



Design and Technology (DT)

SUBJECT INTENT



Our Curriculum Map

	Cycle A				Cycle B			
	EYFS	Year 1/2	Year 3/4	Year 5/6	EYFS	Year 1/2	Year 3/4	Year 5/6
Autumn 1	Can We Be Friends? Come Rhyme With Me	Why do I love to be beside the seaside?	Sticks and stones	Hurry up, you've Benin there a while!	Can We Be Friends? Come Rhyme With Me	The great animals	The Vikings on the wall	It's all Greek to me!
Autumn 2	Tell Me A Story	Darling, put the fire out!	We built this mega city on rock and roll!	Lavas all you need	Tell Me A Story	Happily Everest after	You crack me up!	Ain't no mountain high enough
Spring 1	Are We Nearly There Yet?	A toy story!	Bronze ain't bad!	What did the Romans do for us?	Pole To Pole	What's the nurse that can happen?	Where's my mummy?	The big Shang theory
Spring 2	It's A Bug's Life	Why don't penguins need to fly?	National parks	Walking on sunshine	Land Of The Giants	Wicked weather!	Don't rainforest on my parade	How is fair trade fair?
Summer 1	How Does Your Garden Grow?	It's pasture bedtime!	I've got my iron you	Mirror, Royal Signal, Manoeuvre	Commotion in the Ocean	Location, location, location	Great scot!	Only we can save the world!
Summer 2	The Best Show Of Your Life!	On the road again!	Save it for a train-y day	Current affairs	Here Comes The Sun!	Too hot to handle	Ch-ch-changes!	Who do you think you are, Mr Hitler?

What does DT look like at Downlands?



Volume of content:

1. Each mixed-age class will complete **three** units per year.
2. Each unit will be at least **five** lessons.

Subject delivery:

1. Each unit should follow a similar structure, starting with looking at what problem you are trying to solve. Next, looking at existing solutions to that problem (or how that problem was solved in a historical context). This should be as hands-on as possible, giving children practical examples to manipulate and explore. This should provide them with the skills they will need to solve their problem and could include explicit teaching of skills (e.g. different stitches). This is the 'investigate' stage.
2. There should then follow a planning stage where children consider how they are going to solve the problem using their own ideas and the knowledge they have gathered from the 'investigate' stage.
3. Then, children should have a reasonable allotment of time to create their idea, including the opportunity to make amendments and trial different ideas.
4. The final stage is evaluation, this might be half of a lesson, considering what went well, does it meet the design brief, what could have gone better and what they would do differently next time. This might also include the opportunity to evaluate other groups' projects.

Recording of subject:

1. In EYFS/KS1, learning will be recorded in a floor book. This will include photos of children at each stage, as well as a sample of plans that they have made and product parts (e.g. fabric/cardboard).
2. In KS2, learning will be recorded in a individual bespoke booklet created for each unit. This will include opportunities to record each stage of the design process.

DT – progression of skills (disciplinary knowledge)



