Vehicles</p> <p>Electrical First unit</p> <p>Food unit Children will know how to follow simple instructions supported by an adult. Children will know how to use a peeler with support. Children will know how to use a grater to grate soft foods such as cheese and cucumber. Children will know how to use a table knife safely.</p>	<p>Mechanical unit – Use unit 5c for reference (Link to local history creating Mayflower boats bobbing along the sea cam toys) Children know that many toys have mechanisms to allow moving parts Children know the purpose of cogs, levers, pullys and cams Children know that different shaped cams produce a different movement</p> <p>Electrical unit Unit 4c Torches</p> <p>Food unit See term 1/2 prior learning</p>
<p>Term 5/6 Textiles unit Children will know how to thread smaller needles with the support of a needle threader</p>	<p>Textiles unit Children will know how to sew with a large eyed needle.</p>	<p>Textiles unit Children will know how to use smaller needles to attach materials</p>

<p>Children will know how to use smaller needles to sew a running stitch and cross stitch on felt. Children will know how to attach beads, felt, sequins and buttons to add finer details</p> <p>Structures unit Children will know how to build a more complex structure – reinforced Roman fort (History x curricular link) Children will know how to build a lean to shelter OL link Children will know how to make a shelter using natural resources – celtic round house OL Link Children will know how to knot a clove hitch knot</p>	<p>Children will know how to do a running stitch and cross stitch on binka. Children will know how to use a running stitch to join two pieces of felt. Children will know how to attach sequins and buttons.</p> <p>Structures unit Children will know about the structure of the Eiffel tower and Gustave Eiffel. Children will know about strengthening structures by adding triangles to strengthen corners. Children will know how to build a strong stable structure.</p>	<p>Children will know how to attach sequins, beads and buttons with running and joining stitches Children will know how to sew a blanket stitch</p> <p>Structures unit Children will know how to design and make a water collecting devise (History x curricular link Egyptian Shaduf)</p>
<p>Throughout each unit the design, make, evaluate process should be followed.</p>		
<p>Design</p> <p>Children will know how to research with guidance, to inform the design of a functional and appealing product.</p> <p>Children will know how to generate, develop, model and communicate their ideas through discussions and annotated sketches.</p>	<p>Make</p> <p>Children will know how to select from a wide range of suitable materials and equipment, whilst making their product.</p>	<p>Evaluate</p> <p>Children will know how to investigate and analyse a range of existing products to inform their designs.</p> <p>Children will know how to use a design brief to evaluate a product and their own product.</p>
<p>Vocabulary</p>		
<p>research functional appealing product annotated Mechanism pneumatic system assemble levers Circuit parallel bulb buzzer motor Recipe claw grip swivel peeler grate Thread needle running/cross stitch attach Clove hitch knot</p>		
<p>DT Year 4</p>		
<p>Throughout the year children will gain knowledge on how to design products with a purpose by identifying opportunities to design. They will know how to make products by working efficiently such as by carefully selecting materials. Children will know how to refine work and techniques as work progresses, continually evaluating the product design. They will know how to create a series and parallel circuit. Children will know how to choose</p>		

suitable techniques to construct products or to repair items. They will know how to strengthen materials using suitable techniques. Children will know and apply the principles of a healthy and varied diet. They will know how to prepare and cook savoury dishes using a range of cooking techniques. Children will know about seasonality and know how and where a variety of ingredients are grown, reared, caught and processed.

<p>Term 1/2 Structures unit Children will know how to design and make a water collecting devise (History x curricular link Egyptian Shaduf) Electrical unit Unit 4c Torches</p>	<p>Prior Learning: Structures unit Children will know how to build a more complex structure – reinforced Roman fort (History x curricular link) Children will know how to build a lean to shelter OL link Children will know how to make a shelter using natural resources – celtic round house OL Link Electrical (Science x curricular link) Children will know how to create a series circuit, parallel circuit and add an electrical system with either a bulb, buzzer or motor to a product (in science learning time)</p>	<p>Next Steps: Structures unit Children know how to reinforce a beam to improve it’s strength Children know how to build a truss bridge structure (use doweling for final bridge, spaghetti, straws for mock ups) Children know about the influence of Isambard Kingdom Brunel (History Victorians x curricular link) Children know how to build structures for particular environments OL Children know how to knot a granny knot, reef knot, clove hitch knot Electrical and Mechanical unit – refer to Unit 6c (Fairground/WW1 spotlights) Children know how to add an electrical and mechanical system to a product Children know how to construct circuits with switches and other innovative combinations of electronics</p>
<p>Term 3/4 Textiles unit Children will know how to use smaller needles to attach materials Children will know how to attach sequins, beads and buttons with running and joining stitches Children will know how to sew a blanket stitch</p>	<p>Textiles unit Children will know how to thread smaller needles with the support of a needle threader Children will know how to use smaller needles to sew a running stitch and cross stitch on felt. Children will know how to attach beads, felt, sequins and buttons to add finer details</p>	<p>Textiles unit Children know when to use and apply a range of different stitching techniques previously learnt Children know how to sew a back stitch Children know how to create objects that employ a seam allowance (such as a bag) Children know how to join textiles with a combination of stitching techniques such as back stitch for seams and running stitch to add decoration</p>
<p>Term 5/6 Structures Children will know how to refine knotting skills previously learnt and use them to aid in shelter building</p>	<p>Structure Children will know how to knot a clove hitch knot</p>	<p>Structures unit Children know how to knot a granny knot, reef knot, clove hitch knot</p>

