WHITMORE
PRIMARY SCHOOL AND NURSERY

Design and Technology Overview 2025 – 26

Year		End of Year Objectives Physical Development	Communication and Language	Personal, Social and Emotional Development	Maths	Expressive Arts and Design	Understanding the World
EYFS	N1	*I can pour from 1 container to another* *I can use a spoon to pick up food and put in my mouth* *I can hold a pencil with a palmer grasp* *I am able to build a tower and fix some things together* *I can make big balls using whole palm, squeezing* *I can work independently to develop basic skills*	*I can understand action words e.g. Who's jumping?* *I can use a wider range of vocab/understand a 2-part instruction* *I can understand 'why' questions* *I am beginning to use longer sentences of 4-6 words* *I am beginning to turn take in conversations* *I can use talk to organise myself and my play*	*I can select and use activities with help* *I am showing increasing confidence in new surroundings* *I help to suggest solutions to conflicts*	*I can use shapes appropriately for tasks – a cone for the top of a castle etc.* *I can talk about the shapes of everyday objects* *I can make arrangements with shapes* *I can go on a shape hunt* *I can select a particular named shape* *I am able to complete a simple puzzle* *I am developing an understanding of capacity and vocabulary – pouring/filling/full/empty/half full* *I can continue to develop an understanding of tall/short and compare objects* *I can use the language of weight – heavy/light*	*I can experiment with a variety of tools and different sized brushes – sponge brushes, fingers twigs, vehicles, rollers, sponges, hands, feet* *I enjoy using fingers, hands, chalk, pens, pencils to make marks* *I can distinguish between drawing and writing* *I am beginning to draw shapes for a person* *I play with a variety of fabrics, textiles* *I use glue sticks, glue spreader to join materials* *I can take rubbings – leaves, bark, coins, corrugated card, natural resources, bubble wrap*	*I can explore how things work wind-up toys, pulleys, cogs, etc.* *I can explore the changes in materials – melting/cooking* *I can explore floating/sinking /shadows* *I can learn new vocabulary to use to explain what I am observing*
	N2	*I can explore a range of tools-spoons, spades, paintbrushes, etc* *I can stab food using a fork* *I can spoon cereal from container to dish with little spilling* *I can hold a pencil with a digital pronate grasp* *I am able to build a tower and fix some things together* *I can make big balls using whole palm, squeezing* *I can work independently to develop basic skills*	*I can use a sentence of 4-6 words* *I can use 'because' and 'and'* *I can answer simple 'why' questions using past and future tenses*	*I am beginning to understand how others feel* *I am able to settle at an activity for a while*			
	R	*I can hold a pencil with a static tripod grasp* *I can spread using a knife* *I can cut using a knife* *I can use scissors to cut around a shape on paper* *I am able to build houses, transformers etc and to join construction together* *I am able to use Sellotape, masking tape, blu tak* *I am able to select construction for a particular purpose and join using paper clips, Sellotape dispenser, staples, paper fasteners* *I can roll flat* *I can use rolling pins with side handles* *I can cut out shapes with cutters* *I can knead squeeze* *I can use knuckles, and make thumb pots*	*I can hold a back-and-forth conversation and explain why things happen* *I can use new vocabulary and ask relevant questions* *I can connect ideas using connectives* *I can articulate ideas in sentences*	*I can focus my attention* *I am able to share* *I am beginning to regulate my behaviour* *I think about others and wait my turn* *I express my feelings and consider others' feelings*	*I use vocab tall/short, heavy/light, etc.* *I am able to make a prediction and test it – Which holds more? etc.* *I am able to sort 3D shapes and name them* *I am able to describe common 2D and 3D shapes* *I know that a shape can have other shapes within it*	*I can select own resources and use my own ideas to produce a piece of work* *I can look and talk about my art work and describe the techniques used and media used* *I can explore working with paint on different surfaces – paper, card, and different sized and shaped paper* *I can recognise and name the primary colours and mix colours* *I can match the colours to artefacts and objects* *I use fingers, fruit and veg, 3D shapes* *I can draw a person with at least 6 body parts* *I can draw from imagination, observations and illustrations* *I can talk about what I have drawn in detail* *I can use appropriate vocabulary to describe what I have produced* *I can use a hole punch, paper clips, treasury tags, etc.* *I can use stencils to create a picture*	*I can learn about and explain and learn new vocabulary to use for ice melting/sounds causing vibrations/light travelling through materials/shadows, magnets, floating and sinking*
Links to future learning		Children will need to develop their fine motor skills in order to use a range of tools in KS1 and KS2	Good vocabulary skills will help children describe and evaluate their products	PSED skills will help children evaluate sensitively and also overcome difficulties	Strong maths skills are essential for accurate measuring	Experience with making and designing different products will enable children to be more successful in KS1 and KS2	Key vocabulary will help children express themselves when designing, making and evaluating their future products
Notes for teachers		These skills and objectives are taken from the EYFS skills document Children need to be able to master these in order for them to be successful in their DT lessons in future years DT is not explicitly taught in EYFS; some of these skills and objectives are covered through direct teaching of the different areas of learning, others are covered through free-flow and self-chosen activities					