SKILL	End of KS1	End of LKS2	End of UKS2
DESIGN	<ul style="list-style-type: none"> Have own ideas and plan what to do next. Explain what I want to do and describe how I may do it. Explain purpose of product, how it will work and how it will be suitable for the user. Describe design using pictures, words, models, diagrams, begin to use ICT. Design products for myself and others following design criteria. Choose best tools and materials, and explain choices. Use knowledge of existing products to produce ideas. 	<ul style="list-style-type: none"> Use research for design ideas. Show design meets a range of requirements and is fit for purpose. Begin to create own design criteria. Have at least one idea about how to create product and suggest improvements for design. Produce a plan and explain it to others. Say how realistic plan is. Include an annotated sketch. Make and explain design decisions considering availability of resources. Explain how product will work. Make a prototype. Begin to use computers to show design. 	<ul style="list-style-type: none"> Draw on market research to inform design. Use research of user's individual needs, wants, requirements for design. Identify features of design that will appeal to the intended user. Create own design criteria and specification. Come up with innovative design ideas. Follow and refine a logical plan. Use annotated sketches, cross-sectional planning and exploded diagrams. Make design decisions, considering, resources and cost. Clearly explain how parts of design will work, and how they are fit for purpose. Independently model and refine design ideas by making prototypes and using pattern pieces. Use computer-aided designs.
MAKE	<ul style="list-style-type: none"> Explain what I am making and why it fits the purpose. Make suggestions as to what I need to do next. Join materials/components together in different ways. Measure, mark out, cut and shape materials and components, with support. Describe which tools I'm using and why. Choose suitable materials and explain choices depending on characteristics. Ese finishing techniques to make product look good. 	<ul style="list-style-type: none"> Select suitable tools and equipment, explain choices in relation to required techniques and use accurately. Select appropriate materials, fit for purpose; explain choices. Work through plan in order. Realise if product is going to be good quality. Measure, mark out, cut and shape. materials/components with some accuracy. Assemble, join and combine materials and components with some accuracy. Apply a range of finishing techniques with some accuracy. 	<ul style="list-style-type: none"> Use selected tools and equipment precisely. Produce suitable lists of tools, equipment, materials needed, considering constraints. Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics. Create, follow, and adapt detailed step-by-step plans. Explain how product will appeal to audience; make changes to improve quality. Accurately measure, mark out, cut and shape materials/components. Accurately assemble, join and combine materials/components. Accurately apply a range of finishing techniques. Use techniques that involve a number of steps. Be resourceful with practical problems.
EVALUATE	<ul style="list-style-type: none"> Describe what went well, thinking about design criteria. Talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion. Evaluate how good existing products are. Talk about what I would do differently if I were to do it again and why. 	<ul style="list-style-type: none"> Refer to design criteria while designing and making. Use criteria to evaluate product . Begin to explain how I could improve original design. Evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose. Discuss by whom, when and where products were designed. Research whether products can be recycled or reused. Know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products. 	<ul style="list-style-type: none"> Evaluate quality of design while designing and making; is it fit for purpose? Keep checking design is best it can be. Evaluate ideas and finished product against specification, stating if it's fit for purpose. Test and evaluate final product; explain what would improve it and the effect different resources may have had. Do thorough evaluations of existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose. Evaluate how much products cost to make and how innovative they are. Research and discuss how sustainable materials are. Consider the impact of products beyond their intended purpose. Discuss some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products.

DT – curriculum map – KS1 – cycle A



	Spring 1	Summer 1	Summer 2
Unit A toy story	A toy story	It's pasture bedtime	On the road again
Skills (disciplinary knowledge) <div style="border: 1px solid black; padding: 5px; width: fit-content;"> DESIGN MAKE EVALUATE </div>	<ul style="list-style-type: none"> Design products for myself and others following design criteria. Explain what I want to do and describe how I may do it. Explain what I am making and why it fits the purpose Make suggestions as to what I need to do next. Describe what went well, thinking about design criteria. Talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion. Evaluate how good existing products are. 	<ul style="list-style-type: none"> Explain purpose of product, how it will work and how it will be suitable for the user. Design products for myself and others following design criteria. Measure, mark out, cut and shape materials and components, with support. Describe which tools I'm using and why. Use finishing techniques to make product look good Talk about what I would do differently if I were to do it again and why. 	<ul style="list-style-type: none"> Choose best tools and materials, and explain choices. Use knowledge of existing products to produce ideas. Have own ideas and plan what to do next. Join materials/components together in different ways. Choose suitable materials and explain choices depending on characteristics. Talk about what I would do differently if I were to do it again and why.
Knowledge (substantive knowledge)	TOY MAKING In this unit, pupils will explore a range of pre-existing toys and consider what makes them enjoyable. They will then learn about how to safely use scissors and practise cutting in a variety of ways. Next, pupils will look at a selection of paper toys and discuss how these can be made. Finally, pupils will look at what an optical illusion is and create a toy inspired by this.	HEALTHY FOOD (FRUIT KEBABS) In this unit, pupils will look at the different food groups are, and discuss how each of these are essential to our wellbeing. Pupils will then practise their cutting skills involving food, before designing, making and evaluating their own fruit kebab.	MOVING PICTURES - EXPLORERS In this unit, pupils will look at pre-existing moving pictures and explore how these have been made, practising the techniques such as sliders, split pin movement and being able to push and pull. They will then design, make and evaluate their own moving picture based on a scene from a famous explorer they have been learning about, choosing a particular technique to focus on (e.g. Ranulph Fiennes, Amy Johnson, Christopher Columbus and Neil Armstrong).
Learning Objectives	PlanBee Planning available to supplement this unit: https://planbee.com/products/free-mini-scheme-creating-paper-toys <ol style="list-style-type: none"> I can research a range of pre-existing toys and consider why they are fun I can develop my cutting skills I can understand how to make paper toys I can develop and make a paper toy illusion I can make and evaluate a paper toy illusion 	<ol style="list-style-type: none"> I know what the food groups are I can safely cut food in a variety of ways I can design a fruit kebab I can make and evaluate a fruit kebab 	Twinkl planning available to supplement this unit: https://www.twinkl.co.uk/resource/tp2-d-082-planit-dt-ks1-moving-pictures-traditional-tales-unit-pack <ol style="list-style-type: none"> I can practise how to make a paper sliding mechanism I can practise how to use split-pin movement I can practise how to use push-and-pull movement in paper I can design and start to make my own moving picture based on an explorer I can make my own moving picture based on an explorer

