

Curriculum Overview: DESIGN and TECHNOLOGY

Intent EYFS – Key Stage 2 –

“Design is not just what it looks like and feels like. Design is how it works” Steve Jobs.

At the Loriners' MAT, we aim to deliver high-quality Design and Technology (DT) lessons that encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems. These products may be designed in order to satisfy their own needs, or the needs, wants and values of others. At the Loriners' MAT we offer a wide range of DT opportunities to inspire children's creativity and free thinking, including textiles, mechanisms, electrical systems, food technology and structures.

Following the guidelines of the national curriculum the children are also given opportunities to explore and analyse existing products to develop their understanding for the products they will **design, make, test** and **evaluate**, understanding their impact on the wider world. In KS2 children will also explore the work of designers or important movements in the world of design to further broaden their understanding of industry and inspire the development of their own work.

Our Design and Technology curriculum aims to expand the children's personal skills by providing them with situations where they will work as a team, innovate, take risks and make contributions to culture, wealth and well-being of the nation. As part of a skills based developmental curriculum, Design and Technology lessons will also draw on links to other disciplines within the Loriners MAT's broad and balanced curriculum, such as mathematics, science, computing and art.

In order to best deliver this sequenced, progressive curriculum to our children we have set out the aims for learning below. These are our aims for all children to engage with and continue to develop as they progress through their education journey, in order to help them become proficient designers and technicians.

Children will:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technical world.
- Develop a sense of curiosity about how things work.
- A desire to embrace challenges, (including opportunities to research and explore at varying levels to inform their understanding,) when designing and making products.
- Develop the ability to think critically and communicate ideas confidently through the design and manufacture of products they make.
- Build and apply a breadth of knowledge and skills in order 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.
- Be able to understand and use a wide repertoire of subject specific technical language.

Implementation –

In order to implement this intended learning outcome, teachers need to consider the following:

- The Design and Technology subject progression trackers. These outline the knowledge (including vocabulary) all children must master within and across year groups.
- A cycle of lessons for each specialism within Design and Technology, which carefully plans for progression and depth as the children continue in their school career.
- A project book specifically designed for each project undertaken, that builds in its complexity and content to reflect the children's growing knowledge and skills as they move through each Year group.
- A project booklet folder for each child, to enable them to look back on the work they have produced and celebrate their successes.
- Provide opportunities for critical thinking to help children apply their learning and develop their understanding and retention of key skills and vocabulary.
- Possible trips and/or visiting experts who will enhance the learning experience.
- Appropriate curriculum themed days/ home tasks to support the children with their learning journey.
- The display and celebration of children's' DT work in their class and/or as a whole school, to clearly demonstrate progress as aid to learning more and remembering more.

Implementation:	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	Summer 2 whole school end of year project
Nursery	<p style="text-align: center;">Textiles- create a coaster</p>  <p style="text-align: center;">(weaving, different materials)</p> <p style="text-align: center;">Children to have access to a range of materials and tools to be creative. Sharing their ideas and explaining their processes to each other and their teachers.</p> <p style="text-align: center;">Resources include but are not limited to: Hammers, pins, large nuts and bolts, large gears and construction lego.</p>						<p>Food Technology – whole school bake sale. Children decorate a biscuit to sell.</p>
Reception	<p style="text-align: center;">Textiles- create a piece of new fabric using a weaving card.</p>  <p style="text-align: center;">Children to have access to a range of materials and tools to be creative. Sharing their ideas and explaining their processes to each other and their teachers.</p>						<p>Food Technology – whole school bake sale. Children make a biscuit to sell.</p>

