



DT coverage-2026

NC Statement

The national curriculum for design and technology aims to ensure that all pupils:

Develop the creative, technical, and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world

Build and apply a repertoire of knowledge, understanding and skills to design and make high-quality prototypes and products for a wide range of users

Critique, evaluate and test their ideas and products and the work of others

Understand and apply the principles of nutrition and learn how to cook.

Key stage 1

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].

When designing and making, pupils should be taught to:

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

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

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.

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.

Pupils should be taught to:

Use the basic principles of a healthy and varied diet to prepare dishes

Understand where food comes from.

Key stage 2

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, school, leisure, culture, enterprise, industry, and the wider environment].

When designing and making, pupils should be taught to:

Design

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

Make

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

Evaluate

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

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.

Cooking and nutrition

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Pupils should be taught to:

Understand and apply the principles of a healthy and varied diet

Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

Understand seasonality and know where and how a variety of ingredients are grown, reared, caught, and processed.

Lesson structure

1. Introduction/Flashback
2. New learning
3. Independent learning
4. Plenary



DT overview

	Advent Term		Lent Term		Pentecost Term	
Foundation stage 1	Box modelling Joining	Materials - using different construction materials	Box modelling - constructing enclosures	Materials - collage	Box modelling Joining different materials and textures	Materials Joining materials and textures
Foundation stage 2	Box modelling - Joining	Materials - Textures	Box modelling - Refining	Materials - collage	Box modelling - selecting appropriate tools and explaining process used	Materials - experiment with design and explain process used
Year 1	Structures Constructing a windmill		Textiles Puppets		Food Smoothies	
Year 2		Structure Chairs		Mechanisms Fairground wheel		Mechanisms Making a moving monster
Year 3	Food Eating seasonally		Digital world Electronic charms		Structures Constructing a castle	
Year 4		Structure Pavilions		Mechanical systems Making a slingshot car		Electrical systems Torches
Year 5	Electrical systems Greeting cards		Mechanical systems Pop up books		Food What could be healthier?	
Year 6		Textiles Waistcoats		Structure Playgrounds		Digital world CAD's



Structures	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge Substantive Knowledge		Know the purpose of structures, including windmills Know that the shape of materials can be changed to improve the strength and stiffness of structures Know that cylinders are a strong type of structure that are often used for windmills and lighthouses Know that windmill turbines use wind to turn and make the machines inside work Know that axles are used in structures and mechanisms to make parts turn in a circle Know that different structures	Know what natural and man-made structures Know when a structure is more or less stable than another Know that shapes and structures with wide, flat bases or legs are the most stable Know that the shape of a structure affects its strength Know that materials can be manipulated to improve strength and stiffness	Know the features of a castle Know suitable materials to be selected and used for a castle, considering weight, compression, tension Know that wide and flat based objects are more stable Know what strut, tie, span, beam mean Know the difference between a frame and shell structure	Know what pavilions are and their purpose Know that architects consider light, shadow and patterns when designing Know that there are different ways to assemble a frame structure		Know that structures can be strengthened by manipulating materials and shapes Know what the shell structures are in everyday life (cars, aeroplanes, tins, cans) Know man-made and natural structures Know that there are many types of apparatus in a playground such. Slide. Swing, monkey bars, tree house, tunnel



		have different purposes					
Skills Disciplinary Knowledge	Know how to make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Know how to join construction pieces together to build and balance. Know how to begin to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. Know how to join construction pieces together to build and balance. Share their creations, explaining the process they have used.	Learn the importance of a clear design criteria Include individual preferences and requirements in a design Make stable structures from card, tape, and glue Follow instructions to cut and assemble the supporting structure of a windmill Make functioning turbines and axles which are assembled into a main supporting structure Evaluate a windmill according to the design criteria, testing whether the	Generate and communicate ideas using sketching and modelling Learning about different types of structures, found in the natural world and in everyday objects Make a structure according to design criteria Create joints and structures from paper/card and tape Explore the features of structures Compare the stability of different shapes Test the strength of own structures	Design a castle with key features to appeal to a specific person/purpose Draw and label a castle design using 2D shapes, labelling: -the 3D shapes that will create the features - materials need and colours Design and/or decorate a castle tower on CAD software Construct a range of 3D geometric shapes using nets Create special features for individual designs Make facades from a range of	Design a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect Build frame structures designed to support weight Create a range of different shaped frame structures Make a variety of free-standing frame structures of different shapes and sizes Select appropriate materials to build a strong structure and for the cladding		Design a playground featuring a variety of different structures, considering how the structures will be used, considering effective and ineffective designs Build a range of play apparatus structures drawing upon new and prior knowledge of structures Measure, marking and cutting wood to create a range of structures Use a range of materials to reinforce and add decoration to structures