DT – curriculum map – LKS2 – cycle A



	Spring 1	Summer 1	Summer 2
Unit Bronze ain't bad!	I've got my iron you	Save it for a train-y day	
Skills (disciplinary knowledge) <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> DESIGN MAKE EVALUATE </div>	<ul style="list-style-type: none"> Use research for design ideas. Show design meets a range of requirements and is fit for purpose. Produce a plan and explain it to others. Say how realistic plan is. Work through plan in order. Realise if product is going to be good quality. Assemble, join and combine materials and components with some accuracy. Refer to design criteria while designing and making Use criteria to evaluate product. Begin to explain how I could improve original design. Evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose. 	<ul style="list-style-type: none"> Include an annotated sketch. Make and explain design decisions considering availability of resources. Explain how product will work. Make a prototype. Measure, mark out, cut and shape materials/components with some accuracy. Refer to design criteria while designing and making. Use criteria to evaluate product. Know about some inventors/designers/engineers/chefs/manufacturers of ground-breaking products. Discuss by whom, when and where products were designed. 	<ul style="list-style-type: none"> Begin to create own design criteria. Have at least one idea about how to create product and suggest improvements for design. Select suitable tools and equipment, explain choices in relation to required techniques and use accurately. Select appropriate materials, fit for purpose; explain choices. Apply a range of finishing techniques with some accuracy. Know about some inventors/designers/engineers/chefs/manufacturers of ground-breaking products.
Knowledge (substantive knowledge)	MECHANICAL SYSTEMS: MOVING ROCKS In this unit, pupils will look at how things have been moved throughout history, such as rocks to build pyramids in Egypt as well as the Standing Stones. They will practise using a variety of methods to move things such as wheels and levers. Finally, they will design, make and evaluate a system for moving rocks.	IRON AGE TOOLS In this unit, pupils will research various iron age tools such as iron sickles, rotary quern stones and an iron chisel, evaluating how these were used and what the modern day equivalents of these might be. Pupils will then design and prototype their own tool which they think would help in an iron age setting of farming, considering what materials they would have had available to them at the time.	LUXURY TRAIN PIZZA In this unit, pupils recap what the essential food groups are, explore examples of luxury food items and discuss seasonality of certain foods. Pupils will practise their food hygiene and preparation skills before designing, making and evaluating a luxury food dish (pizza) which could be served on a train.
Learning Objectives	<ol style="list-style-type: none"> I can research how objects might be moved I can practise using different methods to move objects I can design a system to move rocks I can make a system to move rocks I can make and evaluate a system to move rocks 	<ol style="list-style-type: none"> I can research various iron age tools I can compare and contrast how tools have evolved over time I can design my own iron age tool I can prototype my own iron age tool I can prototype and evaluate my own iron age tool 	<ol style="list-style-type: none"> I can understand what the essential food groups are and why they are important I can research examples of luxury food and consider which ones are available at a specific time I can practise food hygiene and cutting skills I can design a luxury pizza I can make and evaluate a luxury pizza <p><i>Optional extra: I can design food packaging for my meal which would be suitable for transporting and storing on a train</i></p>

