



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

Year 1/2	Skills	Knowledge
Design	Identifying needs and problems - Thinking about what others might want from a design. - Beginning to recognise how products and designs in the world around us solve certain needs. Developing for a user - Considering who they are designing for - identifying the user. - Stating what they intend to make and why - identifying the purpose. - Using a simple design brief that outlines the intended use, target user and key features of the product, to create simple design criteria. Generating ideas - Talking about ideas, with purpose and user in mind. - Talking about existing products when generating ideas. - Creating ideas with design criteria in mind. - Referring to specific parts of existing products when generating ideas. Communicating ideas - Using basic drawing skills to communicate ideas. - Using labels to explain parts of a design, label materials etc, including using ICT. - Integrating moving parts when creating mock-ups.	Identifying needs and problems - To know that different users may want different things from a design. - To know that the 'user' is the person who will use the product. - To know that designers usually design and make something to solve a problem. Developing for a user - To know that who they are designing for makes a difference to what they design. - To know that the purpose is what something is for. - To know that a design brief helps to decide what to make. - To know that design criteria are the steps for making a product successful. Generating ideas - To know that existing products can help when deciding what to design. - To know that the design criteria help when thinking of ideas. - To know that different products work in different ways and have parts that make them work. Communicating ideas - To know that drawings are a way to explain ideas. - To know that drawings can help explain how something works. - To know that a label explains part of a drawing.



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

Make	Planning • Planning more than one step ahead. Selecting materials • Choosing between a small number of materials, ingredients or components. • Explaining their choices based on personal experiences. • Choosing materials, ingredients or components from a wider range of materials, ingredients or components. • Explaining their choices based on the properties of materials and components. Selecting equipment • Requesting equipment appropriate to the purpose (e.g. scissors for cutting, glue for joining). • Selecting from a wider range of equipment some of which are used for the same purpose (e.g. joining by sewing instead of glue). Tool safety • Explaining in simple terms why certain tools must be handled carefully. • Following and recalling simple safety instructions. • Explaining in simple terms why certain tools must be handled carefully. • Following and recalling simple safety instructions. Tool use • Marking and measuring: Measuring, marking and spacing materials accurately using simple tools and by identifying midpoints.	Planning • To know that a plan is deciding what to do first and next. Selecting materials • To know that choosing different materials or components will have an effect on what their product does or looks like. • To know some properties of materials like hard, soft, flexible, waterproof, strong etc. Tool safety • To know that some tools are sharp, such as scissors and knives. • To know that following instructions means using tools safely. • To know that some tools are sharp like scissors and knives. • To know that following instructions means using tools safely. Tool use • Marking and measuring: To know that straight lines, equal spacing and finding the middle of an object help to make products more accurate. • Marking and measuring: To know that length can be measured and marked to improve the accuracy of products. • Cutting: To know that different tools and techniques are used to cut materials and soft foods safely and accurately. • Cutting: To know that changing grip and how a material is held can make cutting safer and more accurate.
-------------	--	--



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

	• Marking and measuring: Measuring, marking and spacing lines of a given length using simple tools. • Cutting: Cutting straight and spaced lines, larger shapes and simple holes safely and with control. • Cutting: Cutting a range of materials with improving control by adjusting grip and positioning the material carefully. • Joining: Joining materials using glue, tape or simple stitching. • Joining: Joining materials by aligning edges carefully and applying glue or stitches neatly and evenly. • Shaping: Using simple tools to shape materials by cutting and forming. • Shaping: Using templates and known shapes to create and adapt forms for a purpose. • Finishing: Finishing products using controlled colouring and simple textures. • Finishing: Applying consistent brush/pen/pencil strokes to create balance in their finishing.	• Joining: To know that materials can be joined in different ways to create a secure and neat finish. • Joining: To know that careful alignment and neat application make a join stronger and tidier. • Shaping: To know that tools are used to change the shape of different materials. • Shaping: To know that templates and geometric shapes can help create accurate forms that improve how a product works. • Finishing: To know that texture and careful colouring improve how a product looks and feels. • Finishing: To know that balanced and consistent finishing improves the overall appearance of their product.
Evaluate	Evaluating existing products • Discussing existing products, saying what they like about them. • Comparing two products and discuss which is better for a specific purpose. • Discussing a range of existing products and saying what they like and dislike about them.	Evaluating existing products • To know that some products will be better than others. • To know that existing products can be evaluated against design criteria. Evaluating own ideas and products • To know that their ideas or products can be made better. • To know that their final product might be different to their original idea.



