

Design and Technology Long Term Plan (2022- 2023)

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Nursery	<ul style="list-style-type: none"> • Build independently with a range of resources (0-3) • Explore different materials, using all their senses to investigate them. (0-3) • Manipulate and play with different materials. (0-3) • Explore different tools (0-3) • Try new foods 	<ul style="list-style-type: none"> • Use their imagination as they consider what they can do with different materials. (0-3) • Hold scissors correctly (0-3) • Use a glue stick to add craft resources to paper. (0-3) • Talk about healthy food choices 	<ul style="list-style-type: none"> • Make simple models which express their ideas (0-3) • Make snips in paper with scissors (3-4) • Use PVA to add craft resources to paper. (0-3) • Colour finished work. (3-4) • Talk about healthy food choices 	<ul style="list-style-type: none"> • Explore different materials freely, to develop their ideas about how to use them and what to make. (3-4) • Make snips in paper with scissors with more control (3-4) • Explore different ways to join paper/ materials with support e.g. stapler, split pins, treasury tags, glue to create links, hole punch (3-4) • Develop control of tools for food preparation e.g. using a knife for spreading. 	<ul style="list-style-type: none"> • Join different materials and explore different textures. (3-4) • Make snips in paper with scissors with more control (3-4) • Explore different ways to fold paper. (3-4) • Cover a box with paper. (3-4) • Develop control of tools for food preparation e.g. using a knife for chopping/ spreading, spoons for mixing. 	<ul style="list-style-type: none"> • Develop their own ideas and then decide which materials to use to express them. (3-4) • Talk about what they will make and how they will make it. (3-4) • Make imaginative and complex ‘small worlds’ with blocks and construction kits, such as a city with different buildings and a park. (3-4) • Begin to cut a straight line (3-4) • Develop control of tools for food preparation e.g. using a knife for chopping/ spreading, spoons for mixing.
<p>Previous learning:</p> <p>Preparing for:</p>	Creating and building their own models later in Nursery and in Reception	Using their imagination to design and create	Developing some of the fine motor skills	Developing some of the fine motor skills that they will use	Developing the concept of joining different components in different	Developing children’s imaginations in preparation for verbal,

Design and Technology Long Term Plan (2022- 2023)

<p>Bespoke to our school:</p>	<p>Preparing and exploring healthy foods is an important part of our whole school vision to promote healthy lifestyles and physical well being.</p>	<p>products further through the school.</p> <p>Preparing and exploring healthy foods is an important part of our whole school vision to promote healthy lifestyles and physical well being</p>	<p>that they will use and refine in later years.</p> <p>Encouraging pride in their learning outcomes is integral to building early work ethic that informs our school culture and is driven by our “World of Work” business links</p>	<p>and refine in later years.</p> <p>Encouraging pride in their learning outcomes is integral to building early work ethic that informs our school culture and is driven by our “World of Work” business links</p>	<p>ways, preparing them for later units of learning involving structures and mechanisms.</p> <p>Following research into the science of learning, we have designed a DT curriculum that enables children to retrieve, build on and refine their skills.</p>	<p>and later written, story telling.</p> <p>Children in our setting have often not had access to vocabulary rich “talk a lot” environments where they can talk about their experiences with different tools and resources.</p>
<p>Reception</p>	<ul style="list-style-type: none"> • Create models using their experiences and world around them as inspiration. • Talk about what they are making. • Continue to develop a range of different ways to join materials and construction kits. • Cut a straight line. • Colour finished work • Build models with a range of construction resources e.g. lego. • Develop control of tools for food preparation e.g. knife for chopping/spreading. 	<ul style="list-style-type: none"> • Use ideas from imagination to make something • Talk about their design ideas and what they are making. • Cut a curved line • Colour finished work • Fold around a tube • Draw around simple templates and shapes. • Add detail to models built with construction resources e.g. lego. 	<ul style="list-style-type: none"> • Use a range of resources and techniques to make decisions about what they will make and how they will make it. • Draw with control around a template • Cut around a simple shape template • Use joining techniques independently to make decisions on how they will make something. • Colour finished work • Fold around a tube • Use junk modelling to 	<ul style="list-style-type: none"> • Use a range of materials and tools with care, independence and precision to create a model. • Use scissors to cut around a template. • Cover a box with paper. • Use folding techniques to support them to make a model. • Aware of some of the tools, techniques and processes involved in food preparation. 	<ul style="list-style-type: none"> • Children to talk about their ideas with others. • Use scissors to cut around a template. • Explore how split pins can be used to make different movements. • Make independent decisions about finishing techniques. • Create detailed models for a purpose from a range of resources including junk modelling. • Begin to use a variety of tools, techniques and processes to prepare food. 	<ul style="list-style-type: none"> • Create a design and follow it to create a model. • Use joining techniques e.g. split pins to create models that move. • Cut around a template/ outline with precision. • Children to work collaboratively, sharing ideas, resources and skills. • Children to evaluate their models by talking about what went well with their model and what they could improve. • Begin to use a variety of tools, techniques