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[redacted]		**Textiles: Puppets** *I can trace around simple shapes to copy symbols* *I can measure to the nearest 10cm* *I can refer to a photo or drawing when talking about my work* *I know that drawing a design idea is useful to see how an idea will look* *I know that there are various temporary methods of joining fabric by using staples, glue or pins* *I know that 'joining technique' means connecting two pieces of material together*		**Food: Smoothies** *I can make comments about what I am going to design and cook* *I can give a brief overview of my plans for design or cooking, using some DT vocabulary* (year 2 skill) *I can use tallies and simple tables* *I can use knives with an 11-12cm non-serrated blade (supervised)* *To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber)* *I can use a peeler (e.g. apples)*		**Structures: Constructing Windmills** *I can come up with ideas of a product and say why I like it (i.e. personal appeal)* *With support, I can discuss design criteria during the construction process* *I can create constructions with materials that are supplied for me* *I can create a simple evaluation* *I can follow simple advice from adults to improve my work* *To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses)*
Notes for teachers		Children will explore methods of joining fabric Children will design and make a character-based hand puppet using a preferred joining technique, before decorating		Children will learn food preparation skills Children will taste test ingredients and make their own ingredient choices		Children will make a windmill that meets certain design criteria
Links to prior learning		Builds on fine motor skills work from EYFS		Knife skills builds on fine motor skills from EYFS		Builds on speaking and listening skills from EYFS
Links to future learning		Textiles skills are revisited in Yr 3 and Yr 6		Food knowledge will be built on in Yr 3		Structures are revisited in Yrs 2, 3, 4 and 6

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2		**Mechanisms: Making a moving monster** *I can make comments about the function and purpose of my product, and its personal appeal* *I can select from materials that are given to me* *I can measure to the nearest cm and g* *I can follow advice from adults or peers* *I know that a lever is something that turns on a pivot* *I know that an output is the movement that happens as a result of the input*		**Structures: Baby Bear's Chair** *I can create a simple diagram* *I can start to share my ideas while I am building my project* *I can listen courteously to views that differ from my own* *To understand that the shape of materials can be changed to improve the strength and stiffness of structures* *I know that shapes and structures with wide, flat bases or legs are the most stable* *I know that materials can be manipulated to improve strength and stiffness*		**Mechanisms: Fairground Wheels** *I can use scales in twos, fives, tens* *I can relate products to my design criteria* *I can use ICT to create a simple info-sheet about my work* *I know that mechanisms are a collection of moving parts that work together as a machine to produce movement* *I know the features of a Ferris wheel include the wheel, frame, pods, a base an axle and an axle holder* *I know that it is important to test my design as I go along so that I can solve any problems that may occur*
Notes for teachers		Children will explore levers, linkages and pivots by looking at existing products and experimenting, before using their research to create a moving monster		Children will explore stability and methods they can use to strengthen structures They will look at a design and understand its weaknesses		Children will learn about the parts of a structure, how different components fit together, and how to make a wheel rotate and a structure stand freely
Links to prior learning		Reinforces measuring skills from maths Builds on oracy skills that are taught throughout KS1 – allows children to apply their skills Further develops mechanism knowledge from earlier in the year		Children have the opportunity to develop their listening and oracy skills and apply them in a context Builds on structures knowledge and evaluation skills from Yr 1		Links to maths knowledge (times tables, counting in lots of different numbers)
Links to future learning		Mechanisms are revisited in Yrs 4, 5 and 6		Structures knowledge will be developed in Yrs 3, 4 and 6		Mechanisms are revisited in Yrs 4, 5 and 6