		structure is strong and stable and altering it if it isn't Suggest points for improvements	Identify the weakest part of a structure Evaluate the strength, stiffness, and stability of own structure	recycled materials Evaluate own work and the work of others based on the aesthetic of the finished product and in comparison, to the original design Suggest points for modification of the individual designs.	Reinforce corners to strengthen a structure Create a design in accordance with a plan • Create different textural effects with materials		Improve a design plan based on peer evaluation Test and adapt a design to improve it as it is developed Identify what makes a successful structure
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Textiles	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge Substantive Knowledge		Know how to join fabrics together by gluing, pinning, and stapling					Know different decorative stitches Know that King Charles I was the first person to have a waistcoat designed for them in 1630



							Know what the length and width are
Skills Disciplinary Knowledge	Know how to be increasingly independent as I get dressed and undressed, for example, putting coats on and doing up zips Know how to join different materials and explore different textures. Safely use and explore a variety of materials, tools, and techniques, experimenting with colour, design, texture, form and function	Use a template to create a design for a puppet Cut fabric neatly with scissors Use joining methods to decorate a puppet Sequence steps for construction Reflect on a finished product, explaining likes and dislikes					Design a waistcoat in accordance with specification linked to set of design criteria to fit a specific theme Annotate designs Use a template when pinning panels onto fabric Mark and cut fabrics accurately, in accordance with a design Sew a strong running stitch, making small, neat stitches and following the edge Tie strong knots



							Decorate a waistcoat - attaching objects using thread and adding a secure fastening Evaluate work continually as it is created
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Food	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge Substantive Knowledge		Know the difference between fruits and vegetables Know what texture means Know where and how fruits and vegetables grow		Know how climate affects food growth Know how to use cooking equipment safely and hygienically Know that imported foods travel from far away and this can negatively impact the environment Know that vegetables and		Know where food comes from - learning that beef is from cattle and how beef is reared and processed. Know what constitutes a balanced diet Know how to adapt a recipe to make it healthier. Know that a balanced diet	



				fruit grow in certain seasons Know that each fruit and vegetable give us nutritional benefits Know how to use, store, and clean a knife safely		consists of measured amounts of different foods to keep us healthy. Know the different food groups are dairy, fruits and vegetables, protein, carbohydrates, fats, and sugars. Know that eating the right mix of nutrients will help your body grow and develop, many foods have labels which tell you the amount of each nutrient it has. Know that it is important to know how to avoid cross-contamination to keep safe when preparing and	
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						cooking different foods. Know that in farming, it's important that the animals are cared for properly during their lifetime. There are ethical rules which ensure that the animals receive a good level of welfare.	
Skills Disciplinary Knowledge	Know how to show a preference for a dominant hand. Know how to start eating independently and learning how to use a knife and fork Know how to show interest in and describe the texture of things. Safely use and explore a variety of materials,	Design a smoothie carton packaging by-hand or on ICT software Chop fruit and vegetables safely to make a smoothie Identify if a food is a fruit or a vegetable Taste and evaluate different food combinations Describe appearance, smell, and taste		Create a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell, and appearance of the dish Prepare themselves and a workspace to cook safely in, learning the		Adapt a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute, or add additional ingredients. Write an amended method for a recipe to	



	tools, and techniques, experimenting with colour, design, texture, form and function	Suggest information to be included on packaging		basic rules to avoid food contamination Follow the instructions within a recipe Establish and use design criteria to help test and review dishes Describe the benefits of seasonal fruits and vegetables and the impact on the environment Suggest points for improvement when making a seasonal tart		incorporate the relevant changes to ingredients. Design appealing packaging to reflect a recipe. Cut and prepare vegetable safely. Use equipment safely. Avoid cross-contamination. Follow a step-by-step method carefully to make a recipe. Identify the nutritional differences between different products and recipes. Identify and describe healthy benefits of food groups.	
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Mechanisms	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge Substantive knowledge			Know that mechanisms are a collection of moving parts that work together in a machine Know that there is always an input and output in a mechanism Know what an axel and a wheel are Know what a pivot is Know that a lever is something that turns on a pivot Know that a linkage is a system of levers that are connected by pivots Know that linkages use levers and pivots to create motion		Know that products change and evolve over time. Know that all moving things have kinetic energy. Know that kinetic energy is the energy that something (object person) has by being in motion.	Know that an input is the motion used to start a mechanism. Know that an output is the motion that happens because of starting the input. Knowing that mechanisms control movement. Know mechanisms that can be used to change one kind of motion into another.	