Design and Technology Long Term Plan (2022- 2023)

		<ul style="list-style-type: none"> Develop control of tools for food preparation e.g. knife for chopping/ spreading. 	<p>create models by making decisions about what they will use and how they will join materials.</p> <ul style="list-style-type: none"> Aware of basic hygiene and safety during food preparation. 			and processes to prepare food.
<p>Previous learning:</p> <p>Preparing for:</p> <p>Bespoke to our school:</p>	<p>In Nursery, children have been gaining experience with different tools and equipment.</p> <p>Developing the concept of joining different components in different ways, preparing them for later units of learning involving structures and mechanisms.</p> <p>Children in our setting have often not had access to vocabulary rich “talk a lot” environments where they can talk about their experiences with different tools and resources.</p>	<p>In Nursery, children began to develop their imagination and creativity which they will now build on as they become early designers. They refine their early experience with scissors as they begin to use them in different and specific ways.</p> <p>Later learning on structures as they progress into KS1 and KS2.</p> <p>Children in our setting have often</p>	<p>As they refine the early pencil technique and grip that they used to add colour in Nursery, children begin to draw their designs with control.</p> <p>Developing the control and fine motor skills required for textiles and more detailed drawings in their KS1 and KS2 design work.</p> <p>Encouraging pride in their learning outcomes is integral to building early work ethic that informs our school culture and is driven by our “World</p>	<p>Building on a more exploratory approach to using materials in Nursery, children will now manipulate materials in more specific ways eg) folding and covering.</p> <p>Preparing for creating their own packaging appropriate for a food product in Year 4.</p>	<p>Building on their learning on how to join materials, children begin to explore moving joins in preparation for moving models that they will create in KS1 and KS2 as part of their mechanisms learning.</p> <p>Children in our setting have often not had access to vocabulary rich “talk a lot” environments where they can talk about their experiences with different tools and resources.</p>	<p>Building on the designing and making elements of Nursery, children now begin to evaluate their products verbally in preparation for more critical and recorded evaluation of their own and existing products in KS1 and KS2.</p> <p>Early Years DT provides a vehicle through which teachers and support staff can model and encourage collaborative work between pairs and groups of children, which appears to be happening far less naturally post covid.</p>

Design and Technology Long Term Plan (2022- 2023)

		not had access to vocabulary rich “talk a lot” environments where they can talk about their experiences with different tools and resources.	of Work” business links			
Year 1	<p>Food- Science: Animals including humans</p> <ul style="list-style-type: none"> All food comes from plants or animals 5 a day 	<p>Textiles: Templates and Joining</p> <p>Hand Puppets</p> <p>History- Old Toys</p>		<p>Mechanisms</p> <p>Sliders and Levers:</p> <p>Make a moving picture</p> <p>Make the fire engine move across the page</p> <p>History- Fire of London</p>		
<p>Previous learning:</p> <p>Preparing for:</p> <p>Bespoke to our school:</p>	<p>Building on the “Eating Well” strand of our Early Years curriculum.</p> <p>Preparing for working alongside local business “The Ashbourne” to design a healthy Tapas menu in Year 3.</p> <p>Healthy eating and physical well- being form an integral part of our whole school vision born out of the 2021 height and weight check statistics which revealed that obesity levels in our</p>	<p>Children further develop the early fine motor skills that they used to manipulate scissors in the early years as they begin to sew.</p> <p>Preparing for learning an increasing variety of stitches suitable for different purposes in (KS2 eg) back stitch to create their own beach bags in Year 3.</p>		<p>Developing greater precision when manipulating materials.</p> <p>Preparing for their Year 3 mechanisms learning where children will be given more freedom to make a model which moves in a wider variety of ways.</p> <p>Following research into cognitive overload, our</p>		