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3	**Food: Eating Seasonally** *I can convert between units* *I can make choices about following advice* *I can use a knife with 'bridge' hold to cut onion (supervised)* *I can cut with precision (e.g. peppers with even size)* *I can cook food in an electric stockpot / slow cooker (with supervision)* *I can use a grater (e.g cheese, carrots)*		**Structures: Constructing a Castle** *I can refer to my research when talking about my project* *I can draw sketches at different points of the design process* *I can politely discuss my peer's work* *I can measure to the nearest mm, nearest 10ml, and 45° for angles* *I know that a 'free-standing' structure is one which can stand on its own* *To understand the importance of strength and stiffness in structures*		**Textiles: Making Cushions** *I can show a willingness to change and/or restart my designs* *I can link my own and others' designs and products to their functions and purpose* *I can make and discuss annotated sketches and diagrams* *To know that when two pieces of fabric are joined together, it is called a seam* *To understand that some products are turned inside out after sewing so the stitching is hidden* *To know that appliqué is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces*	
Notes for teachers	Kapow plans say to make a tart; a seasonal vegetable stew can also be made so as to use the slow cookers in class Children will also learn about seasonality and some seasonal foods that are harvested at this time		Children will research, design and make a structure from recycled materials		Children will learn about cross-stich and appliqué and use these to make their project	
Links to prior learning	Builds on knowledge of healthy eating from Yr 1 Develops knife skills that the children developed in Yr 1		Develops knowledge of structures from KS1 Improves knowledge of the design process and the different stages Builds on measuring skills from maths		Builds on textiles knowledge from Yr 1	
Links to future learning	Allows children to develop and alter their own recipes, which will be built on in Yr 5		Provides a foundation for the structures units in Yrs 4 and 6		Children develop sewing skills that they will use in Yr 6	

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4	**Electrical Systems: Torches** *I can explain my plans for design or cooking in some detail and, in writing, make reference to techniques, materials, or ingredients* *I can draw simple diagrams without much guidance* *I can request materials or ingredients that have not been supplied* *I know the features of a torch: case, contacts, batteries, switch, reflector, lamp, and lens* *I know that a switch can be used to complete and break an electrical circuit* *I know that an electrical circuit must be complete for electricity to flow*		**Structures: Pavilions** *I can start suggesting improvements to others' designs* *I can use research to justify the appeal of my product and the innovativeness of my design* *I can draw a plan or sketch from a description* *I can create clear projections of common 3D shapes* *I can show a desire to alter and/or restart my designs* *To understand what a frame structure is*			**Mechanical Systems: Making a Slingshot Car** *I can verbalise others' opinions politely and consider following their advice* *I can make and discuss cross-sectional and exploded diagrams* *I can make reasonable estimations of length and distance; start to estimate mass, capacity and angles* *To understand that kinetic energy is the energy that something (object/person) has by being in motion* *I know that air resistance is the level of drag on an object as it is forced through the air* *To understand that the shape of a moving object will affect how it moves due to air resistance*
Notes for teachers	Children will be able to identify the different between electrical and electronic products Children will use their evaluating skills to analyse a range of existing torches, before developing their own torch design		Children can investigate and model frame structures to see if their stability can be improved; they will then apply their research to make a stable, decorated pavilion			Children will use a range of materials to design and make a car with a working slingshot mechanism
Links to prior learning	Electricity in DT and science is new in KS2 Builds on knowledge from science lessons and allows children to apply it in a context		Builds on previous structures units Children develop their evaluation skills by looking at the designs of others			Children build on their knowledge of forces from science Children use their improving drawing skills to make accurate diagrams
Links to future learning	Electricity knowledge is built on in Yr 5 DT and Yr 6 science		Children develop their knowledge of structures to be built on in Yr 6			Children revisit mechanics in Yrs 5 and 6