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

	• Comparing a range of products and explaining why some better meet different design criteria than others. Evaluating own ideas and products • Discussing how their products could be improved based on personal preferences. • Comparing their finished products with their original designs. • Evaluating their ideas and creations against simple design criteria. • Discussing whether they were able to use the tools and techniques effectively. Giving and receiving feedback • Saying what they like about their peers' designs and products. • Accepting feedback and understanding it is meant to improve their work. • Suggesting improvements to their peers' designs and products.	• To know that design criteria help to decide if their product is a success. • To know what different tools and equipment do. Giving and receiving feedback • To know that their ideas can make someone else's work better. • To know that other people's ideas can help make their work better. • To know that improve means to make something better. • To know that their suggestions can improve someone else's work.
--	---	---



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

Year 3/4	Skills	Knowledge
Design	Identifying needs and problems • Noticing simple problems or needs in their everyday life. • Using empathy and conducting simple surveys to recognise the needs of others. Developing for a user • Creating simple design criteria that outline basic functionality and appeal to individual users or target audiences. Generating ideas • Taking part in structured idea-generation sessions. • Coming up with more ideas and considering the feasibility of their ideas in the classroom. Communicating ideas • Beginning to use 2D CAD software to communicate their ideas. • Developing drawing and sketching skills with a focus on clarity and simplicity. • Developing designs by adding detail and justifications about materials, tools, methods. • Beginning to recognise the benefit of a range of diagram types or prototypes to communicate ideas. (eg. sketches, cross-sectional diagram, thumbnail sketches and exploded diagrams).	Identifying needs and problems • To know that a problem or need is something that a designer can help to solve. Developing for a user • To know that a target audience is a group of people that might like the idea. Generating ideas • To know that thinking together can help generate ideas. • To know that not everything can be made in the classroom. Communicating ideas • To know that CAD is computer-aided design. • To know that CAD can be used to better communicate ideas. • To know that extra information on drawings or diagrams can help the user understand a design or idea. • To know that thumbnail sketches are less detailed quick sketches. • To know that a cross-sectional diagram shows the inside of a product. • To know that an exploded diagram shows how the parts of a product fit together. • To know that a prototype is a detailed model that helps a user understand how a product will work.



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

	Creating prototypes using materials with similar properties to their final design.	
Make	Planning - Ordering the main stages of making into a plan. Selecting materials - Selecting materials, components or ingredients from a wider choice but within a limited design space (e.g. seasonal ingredients from May and June in the UK). - Selecting materials, components or ingredients based on their form as well as their functional properties. - Explaining their choices with regard to function and form. Selecting equipment - Selecting equipment required for a series of tasks based on the plan. Explain why each piece is suitable for each stage. Tool safety - Suggesting simple safety rules based on their understanding of tool dangers. - Participating in discussions about classroom safety procedures. - Following detailed safety instructions. Tool use - Marking and measuring: Using a ruler accurately to measure and mark straight lines.	Planning - To know that ordering the steps of a build can make it easier. Selecting materials - To know that form is the look and shape of something. - To know that function is what something does and how it works. Selecting equipment - To know that different pieces of equipment will be used at different stages in a plan. Tool safety - To know that different tools and equipment have different dangers. Tool use - Marking and measuring: To know that a ruler is used to measure and mark length precisely. - Cutting: To know that different tools and techniques are suited to specific materials and levels of resistance. - Joining: To know that stronger and long lasting joins may be needed depending on the materials and how the product will be used. - Shaping: To know that accurate shaping and refining of 2D and 3D forms improves appearance and performance.