Design and Technology Long Term Plan (2022- 2023)

	school are above the national and local authority average.	Our curriculum is designed to promote cross curricular links only where purposeful and meaningful and does not incorporate tenuous links or cause confusion between specific disciplines by blending them in a “Topic” based approach.		curriculum uses skills, vocabulary, objects and contexts that children are already fluent and familiar with alongside the acquisition of new skills so not to detract from the main objective. By using the familiar design of a fire engine, children are able to focus on the new learning around levers and sliders.		
Year 2	Food- Science:Animals including humans Name and sort foods on the eat well plate	Structures: Freestanding Playground Equipment Stand alone	Mechanisms: Wheels and Axels Stand alone			
Previous learning: Preparing for: Bespoke to our school:	Building on the “Eating Well” strand of our Early Years curriculum and the knowledge of where food comes from in Year 1 Preparing for working alongside local business “The Ashbourne” to design a healthy Tapas menu in Year 3. Healthy eating and physical well- being form an integral	Building on children’s understanding of the properties of materials and how to manipulate and join them, children embark upon their first “Structures” unit of learning. Children begin to compare the strength of different	Children build on their ability to move things using sliders and levers as they begin to facilitate movement through the use of wheels and axels. Preparing for widening their movement schema further as they add pneumatic air			

Design and Technology Long Term Plan (2022- 2023)

	part of our whole school vision born out of the 2021 height and weight check statistics which revealed that obesity levels in our school are above the national and local authority average.	shapes in preparation for corrugating and ribbing in Year 4. Following research into the science of learning, our DT curriculum enables children to revisit and build on their understanding of structures in each successive year.	powered movement, cams and movement powered by electricity in KS2. Following research into the science of learning, our DT curriculum enables children to revisit and build on their understanding of moving mechanisms in each successive year.			
--	--	--	---	--	--	--

Key Stage 2

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Year 3		Food: History- Stone, Bronze and Iron Age (Transition from hunter gatherers to farmers) <ul style="list-style-type: none"> • Food can be farmed, grown elsewhere or caught. • Food is grown, reared and caught 	Textiles 2D shape to 3D product Drawstring Beach Bag Food- Geography Spanish Tapas with Ashbourne <ul style="list-style-type: none"> • Ingredients can be combined according to their sensory characteristics • Eat well plate • Food is processed into ingredients that 		Mechanisms Pneumatics Moving Olympic mascot	

Design and Technology Long Term Plan (2022- 2023)

			<p>can be eaten or used in cooking</p> <ul style="list-style-type: none"> • Fresh, pre-cooked and processed 			
<p>Previous learning:</p> <p>Preparing for:</p> <p>Bespoke to our school:</p>		<p>Building on Year 1 learning of where our food comes from, children look at this in more detail as their History learning on the difference between hunting and gathering and farming and the impact of the discovery of farming on how people settled and lived helps them to understand how food can be grown, reared and or caught.</p> <p>Preparing for understanding of how our body utilises the different food groups in Year 4 and 6.</p> <p>Healthy eating and physical well- being form an integral part of our whole school vision born out of the 2021 height and weight check statistics which revealed that obesity</p>	<p>Building on Year 1 where children learned a basic stitch, children now learn to use a back stitch.</p> <p>Preparing for more in depth textiles learning and stitching for a wider variety of purposes and products in later years.</p>		<p>Building on previously taught methods of movement (sliders and levers, wheels and axels)</p> <p>Children explore how air can be trapped and forced into different chambers to power movement in preparation for using cams and electricity to power movement in Years 5 and 6.</p> <p>Following research into the science of learning, our DT curriculum enables children to revisit and build on their understanding of moving mechanisms in each successive year.</p>	

