

Providing the rich soil that enables
our children to develop deep roots and flourish.

Immersion Curriculum: Design and Technology Y1/2 (Cycle A)

At Amberley, each unit of design and technology contains the key elements of: mastering practical skills, design, make, evaluate and improve, and taking inspiration from design through a topic of either food, materials, textiles, electrical and electronics, computing, construction and mechanics.



Intent:

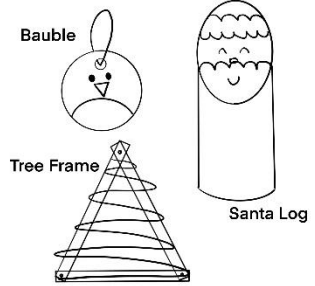
For all learners to...

- work with tools, equipment, materials and components to make quality products,
 - making creative and informed choices on the way
- pupils to critique, evaluate and test their ideas and products and works of others
 - foster enjoyment in designing and making things for a specific purpose
- pupils to have progressive development of knowledge and skills of the DT curriculum
- pupils learn to take managed risks becoming resourceful and innovative learners

Impact:

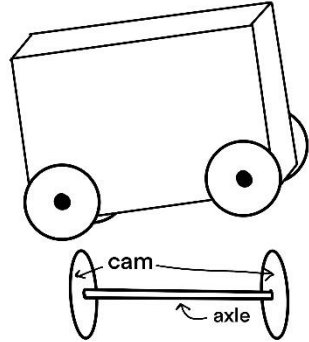
- The children of Amberley will understand and develop the traits and skills needed to become a Design Technologist. They understand that DT is about solving problems, and they strive to be creative, aiming to show perseverance when solving these problems.

Project		Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1	Technical drawing/photo
Basic Skills/Bug Homes (this is differentiated for Year 1 and Year 2)		<ul style="list-style-type: none"> • Demonstrate a range of cutting and shaping technique • Measure and mark out to the nearest cm • Cut materials safely using tools provided • Demonstrate a range of joining techniques (such as gluing, hinges or combing materials to strengthen) 	<p>Pupils should be taught:</p> <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] • 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 <p>Technical knowledge</p> <ul style="list-style-type: none"> • 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>Key Vocabulary for the Year:</p> <p>Cutting, measure, shaping, safely, tools, combining, joining techniques, strengthen, centimetre, product, joint</p>	
Duration	Cycle	<p>Ongoing Milestones:</p> <ul style="list-style-type: none"> • Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products • Design products that have a clear purpose and intended user • Make products refining the design as the work progress • Explore objects and designs to identify likes and dislikes of the designs • Select improvements to existing designs • Explore how products have been created 		
Term 1`	A			

Project		Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1	Technical drawing/photo
Christmas Decorations		<ul style="list-style-type: none"> • Demonstrate a range of cutting and shaping technique • Measure and mark out to the nearest cm • Cut materials safely using tools provided • Demonstrate a range of joining techniques (such as gluing, hinges or combing materials to strengthen) 	<p>Pupils should be taught:</p> <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] • 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 <p>Technical knowledge</p> <ul style="list-style-type: none"> • 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>Key Vocabulary for the Year:</p> <p>Cutting, measure, shaping, safely, tools, combining, joining techniques, strengthen, centimeter, product (repeated)</p>	 <p>The technical drawings show three items: a circular bauble with a loop at the top and a simple face; a conical tree frame made of horizontal lines; and a rectangular log with a wavy top edge and a simple face.</p>
Duration	Cycle	<p>Ongoing Milestones:</p> <ul style="list-style-type: none"> • Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products • Design products that have a clear purpose and intended user • Make products refining the design as the work progress • Explore objects and designs to identify likes and dislikes of the designs • Select improvements to existing designs • Explore how products have been created 		
Term 2	A			

