



Design and Technology Curriculum – Year 1 and 2 – Cycle B

[Please refer to Previous Years' Geography assessment documents linked to hierarchies](#)

[Link to DT Association guidance](#) – [Link to Projects on a Page Documents](#)

Key stage 1 National Curriculum	<p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].</p> <p>When designing and making, pupils should be taught to:</p> <p>Design ♣ 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> <p>Make ♣ 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> <p>Evaluate ♣ 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, stiffer and more stable ♣ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <p>Cooking and nutrition: As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>Pupils should be taught to: Key stage 1 ♣ use the basic principles of a healthy and varied diet to prepare dishes ♣ understand where food comes from.</p>		
		Developing Planning and Communicating Ideas	Evaluating Processes and Products
Non-Negotiables Year 1	<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 	<ul style="list-style-type: none"> Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria 	<ul style="list-style-type: none"> Build structures, exploring how they can be made stronger, stiffer and more stable
Non-Negotiables Year 2	<p>Design purposeful, functional, appealing products for themselves and other users based on design criteria</p> <ul style="list-style-type: none"> Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. 	<ul style="list-style-type: none"> Identify what they could have done differently or how they could improve their work in future 	<ul style="list-style-type: none"> Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
	Autumn 2: Toys - Textiles "Puppets" with use of E-Portfolios	Spring 2: "Making a moving picture"	Summer 2: Vehicles Stiff Materials – wood/wheels: "Wheeled beach hut"
Hierarchies	<p>To master practical skills:</p> <p>DT4: Cut materials safely using tools provided.</p> <p>DT5: Measure and mark out to the nearest centimetre.</p> <p>DT6: Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).</p> <p>DT8: Shape textiles using templates.</p> <p>DT9: Join textiles using running stitch.</p> <p>DT10: Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).</p> <p>To design, make, evaluate and improve:</p> <p>DT15: Design products that have a clear purpose and an intended user.</p> <p>DT16: Make products, refining the design as work progresses.</p> <p>To take inspirations form designers from history:</p> <p>DT18: Explore objects and designs to identify likes and dislikes of the designs.</p> <p>DT19: Suggest improvements to existing designs.</p> <p>DT20: Explore how products have been created.</p> <p>Revisiting Cycle B -</p>	<p>To master practical skills:</p> <p>DT4: Cut materials safely using tools provided.</p> <p>DT5: Measure and mark out to the nearest centimetre.</p> <p>DT6: Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).</p> <p>DT7: Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).</p> <p>DT14: Create products using levers, wheels and winding mechanisms.</p> <p>To design, make, evaluate and improve:</p> <p>DT15: Design products that have a clear purpose and an intended user.</p> <p>DT16: Make products, refining the design as work progresses.</p> <p>To take inspirations form designers from history:</p> <p>DT18: Explore objects and designs to identify likes and dislikes of the designs.</p> <p>DT19: Suggest improvements to existing designs.</p> <p>DT20: Explore how products have been created</p> <p>Revisiting Cycle A – joining techniques – building a castle</p>	<p>To master practical skills:</p> <p>DT4: Cut materials safely using tools provided.</p> <p>DT5: Measure and mark out to the nearest centimetre.</p> <p>DT6: Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).</p> <p>DT7: Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).</p> <p>To design, make, evaluate and improve:</p> <p>DT15: Design products that have a clear purpose and an intended user.</p> <p>DT16: Make products, refining the design as work progresses.</p> <p>To take inspirations form designers from history:</p> <p>DT18: Explore objects and designs to identify likes and dislikes of the designs.</p> <p>DT19: Suggest improvements to existing designs.</p> <p>DT20: Explore how products have been created.</p> <p>Revisiting Cycle A – axels for winding mechanisms</p>
Resources	<p>E portfolios and pupils electronic workbook, http://web.data.org.uk/data/primary/eportfolios.php</p> <p>examples or pictures of a variety of finger and hand puppets from a range of cultures (see e-portfolio), fabric for learning sewing techniques eg plastic mesh, binca, hessian, fabric, preferably non-fraying eg felt, dipryl (disposable cloths), templates, fabric scissors, needles, thread, fabric glue, stapler, felt-tip pens, wool, sequins, buttons, small pieces of fabric to use as features for the puppets doweling</p> <p>Texts: Dogger by Shirley Hughes, This is the Bear,</p>	<p>Guidance resources on S Drive,</p> <p>card, paper (variety of colours), paper straws, glue, stapler, felt-tip pens, split pins,</p> <p>Texts: Mini-beast reference books,</p>	<p>Guidance resources on S Drive,</p> <p>Pictures of vehicles, boxes, card, scissors, masking tape, card wheels, wooden wheels, axels (wood), vehicle kits, Sellotape, masking tape,</p>