Design and Technology Long Term Plan (2022- 2023)

		levels in our school are above the national and local authority average.				
Year 4	<p>Food- Geography (Imported foods discussed with ABP)</p> <ul style="list-style-type: none"> Seasons affect the food available Food miles and the environmental impact 	<p>Food- Science (Digestive System)</p> <ul style="list-style-type: none"> Food and drink provide energy for the body. Nutrients, water and fibre are needed for health 	<p>Structures: Shell structures Biscuit packaging Stand alone</p>			<p>Mechanisms: Circuits and switches Stand alone (after Electricity Science unit)</p>
<p>Previous learning:</p> <p>Preparing for:</p> <p>Bespoke to our school:</p>	<p>Children build on their learning of how food is sourced as they learn how the foods are transported from their source location to the supermarkets and other shops.</p> <p>Their Year 6 careers project where they further their understanding of local industry and for their future careers.</p> <p>Strong and purposeful links to our local physical and human Geography as children build an understanding of how having the largest UK port on their doorstep makes Immingham a key</p>		<p>Children build on their learning of stronger and weaker shapes from their Year 2 structures learning as they learn to corrugate and rib materials to add strength.</p> <p>Preparing for joining, building and reinforcing strong frames as part of their Year 5 structures learning.</p> <p>Following research into the science of learning, our DT curriculum enables children to revisit and build on their understanding of</p>			<p>Building on use of pneumatic power as they begin to use electricity to power their own torch. Building on an earlier Science unit in which children developed a fluent understanding of electrical circuits.</p> <p>Preparing for using electrical circuits to power a wider range of output variables to design a fair ground ride in Year 6.</p> <p>Following cognitive load theory, children use their prior learning of electrical circuits, with which they have developed a fluency</p>

Design and Technology Long Term Plan (2022- 2023)

	location in the transportation of food products. Commonly imported foods are highlighted to the children in a meeting with a manager from Associated British Ports.		structures in each successive year.			that enables them to focus on the design, execution and evaluation of their working product.
Year 5		Mechanisms: Cams Moving advertisement Stand alone	Structures: Frames Make a shelter Stand alone			
Previous learning: Preparing for: Bespoke to our school:		<p>Building on experience of using levers and sliders, wheels and axels and pneumatics to power movement, children learn how to use cams to facilitate motion in a moving advertisement</p> <p>Preparing for building on the concept of rotation, belts and pulleys and combing this with their Year 4 knowledge of electrical circuits to design, make and power a functioning fairground ride in Year 6.</p> <p>Rooted in the Science of learning, our DT curriculum plans for</p>	<p>Building on previous learning on using different shapes, corrugating and ribbing methods to build strong structures, children will work collaboratively to make the strongest possible frame for their shelter.</p> <p>Preparing for joining the frame of their fairground to the axel in their Year 6 fairground ride. Developing early engineering knowledge of how to strengthen joins that will prepare them for their secondary</p>			

Design and Technology Long Term Plan (2022- 2023)

		opportunities for children to retrieve learning on how to power movement and use this sticky knowledge to extend their movement schema.	education and perhaps for the engineering career opportunities that drive the economy of their home town such as pipe fitting, welding, tinning, fabrication and roles within the wind turbine industry which are ever increasing with government investment into renewable energy around the Humber bank.			
Year 6	Food: Science, Animals Including Humans <ul style="list-style-type: none"> Nutrients, water and fibre are needed for health 				Mechanisms: Electricity and Coding/ Circuits and Control Make a fairground ride	
Previous learning: Preparing for: Bespoke to our school:	Building on previous learning in Year 3 about the "Eat Well Plate" Healthy eating and physical well- being form an integral part of our whole school vision born out of the 2021 height and weight check statistics which revealed that obesity levels in our				This project is a culmination of the children's previous learning around wheels and axels, rotation and pulleys, joining strong frames and utilising electrical circuits. Children now challenge themselves to apply these multiple concepts in tandem to design and	

Design and Technology Long Term Plan (2022- 2023)

	<p>school are above the national and local authority average.</p>				<p>create a functioning product.</p> <p>Developing early engineering knowledge of how to strengthen joins that will prepare them for their secondary education and perhaps for the engineering career opportunities that drive the economy of their home town such as pipe fitting, welding, tinning, fabrication and roles within the wind turbine industry which are ever increasing with government investment into renewable energy around the Humber Bank.</p>	
--	---	--	--	--	---	--