

EYFS Curriculum Pathway – Design and Technology

Our EYFS Curriculum Pathway to KS1 builds on pupils' past knowledge and prepares them well for the learning that is to come in KS1.

The most relevant early years outcomes for Design and Technology are taken from the following areas of learning:

- Physical Development
- Understanding the World
- Expressive Arts and Design

Our approach to the Design and Technology Curriculum in Early Years Foundation Stage

In Early Years at Ryton Federation children use simple tools with simple rules which provides them with rich learning and development opportunities and a platform on which further Design and Technology Learning can be built. Children are supported and encouraged to investigate human resourcefulness and inventiveness by looking at buildings, clothes, vehicles, books, toys, even the food we eat and the natural spaces we create. Design and Technology in the Early Years enables children to make sense of the 'made world' in which they live. By making, changing and modifying (or designing) things for themselves, children come to a greater understanding of their world and develop a sense of agency - of being able to change and modify their environment. Ultimately, Design and Technology in EYFS enables children to gain knowledge and understanding of their world.

All classrooms have continuous access to well-resourced dough areas, paint tables/easels, junk modelling/craft table and outdoor areas where children are encouraged to explore in a holistic way, exploring materials, ideas and techniques both indoors and outdoors. We also visit the Forest Area which provides endless opportunities for exploring, designing, making and refining structures on a much larger, messier and louder scale. Here they are introduced to new tools or different ways to use familiar tools.

We believe that Design and Technology can be developed in every area of provision, wherever children have opportunities to: **Make things move** - not just vehicles but pulleys, water and balls, using guttering, wind chimes **Construct** - using everything from tiny Lego to crates, ladders and tyres **Squash and squeeze materials** - clay, dough, wet sand, cooking **Explore natural phenomena** such as floating and sinking, magnetism and electricity, shadows and the effects of wind **Fold, cut and decorate** - including paper, card, fabric **Taste and make** - exploring foodstuffs, cooking, baking and investigating food.

From the beginning of their learning journey at Ryton, Children are encouraged to think and play creatively when using our open-ended resources such as small mirrors, baskets of reclaimed and natural materials, musical instruments, fabrics, scarves, and construction blocks. Larger equipment outdoors provides similar opportunities but on a larger scale. Staff skilfully plan for, provide for and teach children's next steps in the moment. Some skills must be taught such as how to use new tools, how to use tools safely, joining techniques etc. New skills, techniques and knowledge taught explicitly as a class, group or 1:1 in the moment. Working in a child-led way we build skills and enjoyment. Children are encouraged to value the process of art making alongside the product at the end. As part of plan-do-review children are given the confidence to share exploration, thoughts and appreciate and respect that others might have different experiences or opinions. Children are encouraged to evaluate models and suggest improvements. The CoEL are crucial to learning in all subjects but they link very explicitly to the EYFS D&T elements.

Design and Technology

Art Forms	A Unique Child	What this looks like at Ryton Federation
Exploring	<p>To show an interest in technological toys with knobs or pulleys, or real objects.</p> <p>To enjoy joining in with dancing and ring games.</p> <p>To begin to move rhythmically.</p> <p>To imitate movement in response to music.</p> <p>To tap out simple repeated rhythms</p> <p>To use movement to express feelings.</p> <p>To create movement in response to music.</p> <p><i>Playing and Exploring – Engagement</i></p> <p>Finding out and exploring Playing with what they know Being willing to ‘have a go’</p>	<p>Design and Technology is inextricably linked to exploration and investigation. At times this can be explored with an adult in an adult led session where a specific teaching point is being made or most often it is the practitioners providing the children with a range of items which are both manufactured and natural to tinker with, explore and investigate. Through their senses children come to know a great deal about what things can do and what can be done with them. They begin to identify similarities and differences, identifying common patterns and exceptions. For example, one familiar common pattern is that large objects are heavy. However, stones and balloons are clear exceptions to that pattern. Similarly, fabric and paper both can be scrunched up, but fabric usually opens itself up again whereas paper generally stays crumpled unless it is deliberately smoothed out. These explorations and investigations often link in a cross-curricular way with subjects such as Maths, Science (UtW) and Art (EAD).</p> <p>Through exploration, children can begin to explore cause and effect, which over time will lead them to questions about how things happen and how they work. Wind chimes, shadows, or balls rolling through tubes offer many opportunities to explore these ideas.</p>
Design	<p>To capture experiences and responses with a range of media, such as music, dance and paint and other materials or words.</p> <p>To use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.</p> <p><i>Creating and Thinking Critically</i></p> <p>Having their own ideas Making links Choosing ways to do things</p>	<p>Whether building with blocks, making three-dimensional models out of recycled materials or using malleable materials, children are taken by exploration of new ideas to new levels of thinking and doing - designing and making.</p> <p>At Ryton Federation we believe that design is not just about drawing, but about thinking. Creating a pizza or designing a new Lego structure require no drawing, but both involve some experience, some imagination and a willingness to change and modify ideas.</p> <p>Clipboards, pencils and paper are in many areas around the classroom and children are encouraged to design their models – This is introduced through stories such as Iggy Peck Architect, Rosie Revere Engineer and Ada Twist Scientist.</p> <p>When children ‘plan’ their independent learning during Plan-Do-Review they have an opportunity to plan orally</p>