<p>Food unit</p> <p>Children will know how to follow simple recipes with guidance from an adult</p> <p>Children will know how to use a knife safely and cut medium resistance food using a claw grip and a bridge grip</p> <p>Children will know how to use a hand whisk</p> <p>Children will know how to snip with kitchen scissors (herbs, spring onions, lettuce and cabbage) with control</p>	<p>Food unit</p> <p>Children will know how to follow simple recipes with guidance from an adult</p> <p>Children will know how to use a knife to cut medium resistance food using a claw grip</p> <p>Children will know how to use a swivel peeler with adult supervision</p> <p>Children will know how to grate firmer foods such as carrots and apples</p>	<p>Food unit</p> <p>Children know how to follow simple instructions independently</p> <p>Children know how to cut high resistance food with a vegetable knife using the claw grip</p> <p>Children know how to thread vegetables onto a kebab stick safely</p> <p>Children know how to fold ingredient together carefully</p>
<p>Throughout each unit the design, make, evaluate process should be followed.</p>		
<p>Design</p> <p>Children will know how to research to inform the design of a functional and appealing product.</p> <p>Children will know how to generate, develop, model and communicate their ideas through discussions and annotated sketches.</p> <p>Children will know how to create step by step designs.</p>	<p>Make</p> <p>Children will know how to select from a wide range of suitable materials and equipment, whilst making their product</p> <p>Children will know how to make a product to a good standard, adapting and making improvements</p>	<p>Evaluate</p> <p>Children will know how to investigate and analyse a range of existing products to inform their designs.</p> <p>Children will know how to use a design brief to evaluate a product and their own product.</p> <p>Children know how key civilisations through history have shaped the world</p>
<p>Vocabulary</p>		
<p>functional appealing product</p> <p>Generate model annotated adapt improvements analyse investigate</p> <p>Attach blanket stitch claw grip bridge grip specific grate running/joining stitch</p>		

DT Year 5		
<p>Throughout the year children will gain knowledge on how to design with the user in mind, motivated by the service a product will offer. Children will make products through stages of prototypes, making continual refinements. Children will know that products are expected to have a high quality finish, using art skills where appropriate. Children will know how to use prototypes, cross sectional drawings to represent designs. Children will know how to cut materials with precision and refine the finish with appropriate tools. Children will show an understanding of the qualities of materials to choose appropriate tools to cut and shape. Children will know a range of practical skills to create products. Children will know and apply the principles of a healthy and varied diet. They will know how to prepare and cook savoury dishes using a range of cooking techniques. Children will know about seasonality and know how and where a variety of ingredients are grown, reared, caught and processed.</p>		
<p>Term 1/2 Structures unit Children know how to reinforce a beam to improve it's strength Children know how to build a truss bridge structure (use doweling for final bridge, spaghetti, straws for mock ups) Children know about the influence of Isambard Kingdom Brunel (History Victorians x curricular link) Children know how to build structures for particular environments OL Children know how to knot a granny knot, reef knot, clove hitch knot</p>	<p>Prior Learning: Structures unit Children will know how to design and make a water collecting devise (History x curricular link Egyptian Shaduf)</p>	<p>Next Steps: Structures unit Children will know how to knot a round turn 2 ½ hitch knot Children will know how to lace and tie two ropes together Children will know how to build structures/shelters for particular environments OL</p>
<p>Term 3/4 Textiles unit Children know when to use and apply a range of different stitching techniques previously learnt Children know how to sew a back stitch Children know how to create objects that employ a seam allowance (such as a bag) Children know how to join textiles with a combination of stitching techniques such as back stitch for seams and running stitch to add decoration</p>	<p>Textiles unit Children will know how to use smaller needles to attach materials Children will know how to attach sequins, beads and buttons with running and joining stitches Children will know how to sew a blanket stitch</p>	<p>Textiles unit Children know how to apply a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, design, assemble and decorate a tie for a chosen purpose. (Xmas/ father's day/ sports personality/popular character)</p>
<p>Term 5/6 Mechanical unit – Use unit 5c for reference (Link to local history creating Mayflower boats bobbing along the sea cam toys)</p>	<p>Mechanisms unit (use moving monsters unit 3c for guidance)</p>	<p>Electrical and Mechanical unit – refer to Unit 6c Fairground/WW1 spotlights)</p>

