



Limehurst Primary School



Subject Leader Report: Design and Technology by Lauren Lord

INTENTION: Subject Overview

At Limehurst children enter their school journey with some knowledge and understanding of the world around them. The Design and technology scheme of work aims to inspire our children to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation. We will be encouraging our children to think about creating products for a real life purpose and audience in order to give their projects a meaningful purpose with skills that can be used within their personal lives. We want children to develop the confidence to take risks, through drafting design concepts, modelling, and testing and to be reflective learners who evaluate their work and the work of others. To become constructive in their criticism of themselves and others when thinking about how to improve upon the design they have created. Through our scheme of work (Kapow), 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. Our Design and technology scheme of work enables pupils to meet the end of key stage attainment targets in the National curriculum and the aims also align with those in the National curriculum. EYFS (Reception) units provide opportunities for pupils' to work towards the Development matters statements and the Early Learning Goals.

IMPLEMENTATION: Planning, sequencing and skills progression

Our 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 and 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. Our National curriculum mapping shows which of our units cover each of the National curriculum attainment targets as well as each of the five strands. As a school we follow Kapow Primary's Mixed Age curriculum map based on a 2 year cycle of A and B. Over the two years the children will have been taught all national curriculum objectives with each Key Stage, all 5 strands and built upon skills using a spiral curriculum from previous year groups with key areas revisited again and

again with increasing complexity, allowing pupils to revisit and build on their previous learning. Our Progression of skills shows the skills and knowledge 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 our Design and technology scheme, pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in six key areas: **Mechanisms, Structures, Food, Textiles, Digital World (KS2 only) and Electrical Systems (KS2 only)** Each of our 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. 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 pupils and opportunities to stretch pupils' learning are available when required. Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary focusing on that all important 'sticky knowledge.' All resources are easily accessible on Kapow's online lesson plans, which are updated and modified by Kapow on a regular basis to ensure teachers are teaching the most up to date content and skills. Equipment lists for each topic are readily available making resourcing units simple and easy for subject or unit leads.

IMPLEMENTATION and IMPACT: Assessment, monitoring and evidence

The impact of our Design and Technology curriculum will be constantly monitored through both formative and summative assessment opportunities. Focusing on the progress children in our school are making as they progress through the keystages. Each lesson includes guidance to support teachers in assessing pupils against the learning objectives. Each individual lesson has detailed criteria for those children who are working at the expected level and for those children who are working above and beyond the expected level, allowing teachers to have a clear understanding of which children are working below, at and above expected for each session. This leads to clear prompting any future planning to be adapted accordingly to fit the needs of the children. Furthermore, each unit has a unit quiz and knowledge catcher which will be used at the start and/ or end of the unit as a summative form of assessment. The increase in the children's knowledge and understanding of what they have been taught was evident in the increase of scores from the beginning of the topic to the end. Photographs and videos of the children will be kept as evidence of any/all stages of the design, make and evaluate process. Evidence has shown that, especially in KS1, filming the children thinking critically when designing or evaluating their product through discussions with their teacher is paramount in encouraging a critical analysis of what they have created. Furthermore, we understand that children have their own individual strengths and weaknesses, using photographs and video evidence allows children to be creative, innovative and critical without the constraints of formal written analysis. This has led to the children in Limehurst fostering a love for creativity and building children's confidence in following their passions and interests.

After the implementation of our Design and technology curriculum, pupils will leave Limehurst equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of our society. The expected impact of following the Kapow Primary Design and technology scheme of work is that children will be able to 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. Children should be able to 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 real life scenarios. It is important that children should understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment. They should begin to have an appreciation for key individuals, inventions, and events in history and of today that impact our world. The National Curriculum states that children should be able to recognise where our decisions can impact the wider world in terms of community, social and environmental issues. Children should be able to self-evaluate and reflect on learning at different stages and identify areas to improve. Following the curriculum will ensure children meet the end of key stage expectations outlined in the National curriculum for Design and technology.

Other Key Information if applicable (subject specific)

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 Primary 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. Kapow Primary offer regular online webinars and training videos which can be accessed by any member of staff to develop subject knowledge and CPD.

The introduction of Design and Technology enrichment after school clubs is intended to help encourage the children to follow their creative passions and allow them a safe space to be creative designers. The sessions will mirror the curriculum in following the **design, make and evaluate process** based around themes around the school year such as Christmas, Easter, Diwali, Chinese New Year etc.