		<p>– make decisions and share ideas and scaffolded by adults helping them to decide how to approach tasks.</p>
<p>Make</p>	<p>To use one-handed tools and equipment, e.g. makes snips in paper</p> <p>To understand that equipment and tools have to be used safely.</p> <p>To develop preferences for forms of expression</p> <p>To use simple tools to effect changes to materials.</p> <p>To handle tools, objects, construction and malleable materials safely and with increasing control.</p> <p>To show understanding of the need for safety when tackling new challenges and consider and manage some risks.</p> <p>To show understanding of how to transport and store equipment safely.</p> <p>To practise some appropriate safety measures without direct supervision.</p> <p>To explore what happens when they mix colours.</p> <p>To experiment to create different textures.</p> <p>To understand that different media can be combined to create new effects.</p> <p>To manipulate materials to achieve a planned effect.</p> <p>To construct with a purpose in mind, using a variety of resources.</p> <p>To use simple tools and techniques competently and appropriately.</p> <p>To select appropriate resources and adapt work where necessary</p> <p>To select tools and techniques needed to shape, assemble and join materials they are using.</p> <p>To create simple representations of events, people and objects.</p>	<p>Making in EYFS involves putting ideas into practice and having an awareness of the possibilities and limitations of different materials. Children need to experience at first hand the consequences of the decisions they have made, rather than quickly being shown by an adult how to get it 'right'. Purposeful making involves creativity, imagination and fun - as well as making mistakes.</p> <p>Design and Technology begins by investigating through heuristic play, treasure baskets, and collections of natural and manufactured resources, playing with everyday objects such as empty boxes, blocks and construction materials, experimenting with tools such as scissors, hammers, hole punches and making use of fixing and joining materials such as sellotape, masking tape, string, pipe cleaners.</p> <p>Skills progress and children begin to produce items which represent other objects – models which may not look like what they are but children can talk about and explain them.</p> <p>Following this Children refine and are taught skills which help them to make items that look and function more like purposeful objects. Interest in playing with dough may become more focused on producing something which can actually be eaten. Children may begin to want to make bags for their shop, create signs for their library, or explore ways of channelling water.</p> <p>Progress may also be supported by introducing a wider range of tools and materials: Cutting - scissors (ideally different ones for paper and fabric, as paper blunts the scissors, making it harder to cut fabric), knives (for cooking), safety snips (for card and plastic), saws (for wood) Using more demanding materials - including fabric, card, foil, plastic, wood Making holes - single hole punch, tapered reamer, hand drill. Increasing challenge by including different thicknesses of card, cardboard cylinders, plastic bottles - of card, cardboard cylinders, plastic bottles. Moulding and squeezing - sand, play dough, clay, bread dough, papier mache. Joining or linking papers, boxes, fabrics - with string, glue, masking tape, treasury tags, elastic bands, plastic nuts and bolts, clothes pegs.</p>

	<p>To choose particular colours to use for a purpose.</p> <p>To handle equipment and tools effectively, including pencils for writing.</p> <p>To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p><i>Active Learning – Motivation</i></p> <p>Being involved and concentrating Keeping trying</p>	<p>Children are taught how to use tools safely as they are introduced and are encouraged and supported to manage and lookout for own risks.</p>
Evaluate and Improve	<p>Communication and Language</p> <p><i>Active Learning – Motivation</i></p> <p>Enjoying achieving what they set out to do</p>	<p>Adults help children to evaluate models and creations. They praise effort and 'having a go'. If a child is unable to suggest and improvement they sensitively suggest other ways to try. In Reception we refer to a wall which shows how models can be improved. This only happens if the child wants to make an improvement and has good characteristics of effective learning otherwise we value children's effort and creativity to boost confidence and self-esteem. Children have an opportunity to share creations at Review time.</p>
Technical Knowledge and Vocabulary	<p>Communication and Language</p>	<p>Children introduced to technical vocabulary from the outset. Technical words for tools, processes, skills, materials, etc. are all introduced and children are encouraged to remember and use these key subject specific words.</p>
Food and Nutrition	<p>Physical Development – Self Care</p>	<p>We cook, bake and use food with children at least once a fortnight, sometimes weekly.</p> <p>We introduce different tools, skills and recipes. We address different concepts – lots of Mathematics, Language and Science opportunities here too and see the value of this holistic experience.</p>