

## *Our Curriculum Vision*

Everything we do, at Lanercost CE Primary School, stems from our children having a life-long love of learning. We are proud of our inclusive environment, which is firmly rooted in a shared Christian ethos and fosters the care and nurture of our school community. As a school, in partnership with parents and carers, we strive to build strong foundations for an excellent education. We enable our children to achieve all of their divine potential by inspiring them and promoting opportunities to delight in their learning as well as allowing them to grow into successful, compassionate, young adults who recognise their role in the community and the ever-changing wider world.

We aim to accomplish this through a loving, structured and joyful environment with consistently high standards of teaching. Our engaging and immersive learning is based upon the National Curriculum (2014), developed from a love of reading and reflects our school's unique circumstances. We make the most of our beautiful location, which is a stone's throw from Hadrian's Wall, Lanercost Priory, Naworth Castle and close to Northumbria National Park.

This brave, broad and rich curriculum motivates all of our children to build concepts, skills and knowledge for life. They become curious learners who are led by enquiry and inspired by a range of real-life experiences and cultural enrichment. Each of our subject leaders has worked hard to craft their subject curriculum to ensure this within their subject.

We know that the greatest way to understand school-life is to become a part of your child's learning journey. We aim to run several shared learning events, workshops and cultural enrichment moments that you can participate in, allowing you to see your child's progress and ventures in school. Please see our school website, social media platforms and school newsletter for the latest parent and community events.

*Our vision for our curriculum comes directly from our whole school vision. It has been carefully crafted by our teaching staff in order to ensure that we provide an education that helps every child reach their divine potential and enables them to have a life-long love of learning. Each of our subject-leaders has then designed their subject to stem from an evidence-basis where our vision is threaded through at every point.*

## *Our Vision for Design and Technology*

Design and Technology at Lanercost aims to give children the opportunity to develop skills, knowledge and understanding of designing and making functional products. At Lanercost, we feel it is vital to nurture creativity and innovation through design, and by exploring the designed and made world in which we all live.

Design and Technology education at Lanercost involves two important elements - learning about the designed and made world and how things work, and learning to design and make functional products for particular purposes and users. We aim to ensure that every child acquires and is able to apply their knowledge and understanding of materials and components, mechanisms and control systems, structures, existing products, quality and health and safety. Furthermore, we have made our curriculum one where all children throughout school are taught cooking and nutrition as we believe that this is vital life-long skill. Children knowing how to cook is an important element of ensuring our whole school approach to health and wellbeing.

Our Design and Technology curriculum ensures all the skills are progressively learned and aids learning across the whole curriculum. Examples of this are. knowledge about the properties of materials supports science learning and the practice of measuring accurately helps in maths. These skills help in Computing through the children's use of computer control and, naturally, our Design and Technology curriculum links to Art and Design.

Our Design and Technology curriculum serves to develop the whole child in many additional ways. This include, children's life skills through collaborative working and problem-solving, knowledge and understanding of design, materials, structures, mechanisms, electrical control, as well as cooking and nutrition. All children are encouraged to be creative and innovative across the curriculum; however, this is further highlighted in our teaching of Design and Technology, and they are actively encouraged to think about important, development issues in the world, such as sustainability and enterprise.

## *Our Teaching and Learning of Design and Technology*

The basis for our Design and Technology curriculum is the Kapow Primary's Design and Technology scheme of work. We believe that this sequential and knowledge-based outline inspires our children to be innovative and creative thinkers. They have an appreciation for the product design cycle through ideation, creation, and evaluation. This gives all the children the opportunity to develop the confidence to take risks, through drafting design concepts, modelling, and testing. Additionally, this allows them to become reflective learners who evaluate their work and the work of others. Through this curriculum design, we aim to build an awareness of the impact of design and technology on our lives and encourage children to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.

Kapow Primary's Design and technology scheme of work enables children to meet the end of key stage attainment targets in the national curriculum and the aims also align with those in the national curriculum.

## *Design and Technology in Early Years*

In the Early Years, Design and Technology concepts and ideas relate to the Statutory framework for the Early Years foundation stage 2021 statement and outcomes for Expressive Arts and Design as well as physical development. Learning experiences are planned and facilitated through the use of both the indoor and outdoor environments using Development Matters 2021 (outlined below).