		Resources include but are not limited to: hammers, pins, plastic screws, plastic screw drivers and plastic hole punchers, lego gears, split pins, wooden wheels, Mobilo, lego.					
Year 1		<p>Textiles- Make a winter decoration to hang on your bedroom door.</p> 		<p>Mechanisms – Levers and sliders Making a slide-able rewards chart for a new Reception child.</p>		<p>Phonics Screening Technical knowledge-Structures: creating a new free standing structure for the playground (e.g. slide, swing, climbing frame).</p>	<p>Food Technology – whole school bake sale. Children make rainbow cupcakes to sell.</p>
Year 2		<p>Textiles – Make a reusable bag to support sustainability.</p> 		<p>Mechanisms - Wheels and axels : Make a toy car with a functioning wheel and axel.</p>		<p>SATS</p>	<p>Food Technology – whole school bake sale. Children make rocky road to sell.</p>
Year 3		<p>Textiles – Make a Finger puppet, to deliver a show to Reception children.</p>  <p>Link to designer/ Design movement: COCO Chanel</p>		<p>Mechanisms- Levers and linkages and pneumatics Make a Pneumatic toy in a box.</p>  <p>Link to designer/ Design movement: Samuel Ingersoll</p>		<p>Electrical systems – series circuits using a bulb: Make a reusable flashing birthday badge.</p> <p>Link to designer/ Design movement: Hary Beck</p>	<p>Food Technology – whole school bake sale. Link to designer/ Design movement: Nadiya Hussain</p>
Years 4		<p>Textiles – Make a pencil case with zip.</p>		<p>Mechanisms – Make a slingshot car.</p>		<p>Electrical systems – Series circuits using buzzers and programming: Making a night light for a younger sibling or older relative.</p>	<p>Food Technology – whole school bake sale.</p>

		 <p>Link to designer/ Design movement: Art Deco Post Modernism</p>		<p>Link to designer/ Design movement: Adrian Newey Thrust</p>		<p>Link to designer/ Design movement: Bauhaus School of design</p>	<p>Link to designer/ Design movement: Jamie Oliver</p>
Year 5		<p>Textiles – Make a stuffed toy to send to a dog's charity.</p>  <p>Link to designer/ Design movement: Tinker Hatfield</p>		<p>Mechanisms – Gears and Pulleys Create a proposal and model for a new lift at the junior school.</p>  <p>Link to designer/ Design movement: Elisha Otis</p>		<p>Electrical systems – using complex switches and programming. Design a money box for a child. Write the program for the money box to light up and create outer packaging for the product.</p> <p>Link to designer/ Design movement: Bauhaus School of Design Jonathan Ive</p>	<p>Food Technology – whole school bake sale. Link to designer/ Design movement: Michel Roux JR</p>
Year 6		<p>Textiles – Make your own keyring.</p>  <p>Link to designer/ Design movement: Vivian Westwood</p>		<p>Mechanisms – cams Design a new range of movable toys to inspire young children's understanding of using handles to make things move.</p>  <p>Link to designer/ Design movement: Henry Ford</p>	<p>SAT S</p>	<p>Technical knowledge-Structures: design a tent that they could use to take with them on their residential trip. Use CAD to make design? Link to designer/ Design movement: Frank Getlry Memphis movement Zaha Hadid</p>	<p>Food Technology – whole school bake sale. Link to designer/ Design movement: Heston Blumenthal</p>

Intended Impact –

At the end of the Early Years Foundation Stage: As measured by the children's progress towards the Early Learning Goal for Expressive Art and Design.

Children who have achieved the expected level of development in the early learning goal, can be assumed to be on-track to make sustained or accelerated progress when assessed against the curriculum in Key Stage 1.

They should be able to:

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creations, explaining the process they have used.

At the end of Key Stage 1: As measured by the children's progress towards the learning outcomes of the National Curriculum.

Children who have achieved the expected level of development in the Key Stage 1, can be assumed to be on-track to make sustained or accelerated progress when assessed against the curriculum in Key Stage 2.

At the end of Key Stage 2: As measured by the children's progress towards the learning outcomes of the National Curriculum.

Children who have achieved the expected level of development in the Key Stage 2, can be assumed to be on-track to make sustained or accelerated progress when assessed against the curriculum in Key Stage 3.