			Know what a design criteria is				
Skills Disciplinary Knowledge			Identify mechanisms in everyday objects Make linkages Experiment making linkages by varying materials and measurements of the levers Create a design meeting the design criteria		Design a shape that reduces air resistance Draw a net to create a structure from. Choose shapes that increase or decrease speed because of air resistance. Personalise a design. Create a range of different shaped frame structures. Make a variety of free-standing frame structures of different shapes and sizes. Select appropriate materials to build a strong structure and for the cladding.	Design a pop-up book which uses a mixture of structures and mechanisms. Name each mechanism, input, and output accurately. Storyboard ideas for a book. Follow a design brief to make a pop-up book, neatly and with focus on accuracy. Make mechanisms and/or structures using sliders, pivots, and folds to produce movement. Use layers and spacers to hide the workings of mechanical parts for an	



					Reinforce corners to strengthen a structure. Create a design in accordance with a plan. Create different textural effects with materials. Evaluate the speed of a final product based on the effect of shape on speed and the accuracy of workmanship on performance	aesthetically pleasing result. Evaluate the work of others and receiving feedback on own work. Suggest points for improvement.	
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Electrical systems	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge Substantive Knowledge					Know what electricity is Know some everyday items that use electricity Know that a battery contains stored electricity and	Know the key components used to create a functioning circuit • Know that copper is a conductor and can be used as part of a circuit	



					can be used to power products Know that a conductor is a material that lets electricity travel through it Know that an insulator is a material that electricity cannot pass through Know what a simple series circuit with a switch is and how to make it Know what a torch is and its features Know what a target audience is Know how to build a circuit and housing for my torch design	• Know that breaks in a circuit will stop it from working • Know how a series circuit will work in my card • Know the negative and positive leg of an LED • Know the symbols used in a circuit diagram • Know who Sir Rowland Hill was and what he invented.	
Skills Disciplinary Knowledge					Identify electrical products.	Design an electronic greetings card with a copper	



					Create a simple series circuit with a switch. Identify the features of a torch. Understand how a torch works. Analyse and evaluate different torches. Understand what is important in torch design. Know how to design a torch to fit needs of user. Know how to evaluate my torch design.	track circuit and components Create a labelled circuit diagram showing positive and negative parts in relation to the LED and the battery. Write design criteria for an electronic greeting Card. Compile a mood board relevant to my chosen theme, purpose, and recipient. Make a functional series circuit. Create an electronic greeting card, referring to a design criteria Map out where different components of the circuit will go.	
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						Evaluate a peer's product against design criteria and suggesting modifications that could be made to improve the reliability or aesthetics of it or to incorporate another type of circuit Component. Analyse and evaluating a range of existing greeting cards.	
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Digital world	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge Substantive Knowledge				Know key product developments that occurred because of the digital revolution. Know what a loop is in programming. Know the basic functionality of a			Know that a design brief is an important document that outlines your design project so the client understands exactly what to expect will be delivered and the timescales.



				eCharm program. Know what is meant by 'point of sale display'.			Know that a client is a person or company who have requested a service or job from someone to complete a specialist task Know that the features of design criteria are the specific goals that a project must achieve to be successful Know what a 3D CAD model is Know that a pitch is a presentation that attempts to persuade
Skills Disciplinary Knowledge				Problem solving by suggesting potential features on a Micro: bit and justifying my ideas.			Develop a concept and design criteria to fulfil the needs of a client Explain the key functions in the program used to



				Develop design ideas for a technology pouch Draw and manipulate 2D shapes, using computer-aided design, to produce a point-of-sale badge. Use a template when cutting and assembling the pouch. Follow a list of design requirements. Select and use the appropriate tools and equipment for cutting, joining, shaping, and decorating a foam pouch. Apply functional features such as using foam to create soft buttons.			fit the design criteria Consider appropriate materials and their function Develop a 3D CAD model Develop a presentation to explain the key functions of their design, material choices through a functional program Evaluate my design
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				Analyse and evaluating an existing Product. Identify the key features of a pouch.			
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