Vocabulary	Designing - <i>eg user, list, label, drawing, ideas, mock - up, choose, decide, evaluate, try out ideas, standard unit</i> Making - <i>eg plan, template, fabric, cutting out, sewing, needle, running stitch, gluing, adding knowledge and understanding, eg character, puppet, string puppet, marionette, hand-puppet, finger puppet, seam, stitch, thread, strong, quality, features, strengthen, reflective symmetry, position, to, towards</i>	Sliding mechanism, lever, pivot, movement, wheel,	Designing – user, list, label, drawing, ideas, mock-up, choose, decide, evaluate, try, explore, investigate, plan, stable, wheel, axel, cab, body, chassis Texts:
Flashback	<ul style="list-style-type: none"> Use a range of small tools, including scissors, paintbrushes and cutlery. 	<ul style="list-style-type: none"> what puppets are and how they are used how to join fabrics using a running stitch (Y2 how to add decorations such as a button) how to work safely with a variety of sharp tools, such as needles and scissors 	<ul style="list-style-type: none"> how a sliding mechanism works. how to make their own sliding mechanism. and understand what a lever is and how it works how to work safely with a variety of tools
Lesson 1	<p>Year 1 - To investigate a range of puppets Year 2 – To investigate a range of puppets and their features. Activities: Children to discuss and explore a range of puppets, their features, what materials are used and what they are used for. They will have the opportunity to choose their favourite puppet, draw and label it Children will know:</p> <ul style="list-style-type: none"> what puppets are and how they are used recognise and describe different types of puppets and identify the features of a puppet 	<p>Year 1 - To be able to create a sliding mechanism Year 2 – To be able to create a sliding mechanism Activities: In this first lesson, children will find out what a sliding mechanism is, and how it can be used to make a simple moving picture. They will then explore the sliding mechanism themselves in their independent activities, making a variety of simple moving pictures with different minibeasts. Children will know:</p> <ul style="list-style-type: none"> how a sliding mechanism works. how to make their own sliding mechanism. how to evaluate the sliding mechanisms they have made. 	<p>Year 1 - To investigate vehicles and their uses and features Year 2 – To investigate a variety of vehicles and their uses and features Activities: Children to explore and discuss a variety of different vehicles, their features and what they are used for. They will choose their favourite vehicle to compare, draw and label. Children will know:</p> <ul style="list-style-type: none"> and identify different types of vehicles. the main features of a vehicle. the uses for a variety of vehicles
Lesson 2	<p>Year 1 - To create a finger puppet. Year 2 – To be able to work with fabric to create a finger puppet. Activities: Children will to explore and discuss a variety of different finger puppets. Using the templates, they will work with fabric to create, make and decorate a finger puppet. (Y1s could create a lollipop puppet) Children will know:</p> <ul style="list-style-type: none"> how to develop ideas by putting components together how to discuss their finished work and evaluate what went well how to use a template to cut out appropriate sizes of fabric 	<p>Year 1 - To be able to use levers to create a moving mechanism Year 2 – To be able to use levers and pivots to create a moving mechanism Activities: Children are first shown a moving picture with a lever and pivot mechanism, and asked to explain how they think it works. They will then explore and discuss how it has been made, looking at how to hide the lever at the back of a picture too. Children then create moving pictures of minibeasts using the lever and pivot mechanism. Children will know:</p> <ul style="list-style-type: none"> and understand the term 'lever'. Know how to combine and join materials to make their own lever mechanisms how their lever works 	<p>Year 1 – To investigate wheels and axels Year 2 – To investigate wheels, axles and chassis Activities: Children to understand how different parts of a vehicles help to make them work. They will practise attaching wheels to axles and chassis Children will know:</p> <ul style="list-style-type: none"> what wheels, chassis and axles are. two different ways of attaching wheels to axles. how to experiment with a range of materials and techniques to combine wheels, axles and chassis.
Lesson 3	<p>Year 1 - To develop and practise running stitch Year 2 – To develop and practise sewing skills Activities: Children will learn different sewing techniques to use when creating a puppet. They will practise these skills before making their actual puppet. Y2 use a needle and thread to attach buttons and other features to material Children will know:</p> <ul style="list-style-type: none"> how to use running stitch to join two pieces of fabric together how to work safely with a variety of sharp tools, such as needles and scissors <p>Year 2</p> <ul style="list-style-type: none"> how to use a needle and thread to attach buttons and other features to material 	<p>Year 1 - To be able to create a wheel mechanism Year 2 – To be able to create a wheel mechanism Activities: Children are shown a third way in which to make a moving picture by creating a wheel mechanism. They will be encouraged to discuss how it works as a class before having the chance to practise making their own moving minibeast pictures using the wheel mechanism. Children will know:</p> <ul style="list-style-type: none"> how to cut out (Y1 with support) and join components to create a wheel mechanism. how to evaluate their work and identify areas for future development what a pivot is. 	<p>Year 1 - To be able to investigate ways of creating and decorating the body of a vehicle Year 2 – To be able to investigate ways of creating and decorating the body of a vehicle. Activities: Children to explore and discuss the different ways of creating the vehicle’s body. They will use a variety of different boxes and modelling equipment to explore different ways of creating the bodies of vehicles. Children will know:</p> <ul style="list-style-type: none"> and choose materials to use as the body of a vehicle. different ways of decorating the body of a vehicle different ways of combining materials to create the body of a vehicle (including ICT)
Lesson 4	<p>Year 1 -To be able to design a glove/finger puppet. Year 2 – To be able to design a glove puppet. Activities: Children design a puppet for a particular purpose Children will know:</p>	<p>Year 1 - To design a picture with a moving mechanism Year 2 – To design a picture with a moving mechanism Activities: In this lesson children will apply what they have learnt about the three different types of moving mechanisms to design their own moving minibeast picture for an author who is creating a children’s book about minibeasts.</p>	<p>Year 1 - To be able to design a vehicle. Year 2 – To be able to design a vehicle with an identified purpose Activities: Children to design their own vehicle using the techniques previously explored, as well as following the success criteria. Children will know:</p>