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

	• Cutting: Cutting more complex shapes and a wider range of materials and foods accurately and safely (e.g. using a bridge or claw hold when chopping foods). • Joining: Joining materials securely by selecting and applying appropriate joining methods for the material and purpose. • Shaping: Creating and refining accurate 2D and 3D shapes to suit the function of a product. • Finishing: Applying precise and varied finishing techniques to enhance appearance and surface quality.	• Finishing: To know that finishing techniques can improve both the look and performance of a product.
Evaluate	Evaluating existing products • Investigating and analysing a range of existing products by looking at their functionality and appeal. • Analysing why specific products, designers or inventors are successful. Evaluating own ideas and products • Evaluating their designs by comparing them against design criteria and considering feedback from peers to suggest improvements. • Evaluating how effective their chosen materials and tools were in fulfilling the design brief. Giving and receiving feedback • Explaining why they think certain aspects of a peer's design are effective or why they suggested specific improvements. • Reflecting on feedback to decide if and how it could be used to improve future iterations.	Evaluating existing products • To know that some products are more successful than other because of their function. • To know that designers and inventors create products. Evaluating own ideas and products • To know that choices of materials and equipment can affect the final product. • To know that feedback is ideas and suggestions from other people that can help improve their work. Giving and receiving feedback • To know that the better the suggestions the better the feedback. • To know that they can choose to use feedback or not.



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

Year 5/6	Skills	Knowledge
Design	Identifying needs and problems • Noticing wider-reaching problems or needs in the community. • Identifying a wide range of needs and potential barriers through market research. • Identifying more complex problems that consider multiple factors and constraints with guidance. Developing for a user • Creating more complex design criteria that require considering detailed user needs, environmental impact, materials and cost. Generating ideas • Developing more independence in generating ideas. • Coming up with a broader range of ideas and deeper innovation, requiring pupils to think critically about their ideas' practicality and originality. Communicating ideas • Using 3D CAD software to communicate their ideas. • Beginning to use more complex annotated sketches, such as cross-sectional and exploded diagrams and pattern pieces in design.	Identifying needs and problems • To know that problems can be large and small. • To know that market research is a way of collecting information about problems or needs. • To know that a constraint is a limit or condition when making a product. Developing for a user • To know that environmental impact is how the product and making the product might affect the environment. • To know that different materials have different costs. Generating ideas • To know that original and innovative ideas are different from what has been made before. Communicating ideas • To know that drawings and diagrams can be communicated in 3D. • To know that annotations are detailed labels and comments on diagrams. • To know that improving on prototypes can help to improve the final design.



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

	Using a series of prototypes to refine and improve their designs.	
Make	Planning - Producing lists of equipment, materials and tools that they need for a task. - Creating a step-by-step plan for making. Selecting materials - Selecting materials, components or ingredients based on research or user needs. - Explaining their choices, referring to their research. Selecting equipment - Considering which equipment will work well together. - Choosing from the known range of equipment available to them with little guidance. Tool safety - Assessing risks associated with different tools and equipment. - Understanding and explaining the importance of each safety rule. - Consistently apply safety instructions. Tool use - Marking and measuring: Measuring and marking to a greater degree of accuracy to support more complex designs and components. - Cutting: Using appropriate cutting tools and techniques to achieve accurate and aesthetic cuts.	Planning - To know that materials and equipment lists help to plan better. Selecting materials - To know that aesthetics are the way something looks. - To know that research can help decide on form and function. Selecting equipment - To know that some equipment can work well with other equipment. Tool safety - To know that risks are things that might go wrong. Tool use - Marking and measuring: To know that precise measuring and marking are essential for parts to fit and function correctly. - Cutting: To know that precision in cutting affects how well parts fit, function and look. - Joining: To know that joins may need reinforcement or adjustment to improve strength and stability. - Shaping: To know that the form of a product influences how it looks, feels and performs. - Finishing: To know that finishes can improve durability, protect materials and make products suitable for different uses or environments.



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

	• Joining: Selecting and applying joining methods to create strong, durable and well-finished products. • Shaping: Shaping and refining materials and components to balance aesthetics and functionality. • Finishing: Selecting and applying finishes to enhance appearance and protect the product.	
Evaluate	Evaluating existing products • Reflecting on the usability, aesthetics, innovation and sustainability of products and discussing how design choices impact these aspects. • Evaluating the work of a range of designers to help inform their designs. Evaluating own ideas and products • Assessing their designs against a more complex set of design criteria that includes functionality, aesthetics, user experience, sustainability and cost. • Considering alternative materials, tools or techniques that could enhance the product. Giving and receiving feedback • Providing feedback that is helpful, specific, and encouraging. • Incorporating feedback from peers or users improve their product further, explaining the changes they made and the impact they had.	Evaluating existing products • To know that sustainability means thinking about the materials that were used to make a product and how the product was made. • To know that looking at other designers work can help inform designs. Evaluating own ideas and products • To know that their final product can still be improved by different materials or techniques. • To know that evaluating their designs in detail will help them understand its successful and less successful parts. Giving and receiving feedback • To know that feedback should be positive, helpful and specific. • To know that explaining how they used feedback to improve their design can help them create better products in the future.