DT – curriculum map – UK\$2 – cycle A



	Spring 1	Spring 2	Summer 2			
Unit	What did the Romans do for us?	Walking on sunshine	Current affairs			
Skills (disciplinary knowledge) <table border="1" style="margin-left: 20px; margin-top: 10px;"> <tr><td>DESIGN</td></tr> <tr><td>MAKE</td></tr> <tr><td>EVALUATE</td></tr> </table>	DESIGN	MAKE	EVALUATE	<ul style="list-style-type: none"> Use research of user’s individual needs, wants, requirements for design. Identify features of design that will appeal to the intended user. Independently model and refine design ideas by making prototypes and using pattern pieces. Use selected tools and equipment precisely. Create, follow, and adapt detailed step-by-step plans. Accurately measure, mark out, cut and shape materials/components. Explain how product will appeal to audience; make changes to improve quality. Keep checking design is best it can be Evaluate ideas and finished product against specification, stating if it’s fit for purpose. Test and evaluate final product; explain what would improve it and the effect different resources may have had. Discuss some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products. 	<ul style="list-style-type: none"> Create own design criteria and specification. Come up with innovative design ideas. Follow and refine a logical plan. Use annotated sketches, cross-sectional planning and exploded diagrams. Draw on market research to inform design. Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics. Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics. Research and discuss how sustainable materials are. Consider the impact of products beyond their intended purpose. Evaluate quality of design while designing and making; is it fit for purpose? Evaluate how much products cost to make and how innovative they are. 	<ul style="list-style-type: none"> Clearly explain how parts of design will work, and how they are fit for purpose. Independently model and refine design ideas by making prototypes and using pattern pieces. Accurately assemble, join and combine materials/components. Use techniques that involve a number of steps. Be resourceful with practical problems. Discuss some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products. Do thorough evaluations of existing products considering: how well they’ve been made, materials, whether they work, how they’ve been made, fit for purpose.
DESIGN						
MAKE						
EVALUATE						
Knowledge (substantive knowledge)	BURGER MAKING In this unit, pupils will explore the impact that Romans had on food in Britain, discovering that they were the ones who brought us the idea of ‘fast food’! Pupils will then plan, make and evaluate their own burger meal based on the Romans’ food.	WIND POWERED CARS In this unit, pupils will explore how wind can be used to generate energy and momentum. Pupils will look at how wind affects things such as boats (e.g. sails) and windmills. Pupils will then use some of this understanding to design their own wind-powered car of the future, as a sustainable alternative. They will build, test and evaluate a prototype	BRIDGES In this unit, pupils will learn about the history of significant bridges and the people who designed them. They will explore how this work, looking at different ways these can be made before using this knowledge to design a bridge which could be built over a river. This will then be built and tested to see which groups is the most effective.			
Learning Objectives	<ol style="list-style-type: none"> I can understand the impact Romans had on food in Britain I can explore some of the foods the Romans introduced I can plan how to make a Roman ‘fast food’ meal I can practise making a Roman ‘fast food’ meal I can make a Roman ‘fast food’ meal I can advertise and evaluate a Roman ‘fast food’ meal 	<ol style="list-style-type: none"> I can understand how wind is used as a source of energy I can research various designs for a wind powered vehicle I can design (and prototype) a wind powered car I can build a wind powered car I can build a wind powered car I can test and evaluate a wind powered car 	<i>PlanBee Planning is available to supplement this unit.</i> <ol style="list-style-type: none"> I can research the history of bridges and the people who have influenced their design I can practise making different types of bridges I can design a bridge suitable for a river I can build a bridge suitable for a river I can test and evaluate a bride suitable for a river 			