



Westbury Infant School

Progression of Knowledge and Skills – DT

These principles and features characterise this approach and convey how our curriculum is implemented:

Intent	Implementation	Impact
At Westbury Infant School, we want Design and Technology to be fun, inclusive, engaging, enjoyable and full of practical experiences that enable all children to become creative problem solvers and thinkers. They will have opportunities to work individually and collaboratively and when identifying needs and opportunities, to develop a range of imaginative design ideas. These ideas will be transformed into real functional everyday products that can be evaluated and used to shape future creative thinking. By providing a carefully structured and progressive Design and Technology curriculum that is accessible to all, every learner will develop basic technical skills like cutting, joining and folding materials and be able to apply them to solve real and relevant problems and create simple mechanisms and structures.	At Westbury Infants school, we be following our own DT planning, drawing on ideas from various schemes and which is aligned with the National Curriculum recommendations. Each project is scaffolded with a clear design criterion, a time to explore different construction or joining methods and a time to practice using relevant tools. Having created their designs they will then have time at the end of each project for reflection and discussion about their design choices and outcomes. Over the course of the two years, every child will have explored all elements of the Design and Technology National Curriculum and completed projects on designing a vehicle using axels and wheels; designing a card with a moving mechanism; creating a healthy fruit salad; making a puppet using different joining techniques and learning about structures and how to make them more sturdy. All things learnt by the children during their DT lessons, can be independently practiced through child-initiated learning opportunities and can be supported in cross curricular links with subjects like maths (measuring) science (properties) and history (looking at the work of the famous engineer IKB).	Children at Westbury Infant School will be able to demonstrate improved fine motor skills and confidence using a variety of tools. From the start of EYFS, children begin their journey into design and making things and start to make simple choices on colour and size. They also start to reflect on their finished project and can say their likes and dislikes. By the end of year 2, the children demonstrate improved fine motor skills and confidence using a variety of tools. They show an enhanced ability to think critically and solve problems in their design tasks, to evaluate their own work and reflect on what went well and suggest improvements. Clear progression can also be seen from basic concepts to more complex ideas. They will demonstrate progression in understanding materials, mechanism and basic structures. .

Progression of Knowledge and Skills	EYFS In reception, I am an early designer who is confident to explore and express my design ideas using a variety of materials, resources and media in my own unique way. I will be inspired by the rich and diverse design projects presented through the early learning area of expressive art and design. My teachers will offer scaffolding to support and challenge my learning. I will feel safe to express and represent my thoughts, feelings and ideas that demonstrate the skills and techniques I have learnt. I will be respectful of others own unique design ideas and creations that are different to mine. High quality texts and resources will be used to support the children's learning. During our outdoor learning time there are many opportunities for the children to build bridges, make structures, create dens and create exciting recipes in their mud kitchens. I am able to: • Experiment to use different joining and fixing materials. • Use simple tools efficiently and confidently e.g., scissors, glue sticks, pencils • Begin to build structures for different purposes • Manipulate materials and tools to achieve a planned effect (add wheels to make something move, fold card to make a hinge). • Adapt my work. • Talk about what I am doing or have done and describe it e.g. I made a car to carry my teddy and wanted big wheels to make it higher). • Use materials and resources to create props for my role-play	Key Stage 1 In KS1, I am a designer who is confident to create with a range of techniques and tools as I continue to develop my own unique design style. I am inspired by everyday designs around me or designers and engineers that we have learnt about. I am confident in my own creative choices. I talk animatedly about how designing and making something makes me feel and can explain my opinions on others work and how I could improve my design next time. I am able to: • Decide which media I want to use to create my design • Practise the techniques I have been taught in a variety of pieces of work • Share my ideas and opinions with others • Respond to feedback from others to improve my work • Follow a design and make changes to improve it • Use a variety of tools effectively and with purpose, including pencils, scissors, hole punches, glue, sellotape, masking tape, string, axles, split pin, straws, needle, thread, saw, clamp, spoon, knife, scales, measuring cups. • Create moving mechanism such as sliders, levers, hinges • Experiment with finishing techniques and evaluate my work to my design • Use materials to build structures and know how to make them stronger • Roll, knead, mix, chop, slice, grate different food. • Explain which foods help us to maintain a healthy balanced diet and what we need to eat less of. • Use the basic principles of a healthy and varied diet to prepare dishes. • Understand where food comes from. • Understand what keeps me healthy/in balance? (PSHE)
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Assessment and Monitoring

What you will see in our classrooms:

- * Class books to show consistency of teaching.
- * Teachers moving around the room, asking questions, assessing, providing support etc and using DT language appropriately.
- * Sticky Sticks to be used consistently.
- * Teacher led interviews to assess what children have been learning.
- * Work on display motivating children to create for a purpose.