Project		Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1	Technical drawing/photo
Zip Lines and Pulleys		<ul style="list-style-type: none"> • Demonstrate a range of cutting and shaping technique • Measure and mark out to the nearest cm • Cut materials safely using tools provided • Create products using levers, wheels and winding mechanisms 	<p>Pupils should be taught:</p> <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] • 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 <p>Technical knowledge</p> <ul style="list-style-type: none"> • build structures, exploring how they can be made stronger, stiffer and more stable <p>explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <p>Key vocabulary for the year: Cutting, measure, safely, tools, strengthen, centimeter, product, lever, hinge, weight, momentum, pulley, gravity, fulcrum</p>	
Duration	Cycle	<p>Ongoing Milestones:</p> <ul style="list-style-type: none"> • Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products • Design products that have a clear purpose and intended user • Make products refining the design as the work progress • Explore objects and designs to identify likes and dislikes of the designs • Select improvements to existing designs <p>Explore how products have been created</p>		
Term 3	A			

Project		Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1	Technical drawing/photo
Wind Chimes		<ul style="list-style-type: none"> • Demonstrate a range of cutting and shaping technique • Measure and mark out to the nearest cm • Cut materials safely using tools provided • Demonstrate a range of joining techniques (such as gluing, hinges or combing materials to strengthen) 	<p>Pupils should be taught:</p> <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] • 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 <p>Technical knowledge</p> <ul style="list-style-type: none"> • 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>Key Vocabulary for the Year:</p> <p>Cutting, measure, shaping, safely, tools, combining, joining techniques, strengthen, centimetre, product, joint, lap joint, half lap joint, chisel</p>	
Duration	Cycle	<p>Ongoing Milestones:</p> <ul style="list-style-type: none"> • Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products • Design products that have a clear purpose and intended user • Make products refining the design as the work progress • Explore objects and designs to identify likes and dislikes of the designs • Select improvements to existing designs <p>Explore how products have been created</p>		
Term 4	A			

Project		Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1	Technical drawing/photo
Moving Vehicles		<ul style="list-style-type: none"> • Demonstrate a range of cutting and shaping technique • Measure and mark out to the nearest cm • Cut materials safely using tools provided • Demonstrate a range of joining techniques (such as gluing, hinges or combing materials to strengthen) • Create products using levers, wheels and winding mechanisms 	<p>Pupils should be taught:</p> <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] • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics 	
Duration	Cycle	<p>Ongoing Milestones:</p> <ul style="list-style-type: none"> • Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products • Design products that have a clear purpose and intended user • Make products refining the design as the work progress • Explore objects and designs to identify likes and dislikes of the designs • Select improvements to existing designs • Explore how products have been created 	<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 <p>Technical knowledge</p> <ul style="list-style-type: none"> • 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. 	
Term 5 & 6	A		<p>Key Vocabulary for the Year:</p> <p>Cutting, measure, shaping, safely, tools, combining, joining techniques, strengthen, centimetre, product, wheels, winding mechanism, cam, axel, crank, dowelling</p>	

Focus		Milestone for end of Key Stage 1 (Year 2)	National Curriculum Objectives: By the end of the Key Stage 1
Food: Bread		<ul style="list-style-type: none"> • Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients. 	<p>Pupils should be taught to:</p> <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 template, mock ups and where appropriate, information and communication <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] • 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 Technical knowledge • Build structures, exploring how they can be made stronger
Duration	Cycle		
Term 2 1 week	A	<p>Ongoing Milestones:</p> <p>Design, make, evaluate and improve</p> <ul style="list-style-type: none"> • Design products that have a clear purpose and an intended user • Make products, refining the design as work progresses • Use software to design <p>Take inspiration from design throughout history</p> <ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created 	<p>Key Vocabulary for the Year:</p> <p>Weigh, scales, raw, knives, grams, kilograms, millilitres, litres, cut, peel, grate, ingredients, measure, hygienically, assemble, cook, prototype, design, prototype, evaluate.</p>