Our bespoke and evidence-based approach in Early Years provides the opportunity to set up Design and Technology provocations for the children to explore and develop their learning through play. The children also participate each half term in a Design and Technology project where new vocabulary and concepts are introduced. This is linked to the children's interests or other themes for that half term. The projects of work will build the foundations for the children's skills in three key areas:

- Structures (2D and 3D)
- Textiles
- Cooking and nutrition (Food)

To facilitate this learning the teachers may use first hand observations and explorations, discussion, stories and non-fiction texts.

3 and 4 year olds		Reception	
<b>Expressive Arts and Design</b>			
<p>Explore different materials freely, to develop their ideas about how to use them and what to make.</p> <p>Develop their own ideas and then decide which materials to use to express them.</p> <p>Join different materials and explore different textures.</p>	<p>Offer opportunities to explore scale. Suggestions:</p> <ul style="list-style-type: none"> <li>• long strips of wallpaper</li> <li>• child size boxes</li> <li>• different surfaces to work on e.g., paving, floor, table top or easel</li> </ul> <p>Listen and understand what children want to create before offering suggestions.</p> <p>Invite artists, musicians and craftspeople into the setting, to widen the range of ideas which children can draw on.</p> <p>Suggestions: glue and masking tape for sticking pieces of scrap materials onto old cardboard boxes, hammers and nails, glue guns, paperclips and fasteners.</p>	<p>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</p> <p>Return to and build on their previous learning, refining ideas and developing their ability to represent them.</p> <p>Create collaboratively, sharing ideas, resources and skills.</p>	<p>Teach children to develop their colour-mixing techniques to enable them to match the colours they see and want to represent, with step-by-step guidance when appropriate.</p> <p>Provide opportunities to work together to develop and realise creative ideas.</p> <p>Provide children with a range of materials for children to construct with. Encourage them to think about and discuss what they want to make. Discuss problems and how they might be solved as they arise. Reflect with children on how they have achieved their aims.</p> <p>Teach children different techniques for joining materials, such as how to use adhesive tape and different sorts of glue.</p> <p>Provide a range of materials and tools and teach children to use them with care and precision. Promote independence, taking care not to introduce too many new things at once.</p> <p>Encourage children to notice features in the natural world. Help them to define colours, shapes, texture and smells in their own words. Discuss children's responses to what they see.</p> <p>Visit galleries and museums to generate inspiration and conversation about art and artists.</p>
<b>Physical Development</b>			
<p>Use one-handed tools and equipment, for example, making snips in paper with scissors. Use</p>	<p>You can begin by showing children how to use onehanded tools (scissors and hammers, for example) and then guide them with hand-over-hand help.</p>	<p>Develop their small motor skills so that they can use a range of tools competently, safely and</p>	<p>Before teaching children the correct pencil grip and posture for writing, or how to use a knife and fork and cut with scissors, check:</p>

<p>a comfortable grip with good control when holding pens and pencils. Show a preference for a dominant hand.</p>	<p>Gradually reduce the help you are giving and allow the child to use the tool independently. The tripod grip is a comfortable way to hold a pencil or pen. It gives the child good control. The pen is pinched between the ball of the thumb and the forefinger, supported by the middle finger with the other fingers tucked into the hand. You can help children to develop this grip with specially designed pens and pencils, or grippers. Encourage children to pick up small objects like individual gravel stones or tiny bits of chalk to draw with.</p>	<p>confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons.</p>	<ul style="list-style-type: none"> <li>• that children have developed their upper arm and shoulder strength sufficiently: they do not need to move their shoulders as they move their hands and fingers</li> <li>• that they can move and rotate their lower arms and wrists independently</li> </ul> <p>Help children to develop the core strength and stability they need to support their small motor skills.</p> <p>Encourage and model tummy-crawling, crawling on all fours, climbing, pulling themselves up on a rope and hanging on monkey bars.</p> <p>Offer children activities to develop and further refine their small motor skills. Suggestions: threading and sewing, woodwork, pouring, stirring, dancing with scarves, using spray bottles, dressing and undressing dolls, planting and caring for plants, playing with small world toys, and making models with junk materials, construction kits and malleable materials like clay.</p> <p>Regularly review the equipment for children to develop their small motor skills. Is it appropriate for the different levels of skill and confidence of children in the class? Is it challenging for the most dexterous children? Continuously check how children are holding pencils for writing, scissors and knives and forks. Offer regular, gentle encouragement and feedback. With regular practice, the physical skills children need to eat with a knife and fork and develop an efficient handwriting style will become increasingly automatic.</p>
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## *Design and Technology in Key Stage One and Key Stage Two*

The Design and Technology national curriculum outlines the three main stages of the design process: design, make and evaluate. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical, and technical understanding required for each strand. Cooking and nutrition\* has a separate section, with a focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality.