All DT units of work will reinforce the children's knowledge and understanding of criteria, design, suitability and what evaluate means. Every child will be able to say-

- I know **criteria** is a set of features to be successful
- I know **design** means to have a plan or drawing of an idea and know who it is for
- I know **suitable** means it's good for the job it's going to do
- I know **evaluate** means we look at what we have made and decide what went well and what we need to make better next time

EYFS

Golden Threads

Movement & Coordination	Fine Motor & Tool Control
Children develop increasingly coordinated ways of moving, combining movements and responding safely and effectively to space, equipment and others.	Children develop hand strength, dexterity and hand-eye coordination, increasingly controlling tools, equipment and mark-making implements with precision.

Strand	Typical Starting Points	DP1	DP2	DP3	Statutory ELGs
Fine Motor Skills KNOWLEDGE	• Move in different ways, including walking, running, climbing and jumping. • Explore balancing and changing direction during play. • Begin to notice and negotiate space, people and objects as they move. • Use wheeled toys, balls, large equipment and simple apparatus with varying levels of control. • Use their hands and fingers to manipulate toys, construction materials and everyday objects.	• I know my hands and fingers help me control objects and tools. • I know tools need to be held and used safely. • I know using my hands and fingers helps them become stronger and more coordinated. • I know marks can be made using different movements and tools.	• I know different tools need different movements and amounts of control. • I know how I hold and position a tool can help me control it. • I know hand and finger strength helps me control tools more precisely. • I know controlled movements help me make the marks and shapes I intend.	• I know precise movements help me use tools accurately and effectively. • I know an efficient grip and comfortable hand position help me control a pencil and other tools. • I know strength and coordination help me sustain control during increasingly precise tasks. • I know letters have a recognised form and are made using particular movements.	Fine Motor Skills • 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.
Fine Motor Skills SKILLS	• Explore tools such as crayons, pencils, paintbrushes and scissors. • Make marks, lines and simple shapes using a range of tools and movements. • Show an emerging preference for one hand when using tools. • Manage some aspects of dressing, eating and personal care with varying levels of support.	• Manipulate materials by squeezing, pinching, twisting, turning, pushing and pulling. • Make intentional marks; begin to control where and how the tool moves. • Make snips and begin to cut through suitable materials, with support where needed. • Use cutlery and everyday tools, coordinating hands and tool. • Thread, fasten, join and construct, coordinating hands and eyes. • Develop a comfortable and effective grip for mark-making tools.	• Manipulate smaller objects, using fingers separately and together to turn, pinch, place and join. • Draw lines, shapes and recognisable representations, controlling direction and size of movements. • Cut along a simple line and begin to change direction when cutting. • Use everyday tools to scoop, spread, pour, transfer or manipulate, as appropriate. • Complete threading, fastening, construction and joining tasks using coordinated hand/finger movements. • Adjust grip to use pencils and other tools comfortably and effectively for different purposes.	• Manipulate small and more complex objects, coordinating individual fingers and both hands when needed. • Draw recognisable shapes, features and details, controlling direction and size; apply this control when forming letters. • Cut around simple shapes and follow straight, curved and changing lines. • Use cutlery and everyday tools effectively for their intended purpose. • Manage fastening, threading, construction and manipulative tasks requiring smaller, coordinated hand/finger movements. • Use a comfortable and effective pencil grip supporting controlled and sustained mark-making and writing.	
ESSENTIAL VOCABULARY		grip – the way we hold something tool – something used to do a task	control – manage how your body or a tool moves	precision – move carefully and accurately	

		safe – acting in a way that helps prevent harm		adapt – change what you do to suit the situation stable – steady and controlled	
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Key Stage 1 – Knowledge – Cycle 1

