



Our Lady School Curriculum – Progression Grip for the Design and Technology curriculum

Year 1					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Stimuli
Homes	<p>Design</p> <ul style="list-style-type: none"> design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] 	<p>To design a house using different shapes.</p> <p>To make hinges for a purpose.</p> <p>To select materials based on a purpose.</p> <p>To evaluate my work.</p>	<p>Join</p> <p>Hinges</p> <p>Evaluate</p> <p>Improve</p> <p>Materials</p> <p>Model</p> <p>Design</p> <p>Tools</p> <p>Technique</p> <p>Constructive</p>	<p>Joining</p> <p>Evaluating</p> <p>Making</p> <p>Cutting</p> <p>Designing</p> <p>Drafting</p> <p>Using tools effectively</p> <p>Shaping</p> <p>Imagination</p> <p>Exploration</p>	<p>Mr Dazzo, architect</p> <p>Hitchin Tudor Houses</p> <p>Own Houses</p>
Moving pictures	<ul style="list-style-type: none"> select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> explore and evaluate a range of existing products evaluate their ideas and products against design criteria build structures, exploring how they can be made stronger, stiffer and more stable explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. 	<p>To design a moving picture with a moving mechanism.</p> <p>To create a sliding and wheel mechanism.</p> <p>To evaluate my work.</p>	<p>Mechanism</p> <p>Moving mechanism</p> <p>Sliders</p> <p>Evaluate</p> <p>Lever</p> <p>Pivot</p>		<p>Moving toys History unit</p>



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Year 2					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Stimuli
Vehicles	<p>Design</p> <ul style="list-style-type: none"> design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] 	<p>To investigate wheels, axles and chassis.</p> <p>To design and make a vehicle.</p> <p>To evaluate my work.</p>	<p>Vehicles</p> <p>Wheels, axles and chassis</p>	<p>Joining</p> <p>Evaluating</p> <p>Making</p> <p>Cutting</p> <p>Designing</p> <p>Drafting</p> <p>Using tools effectively</p> <p>Shaping</p> <p>Imagination</p> <p>Exploration</p>	<p>Beaulieu car museum</p>
Puppets	<ul style="list-style-type: none"> select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> explore and evaluate a range of existing products evaluate their ideas and products against design criteria build structures, exploring how they can be made stronger, stiffer and more stable explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. 	<p>To work with fabric to create a finger puppet.</p> <p>To develop and practise sewing skills.</p> <p>To design and make a glove puppet.</p> <p>To evaluate my work.</p>	<p>Finger puppet</p> <p>Sewing</p> <p>Needles</p> <p>scissors</p>	<p>Muppet show</p> <p>Sesame street</p> <p>Puppets children have at home</p>	



Year 3					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Stimuli
Photo frames	<p>Design</p> <ul style="list-style-type: none"> use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world Technical knowledge apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	<p>To find different ways of strengthening and joining paper and card.</p> <p>To investigate ways of making stable free-standing structures.</p> <p>To design and make a photograph frame for a particular purpose.</p> <p>To evaluate my work.</p>	<p>Frame</p> <p>Structure</p> <p>Joining</p> <p>Strengthening stable</p>	<p>Joining</p> <p>Evaluating</p> <p>Making</p> <p>Cutting</p> <p>Designing</p> <p>Drafting</p> <p>Using tools effectively</p> <p>Shaping</p> <p>Imagination</p> <p>Exploration</p>	<p>Bring own frame from home</p>
Moving monsters	<p>Evaluate</p> <ul style="list-style-type: none"> investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world Technical knowledge apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	<p>To investigate techniques for making simple pneumatic systems.</p> <p>To design and make a monster including a moving pneumatic system.</p> <p>To evaluate my work.</p>	<p>Pneumatics</p> <p>Air</p> <p>Control movement</p> <p>Inflate</p> <p>Deflate</p>	<p>Joining</p> <p>Evaluating</p> <p>Making</p> <p>Cutting</p> <p>Designing</p> <p>Drafting</p> <p>Using tools effectively</p> <p>Shaping</p> <p>Imagination</p> <p>Exploration</p>	<p>Cross curricular links with Science</p> <p>Use tubes and syringes</p> <p>Air pump and balls</p>