The National curriculum organises the Design and technology attainment targets under five subheadings or strands:

- Design
- Make
- Evaluate
- Technical knowledge
- Cooking and nutrition\*

Kapow Primary's Design and technology scheme has a clear progression of skills and knowledge within these five strands across each year group. The Kapow National curriculum mapping shows which of the units cover each of the National curriculum attainment targets as well as each of the five strands. Our progression of skills shows the skills that are taught within each year group and how these skills develop to ensure that attainment targets are securely met by the end of each key stage.

Through Kapow Primary's Design and technology curriculum, children respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in four key areas in Key Stage One and six key areas in Key Stage Two:

- Mechanisms
- Structures
- Textiles
- Cooking and nutrition (Food)
- Electrical systems (KS2) and
- Digital world (KS2)

Each of the key areas follows the design process (design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. The Kapow Primary scheme is a spiral curriculum, with key areas revisited again and again with increasing complexity, allowing children to revisit and build on their previous learning.



Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands-on, computer-based and inventive tasks. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Differentiated guidance is available for every lesson to ensure that lessons can be accessed by all children and opportunities to stretch children's learning are available when required. Knowledge organisers for each unit support children in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

Strong subject knowledge is vital for staff to be able to deliver a highly effective and robust Design and Technology curriculum. Each unit of lessons includes multiple teacher videos to develop subject knowledge and support ongoing CPD. Kapow has been created with the understanding that many teachers do not feel confident delivering the full Design and technology curriculum and every effort has been made to ensure that they feel supported to deliver lessons of a high standard that ensure pupil progression.

At Lanercost, we teach each unit as a block of sessions at the beginning or end of each half term. The flexibility to teach the units in which ever order allows teachers to make use of cross-curricular links available. The work is recorded in children individual Design and Technology book.

### *Supporting Teaching and Learning of Design and Technology*

Support staff, subject leaders, and teacher play a vital role in universal quality first teaching and learning of Design and Technology. The use of knowledge organisers allows teachers to make reasonable adjustment for children with further needs to help make sense of the content and new vocabulary. Oral rehearsal of their processing and key vocabulary allows children to formulate and practice responses before recording or writing these down.

### *Furthering the Teaching and Learning of Design and Technology*

To bring the subject to life, all our children at Lanercost have the opportunity to explore designs and products from a range of famous and local experts in the field. As part of personal development of all our children, every child in Key Stage Two is given the opportunity to visit London to experience some of our countries most amazing building designs. An example of this is when the children visited the architect Roma Agrawal in her offices at the Shard to talk about its design. Extra-curricular clubs, such as Lego Club, support children's creativity, design, build and evaluate skills by completing a design brief each week.

### *Assessment of the Teaching and Learning of Design and Technology*

The impact of Kapow Primary's scheme is constantly monitored through both formative and summative assessment opportunities. Each lesson includes guidance to support teachers in assessing children against the learning objectives. Furthermore, each unit has a unit quiz is used at the start and/ or end of the unit.



In Early Years the children's ideas are recorded and developed through the use of a 'Big Book'. This allows for consistent monitoring and assessment opportunities.

## *The Impact of Teaching and Learning of Design and Technology*

After the implementation of our Design and Technology curriculum, children will leave our school equipped with a range of skills and clear knowledge to enable them to succeed in their secondary education of Design and technology. They will leave Lanercost as innovative and resourceful members of society.

The expected impact of following the Kapow Primary Design and technology scheme of work is that children will:

- Understand the functional and aesthetic properties of a range of materials and resources.
- Understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.
- Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD, and products to fulfil the needs of users, clients, and scenarios.
- Understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.
- Have an appreciation for key individuals, inventions, and events in history and of today that impact our world.
- Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- Self-evaluate and reflect on learning at different stages and identify areas to improve.
- Meet the end of key stage expectations outlined in the National curriculum for Design and technology.
- Meet the end of key stage expectations outlined in the National curriculum for Computing.

By the end of the Early Years Foundation Stage children will be assessed against the Early Learning Goal, Creating with Materials. Children are expected to 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.

In Fine Motor Skills children are expected to be able to:

- Use 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.

As part of our curriculum design, our subjects are constantly re-evaluated to ensure they broad, brave and going above and beyond the needs of our children.