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5	**Mechanical Systems: Making a Pop-Up Book** *I can make comments about how my product might be altered to appeal to other groups of people* *I can make an accurate design sketch from someone else's measurements and notes* *To understand that mechanisms can be used to change one kind of motion into another* *To understand how to use sliders, pivots and folds to create paper-based mechanisms* *I know that designers often want to hide mechanisms to make a product more aesthetically pleasing* *I know that mechanisms control movement*			**Electrical Systems: Doodlers** *I can make reasonable suggestions for how my peers might improve their work* *I can measure angles to the nearest °* *I can use constructive and sensitive language to suggest improvements to my peers' designs* *I know when there is a break in a series circuit, all components turn off* *I know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin* *I know that 'configuration' means how the parts of a product are arranged*		**Food: Developing a Recipe** *I can plan designs in detail with preliminary studies in sketchbooks, with reference to other designs and materials I have studied* *I can request other materials or ingredients and give reasons for my choices* *I can create a presentation with text and images to support me in showcasing my work* *I can use large knives on hard vegetables (e.g. swede)*(Year 6 objective) *I can handle hot food with oven gloves (with supervision) (Year 6 objective)* *I can use 'claw' grip to cut (e.g. celery, cheese)*
Notes for teachers	Children will create a functional four-page pop-up book using levers, slides, layers and spacers to create paper-based mechanisms			Children will build on the prior learning about circuits and investigate motors Children will start the design process (or cycle) at a different point by investigating an existing product to see if they can work out how it has been constructed		Children will learn a simple bolognaise recipe and adapt it to improve nutritional content
Links to prior learning	Builds on previous mechanics units Builds on knowledge of the importance of making products appealing to consumers			Evaluation skills are further developed Links to maths skills when measuring angles Children build on their circuits knowledge from Yr 4		Builds on previous food units Children develop their skills at adapting recipes Children develop their showcasing skills
Links to future learning	Mechanics revisited in Yr 6			Electricity knowledge will be built on in Yr 6 science		Children will be able to use their skills at adapting recipes when cooking for themselves at home

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6	**Structures: Playgrounds** *I can constructively critique my peers' work and help with improvements if appropriate* *I can help improve peers' designs where that offer is welcomed* *I can use a range of supporting material to showcase my work, and answer questions about my project* *I know that structures can be strengthened by manipulating materials and shapes* *To understand that in the real world, design can impact users in positive and negative ways* *I know that a prototype is a cheap model to test a design idea*		**Mechanisms: Automated Toys** *I can make sophisticated comments about the limitations of the function and purpose of my product, with reference to different audiences* *I can constructively critique my peers' work and help with improvements if appropriate* *I can analyse my own and others' responses to my designs, making improvements if appropriate* *I know that a design brief is a description of what I am going to design and make* *To understand that the mechanism in an automata uses a system of cams, axles and followers* *To understand that different shaped cams produce different outputs*			**Textiles: Drawstring Bags** *I can plan in detail with preliminary studies in sketchbooks, linking to what I have studied before and explaining my choices* *I can make reasonable estimations of length, distance, mass, capacity, angle, area and temperature* *To understand that it is important to design clothing with the client/ target customer in mind* *I know that using a template (or clothing pattern) helps to accurately mark out a design on fabric* *To understand the importance of consistently sized stitches* *To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric*
Notes for teachers	Children will research existing playground equipment and its current forms, before designing and developing a range of equipment based on design criteria		Children discover the problems facing high-street shops and how window displays are important in attracting customers Children will develop design criteria to meet a design brief by creating items for an interactive display Using technical knowledge, they build a mechanical system of cams, followers and axles to create an automata toy			Using a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, children design, assemble and decorate a drawstring bag for a chosen purpose
Links to prior learning	Builds on previous structures units Builds on the understanding that design of products can affect consumers		Builds on previous mechanisms units Children use their oracy skills to give detailed critiques of their peers' work			Children use previously learnt sewing skills to create their product Children use their art skills to help them choose appropriate colours for their product