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	<ul style="list-style-type: none">• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]• understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]• apply their understanding of computing to program, monitor and control their products.				
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Year 4					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Stimuli
Alarms	<p>Design</p> <ul style="list-style-type: none"> use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world Technical knowledge apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	<p>To investigate how to create circuits with a variety of different switches.</p> <p>To design and create an alarm system for a particular purpose.</p> <p>To evaluate my work.</p>	<p>Alarms</p> <p>Circuits</p> <p>Closed circuits</p> <p>Complete circuits</p> <p>Switches and mains</p> <p>Electricity</p>	<p>Joining</p> <p>Evaluating</p> <p>Making</p> <p>Cutting</p> <p>Designing</p> <p>Drafting</p> <p>Using tools effectively</p> <p>Shaping</p> <p>Imagination</p> <p>Exploration</p> <p>Generating</p> <p>Selecting</p> <p>Analysing</p> <p>constructing</p>	<p>Our Lady's caretaker</p> <p>Science link: Electricity and circuits</p>
Money containers	<p>Evaluate</p> <ul style="list-style-type: none"> investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world Technical knowledge apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	<p>To sew using a range of different stitches.</p> <p>To design and make a money container using textiles.</p> <p>To evaluate my work.</p>	<p>Running stitches</p> <p>Back stitches</p> <p>Seam</p> <p>Finishing techniques</p>	<p>Joining</p> <p>Evaluating</p> <p>Making</p> <p>Cutting</p> <p>Designing</p> <p>Drafting</p> <p>Using tools effectively</p> <p>Shaping</p> <p>Imagination</p> <p>Exploration</p> <p>Generating</p> <p>Selecting</p> <p>Analysing</p> <p>constructing</p>	<p>Range of different wallets and purses</p>



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	<ul style="list-style-type: none">• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]• understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]• apply their understanding of computing to program, monitor and control their products.				
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Year 5					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Stimuli
Fashion textile	<p>Design</p> <ul style="list-style-type: none"> use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 	<p>To explore some ways in which textiles are joined and decorated.</p> <p>To design an item made using textiles, and draw pattern pieces.</p> <p>To use pattern pieces to measure, mark and cut fabric; to sew design elements according to a design.</p> <p>To join fabric pieces by hand sewing.</p> <p>To sew hems on an item made using textiles; to add design details.</p>	<p>Fashion world</p> <p>Stitches</p> <p>Seam</p> <p>hems</p> <p>Finishing techniques</p>	<p>Joining</p> <p>Evaluating</p> <p>Making</p> <p>Cutting</p> <p>Designing</p> <p>Drafting</p> <p>Using tools effectively</p> <p>Shaping</p> <p>Imagination</p> <p>Exploration</p> <p>Generating</p> <p>Selecting</p> <p>Analysing</p> <p>constructing</p> <p>Skills</p>	<p>Hitchin</p> <p>Railway bridge</p> <p>Hitchin bridge near St Mary's church</p> <p>Low bridge in Luton</p>
Moving toys	<ul style="list-style-type: none"> select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world Technical knowledge apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	<p>To investigate toys with moving cam mechanisms.</p> <p>To investigate ways of strengthening structures for a moving toy.</p> <p>To be able to design a moving toy with a cam mechanism.</p> <p>To be able to follow a design to create a moving toy with a cam mechanism.</p> <p>To evaluate my work.</p>	<p>Mechanism</p> <p>Moving cam mechanism</p> <p>Joining</p> <p>Strengthening</p> <p>Evaluate</p>		



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Year 6					
Unit/Topic	National Curriculum objectives	Sticky knowledge	New vocabulary	Skills	Stimuli
Building bridges	<p>Design</p> <ul style="list-style-type: none"> use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities 	<p>To explore ways in which pillars and beams are used to span gaps.</p> <p>To explore ways in which trusses and arches can be used to strengthen bridges.</p> <p>To understand how suspension bridges are able to span long distances.</p> <p>To develop criteria and design a prototype bridge for a purpose.</p> <p>To analyse and evaluate products according to Design criteria.</p>	<p>Bridges</p> <p>Beam</p> <p>Pillars</p> <p>Trusses</p> <p>Arch bridges</p> <p>Prototypes</p>	<p>Joining</p> <p>Evaluating</p> <p>Making</p> <p>Cutting</p> <p>Designing</p> <p>Drafting</p> <p>Using tools effectively</p> <p>Shaping</p> <p>Imagination</p> <p>Exploration</p> <p>Generating</p> <p>Selecting</p> <p>Analysing</p> <p>constructing</p>	<p>Hitchin</p> <p>Railway bridge</p> <p>Hitchin bridge near St Mary's church</p> <p>Low bridge in Luton</p>
Fairgrounds	<p>Evaluate</p> <ul style="list-style-type: none"> investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world Technical knowledge apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	<p>To look at a range of existing fairground rides and investigate how they move.</p> <p>To investigate ways of using electrical motors to create rotating parts.</p> <p>To create prototype models to investigate stable frameworks.</p> <p>To be able to design and make a</p>	<p>Pulleys</p> <p>Belts</p> <p>Rotation movements</p> <p>Strengthening and reinforcing structures</p>		



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		fairground ride with a rotating part. To evaluate my work.			
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