<p>Children know that many toys have mechanisms to allow moving parts Children know the purpose of cogs, levers, pullys and cams Children know that different shaped cams produce a different movement</p> <p>Food unit Children know how to follow simple instructions independently Children know how to cut high resistance food with a vegetable knife using the claw grip Children know how to thread vegetables onto a kebab stick safely Children know how to fold ingredient together carefully</p>	<p>Children will know how to assemble simple pneumatic systems Children will know ways of using pneumatic systems in conjunction with simple levers to control movement</p> <p>Food unit Children will know how to follow simple recipes with guidance from an adult Children will know how to use a knife safely and cut medium resistance food using a claw grip and a bridge grip Children will know how to use a hand whisk Children will know how to snip with kitchen scissors (herbs, spring onions, lettuce and cabbage) with control</p>	<p>Children know how to add an electrical and mechanical system to a product Children know how to construct circuits with switches and other innovative combinations of electronics</p> <p>Food unit Children know how to make modifications to simple recipes independently Children know how to cut high resistance food from whole using the bridge grip Children know how to use a swivel peeler to create food ribbons Children know how to use the zesting part of a grater (Cross curricular MFL food)</p>
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Throughout each unit the design, make, evaluate process should be followed.

<p>Design</p> <p>Children know how to research information about a range of products</p> <p>Children know how to use accurate drawings, step by step instructions, cross sectional drawings and prototypes to communicate and develop ideas</p>	<p>Make</p> <p>Children know how to select from a wide range of suitable materials and equipment whilst making their products.</p> <p>Children know that their products need to be made to a high standard.</p> <p>Children know how to adapt and make improvements to their design</p>	<p>Evaluate</p> <p>Children know how to follow simple instructions independently</p> <p>Children know key individuals and events which have shaped the world</p>
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Vocabulary

accurate cross sectional prototype adapt
 Reinforce beam granny knot reef knot clove hitch knot techniques
 Back stitch seam allowance employ clogs levers pullys cams claw grip

DT Year 6		
<p>Throughout the year children will gain knowledge on how to design with a purpose by identifying opportunities to design. Children will know how to design products by working efficiently, refine work and techniques as work progresses whilst continually evaluating the product design. Children will extend their knowledge of series and parallel circuits. They will know how to choose suitable techniques to construct products or repair items including strengthening materials using suitable techniques. Children will know and apply the principles of a healthy and varied diet. They will know how to prepare and cook savoury dishes using a range of cooking techniques. Children will know about seasonality and know how and where a variety of ingredients are grown, reared, caught and processed.</p>		
<p>Term 1/2</p> <p>Electrical and Mechanical unit – refer to Unit 6c Fairground/WW spotlights/ Christmas badge Children know how to add an electrical and mechanical system to a product Children know how to construct circuits with switches and other innovative combinations of electronics</p>	<p>Prior Learning: Mechanical unit – Use unit 5c for reference (Link to local history creating Mayflower boats bobbing along the sea cam toys) Children know that many toys have mechanisms to allow moving parts Children know the purpose of cogs, levers, pullys and cams Children know that different shaped cams produce a different movement</p> <p>Electrical unit Unit 4c Torches</p>	<p>Next Steps: National curriculum in England: design and technology programmes of study - GOV.UK (www.gov.uk)</p> <p>See KS3</p>
<p>Term 3/4</p> <p>Structures unit Children will know how to knot a round turn 2 ½ hitch knot Children will know how to lace and tie two ropes together Children will know how to build structures/shelters for particular environments OL</p> <p>Food unit Children know how to make modifications to simple recipes independently Children know how to cut high resistance food from whole using the bridge grip Children know how to use a swivel peeler to create food ribbons Children know how to use the zesting part of a grater (Cross curricular MFL food)</p>	<p>Structures unit Children know how to reinforce a beam to improve it's strength Children know how to build a truss bridge structure (use doweling for final bridge, spaghetti, straws for mock ups) Children know about the influence of Isambard Kingdom Brunel (History Victorians x curricular link) Children know how to build structures for particular environments OL Children know how to knot a granny knot, reef knot, clove hitch knot</p>	
<p>Term 5/6</p> <p>Textiles unit</p>	<p>Textiles unit</p>	

<p>Children know how to apply a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, design, assemble and decorate a tie for a chosen purpose. (Xmas/ father's day/ sports personality/popular character)</p>	<p>Children know when to use and apply a range of different stitching techniques previously learnt</p> <p>Children know how to sew a back stitch</p> <p>Children know how to create objects that employ a seam allowance (such as a bag)</p> <p>Children know how to join textiles with a combination of stitching techniques such as back stitch for seams and running stitch to add decoration</p>	
<p>Throughout each unit the design, make, evaluate process should be followed.</p>		
<p>Design</p> <p>Children know how to research information on products</p> <p>Children know how to use accurate drawings / step by step / cross sectional drawings / prototypes to communicate and develop ideas</p>	<p>Make</p> <p>Children know how to select, from a wide range of suitable materials and equipment, whilst making my product to a high standard</p> <p>Children know how to adapt their design and make improvements</p>	<p>Evaluate</p> <p>Children know how to evaluate ideas and against a design brief, whilst considering others opinions</p> <p>Children know key individuals / events that have shaped the world.</p>
<p>Vocabulary</p>		
<p>modify accurate cross sectional drawings prototype bridge grip zesting food ribbons mechanical system Circuits (science link) electronics hitch knot Lace applique assemble</p>		