Cycle 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	STICKY STICK RETRIEVAL	DT – How can I build a strong structure? Structures - I know how to build structures -I can make it stronger, stiffer, and more stable. DT-How will I make my card move? Levers/Sliders – Christmas card - I know a mechanism is where something is joined together to make a movement. Levers, sliders and hinges are all mechanisms. - I can explain how different mechanism move. - I know how you attach two things together	DT-Where in the UK, do these traditional treats come from and can I make a healthy snack to go with them? Food of the UK - I can use the claw and bridge techniques safely and other cooking techniques. - I know how to prepare different foods safely and hygienically - I know what keeps me healthy /in balance. - I know where food comes from (plants and animals) -I know a recipe is a set of instructions you must follow in order	STICKY STICK RETRIEVAL	STICKY STICK RETRIEVAL	STICKY STICK RETRIEVAL
		<u>Vocabulary</u> Structure – something built for a purpose Free standing – able to stand up without being attached to something Stable– not likely to fall support Rigid/Stiff – does not bend easily Mechanism – where something is joined together to make movement Pivot – to turn on the spot Lever – a type of mechanism that moves around from a point Rotate – to move round Slider – a type of mechanism that moves in a straight line– up and down left or right	<u>Vocabulary</u> Claw – holding safely by bending your fingers tips in Bridge – holding something between your fingers and thumb and cutting between them Hygiene – stopping germs from spreading by washing hands and not touching our bodies when touching food Fruit– contains seeds inside it Vegetable – grows in the ground– Healthy – eating the right amount of each food group.			

Key Stage 1 – Knowledge – Cycle 2

Units of Work	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	STICKY STICK RETRIEVAL	STICKY STICK RETRIEVAL	STICKY STICK RETRIEVAL	STICKY STICK RETRIEVAL	DT-How do you make a sewn animal puppet? Sewing – Big 5 animal puppet – I know I can join materials together by sewing them. – I know that a running stitch must go in and out but never around. – I know to sew you need to use a needle and thread – I know a knot is a way of tying string together so that it doesn't come apart. – I know how to sew a puppet together	DT- How do I make a moving car? Mechanisms (wheels/axels) – I know that for wheels to move they must be attached to axles – I know an axle is a mechanism that joins two wheels together to make movement – To explain how to use a saw safely to cut a dowel
					<u>Vocabulary</u> Running stitch– a line of small even stitches –in out in out but never around Needle – a thin piece of metal with a point and an eye for the thread to pass through Thread – a long strand of cotton Sew – to join two things together with a needle and thread Knot – a way of tying string together so that it doesn't come apart	<u>Vocabulary</u> Axle – a mechanism that joins two wheels together to make movement Chassis – the base frame of a car Attach – join or fasten to something else Washer – a small flat ring that fits between two joining pieces Saw – a hand tool for cutting wood or other hard material Dowel – a wooden rod

Key Stage 1 – Skills

	Year 1	Year 2
Designing	Design a product for a given purpose.	Develop and adapt designs to improve the final product.
Planning	Follow a simple design and make changes when needed.	Plan, refine and adapt designs independently.
Selecting materials	Select appropriate materials and tools for a design.	Justify choices of materials and tools based on suitability and function.
Using tools	Use a wider range of tools accurately and purposefully (scissors, hole punch, tape, glue, measuring equipment).	Use specialist tools safely and confidently (needle, thread, saw, clamp, knife, grater, scales).
Joining materials	Join materials using glue, tape and simple fixings.	Select and use appropriate joining techniques including sewing and mechanisms.
Construction	Construct stable structures using a range of materials.	Strengthen and reinforce structures by selecting suitable construction techniques.
Mechanisms	Make simple mechanisms such as sliders, levers and hinges.	Design and build mechanisms using axles, wheels and moving parts.
Food technology	Prepare simple foods safely using basic techniques.	Use a wider range of food preparation skills safely and hygienically.
Making	Follow a design to make a functional product.	Produce a finished product that closely matches the design criteria.
Problem solving	Identify problems and improve designs during making.	Independently solve design problems and refine products.
Evaluating	Explain what worked well and respond to feedback.	Evaluate finished products against design criteria and suggest improvements.
Communication	Share ideas and explain design choices.	Justify design decisions using appropriate DT vocabulary.