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

Reception						Fledglings
Fine motor skills 	Use a dominant hand Mark make using different shapes Begin to use a tripod grip when using mark making tools Use tweezer to transfer objects To thread large beads Use large pegs	Begin to use anticlockwise movement and retrace vertical lines Hold scissors correctly and cut along a straight and zigzagged lines Use a tripod grip when using mark making tools Accurately draw lines, circles and	Use a tripod grip when using mark making tools Hold scissors correctly and cut along a curved line Thread small beads To use small pegs Continue writing taught letters using correct formation	Hold scissors correctly and cut out small shapes Paint using thinner paintbrushes Form some letters correctly and control the size of letters.	Hold scissors correctly and cut out large shapes Develop a handwriting style which is fast accurate and efficient.	Hold scissors correctly and cut various materials Create drawings with details Independently use a knife, fork and spoon to eat a range of meals • Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases • Use a range of small tools, including scissors, paint brushes and cutlery • Begin to show accuracy and care when drawing.



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

	Begin to copy letters	shapes to draw pictures	Use a hammer and saw				
	Hold scissors correctly and make snips in paper	Write taught letters using correct formation					
	Hold a fork and spoon correctly	Begin to hold a knife correctly and use to cut food with support					
		Use tap and pin					

Creating with Materials 	Name colours and experiment with mixing.	Use colours for a particular purpose (e.g., choosing	Experiment with different mark-making tools such as art pencils,	Continue to explore mixing primary colours and talk about the	Share creations and talk about the process they used.	Know some similarities and differences between materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function
---	--	--	--	---	---	--	---



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

	Create simple representations of people and objects.	colours to match a character or object).	pastels and chalk.	changes they notice.	Make choices in joining materials for different purposes (e.g., tape for strength, glue for detail).	(texture, flexibility, strength, colour).	• Share their creations, explaining the process they have used • Make use of props and materials when role playing characters in narratives and stories.
	Draw and colour with pencils and crayons.	Share their creations with others.	Explore different techniques for joining materials (tabs, split pins, stronger adhesives).	Plan what they are going to make (construction, junk modelling, craft projects).	Make props and costumes for different role-play scenarios.	Explore, use and refine a variety of artistic effects to express their ideas and feelings.	
	Begin to explore a variety of artistic effects to share their ideas and feelings.	Explore different techniques for joining materials with increasing independence.	Know how to work safely and hygienically.	Draw more detailed pictures of people and objects.	Know how to work safely and hygienically.	Share creations, talk about the process and evaluate their work.	
	Explore different techniques for joining materials (glue, tape, folding). Talk about what they	Use non-statutory measures (spoons, cups) in simple cooking activities.	Use non-statutory measures (spoons, cups) with growing accuracy. Use tools to prepare	Manipulate materials with increasing control (rolling, shaping, tearing, folding).	Use non-statutory measures (spoons, cups) consistently.	Adapt work where necessary to improve it. Explore art linked to	



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

	want to make and how they might do it. Know how to work safely and hygienically. Use different construction materials. Use natural objects to make a piece of art.	Use some basic cooking techniques. Begin to use tools to prepare ingredients. Create collaboratively, sharing ideas, resources and skills. Watch and talk about performance art, expressing their feelings and responses.	ingredients (cutting soft foods, mixing, spreading). Know the names of tools and begin to select them for a purpose. Refine their use of artistic effects to share their ideas and feelings.	Create observational drawings using real objects as inspiration. Know how to work safely and hygienically. Begin to think about what works well and what could be improved. Use non-statutory measures (spoons, cups) confidently.	Look at pictures, sculptures or objects and talk about what they notice. Express simple preferences ("I like this because..."). Use some cooking techniques with greater independence.	stories, seasons or themes. Begin to imitate techniques they see (dots, lines, patterns, shading). Compare their work to others in a positive and constructive way.	
--	--	---	---	--	---	--	--



Clifton Upon-Teme Primary School

Whole School DT Progression of Skills and Knowledge Document

--	--	--	--	--	--	--	--