	<ul style="list-style-type: none"> • how to use the skills they have acquired to design their own glove puppet. • the possible techniques to use and share their ideas to help create their designs. • what materials and tools they will need to make their puppet 	Children will know: <ul style="list-style-type: none"> • how to design their own moving picture. • how to choose a suitable moving mechanism for their design • how the mechanism will make their picture move 	<ul style="list-style-type: none"> • how to design a vehicle. • and describe which materials and tools they will need to make their vehicles. • how to discuss their designs and say what they think and feel about them.
Lesson 5	<p>Year 1 - To be able to make a puppet. Year 2 – To be able to follow a design to make a puppet. Activities: Children to follow their designs to create their glove puppet. They should think about the appropriate materials to use and to work safely and carefully. Children will know:</p> <ul style="list-style-type: none"> • the steps they will need to take to create their puppet • how to follow their designs to create their puppets • how to work safely and sensibly when working with a variety of materials and tools 	<p>Year 1 - To make a minibeast-themed moving picture Year 2 – To make a minibeast-themed moving picture Activities: Children will be encouraged to think carefully about the mechanism they are going to make, the equipment they will need, and their order of work, before beginning to create their moving picture based on their design from the previous lesson. Children will know:</p> <ul style="list-style-type: none"> • how to follow a design to create a picture with a moving mechanism. • how to work safely with a variety of tools. • and identify ways in which they can improve their finished products 	<p>Year 1 – To be able to make a vehicle Year 2 – To be able to make a vehicle based on a design. Activities: Children to follow their designs to create and make their vehicles using a range of craft materials. They will need to make sure they are working safely and carefully. Children will know:</p> <ul style="list-style-type: none"> • how to create a vehicle. • how to use a variety of materials and tools safely to create a vehicle • and identify ways in which they could improve their products (Y2s amend accordingly).
Lesson 6	<p>Year 1 - To be able to evaluate a finished product. Year 2 – To be able to evaluate a finished product. Activities: Children to share and demonstrate their puppets. They will then evaluate their own puppets. Children will know:</p> <ul style="list-style-type: none"> • how to evaluate their own finished products and say what they think and feel about them • how to comment on the work of others and offer their opinions • and identify ways in which they could improve their work in the future 	<p>Year 1 - To evaluate a moving minibeast picture Year 2 – To evaluate a moving minibeast picture Activities: In this final lesson, children will evaluate their completed moving minibeast picture. After beginning to discuss some evaluative questions with a partner and the class, children will then continue this self-assessment in their independent activities. Children will know:</p> <ul style="list-style-type: none"> • what it means to evaluate. • how to evaluate their own moving picture. • and identify ways to improve their moving picture. <p>Year 2 - and other people’s moving picture.</p>	<p>Year 1 - To be able to evaluate a finished product. Year 2 – To be able to evaluate a finished product. Activities: Children will share their vehicles with their friends, making sure that wheels are working and the chassis is strong. They will then evaluate their vehicle, explaining how their vehicle could be improved if they were to make it again. Children will know:</p> <ul style="list-style-type: none"> • how to evaluate a finished product by identifying what they did well. • how to evaluate a finished product by identifying what could be improved. • and identify ways in which they could improve their work with DT in the future.
Key knowledge	<p>Children will know;</p> <ul style="list-style-type: none"> • what puppets are and how they are used • how to join fabrics using a running stitch (Y2 how to add decorations such as a button) • how to work safely with a variety of sharp tools, such as needles and scissors 	<p>Children will know:</p> <ul style="list-style-type: none"> • how a sliding mechanism works. • how to make their own sliding mechanism. • and understand what a lever is and how it works • how to work safely with a variety of tools 	<p>Children will know:</p> <ul style="list-style-type: none"> • and the main features and uses of different types of vehicles • how to use a variety of materials and tools safely to create a vehicle • what wheels, chassis and axles are and know two different ways of attaching wheels to axles to create a vehicle they have designed