Design and Technology at Ashmole Primary School

'At Ashmole Primary School we aim to develop children's skills and knowledge in the design, making and evaluation process. We hope this will lead to the next generation of innovative creators and designers.'

Design and Technology at Ashmole Primary School develops children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials, including food. It encourages children's creativity and encourages them to think about important issues

Intent

At Ashmole Primary School, Design and Technology should be practical, engaging, inclusive and help children learn to solve problems. Design and Technology forms a key part of our broad and balanced curriculum. We fulfil the requirements of the National Curriculum whilst tying our teaching and learning to a cross-curricular 'project' each half term.

We aim for children to learn to become resourceful, innovative, enterprising and capable designers and makers, whilst respecting wider context and consequences of design and innovation. We aim for children to understand the 'design, make, evaluate' cycle that underpins the teaching and learning of Design and Technology, as well as the necessary technical knowledge and skills. We aim for children to be able to understand and apply the principles of nutrition and to begin to learn to cook and prepare dishes.

We aim for children to evaluate both design and technology across timespans and cultures; examining and developing a critical understanding of how design and technology have impacted daily life and the wider world. We want children to use the language of Design and Technology to be able to participate successfully in an increasingly technological and design-driven world.

We have established a school curriculum plan for Design and Technology as an entitlement for all pupils that is:

- Aspirational in the progression of skills and technical knowledge that pupils learn as they progress through the school. Such high aspirations are clearly identifiable in the progressive and increasingly challenging skills-based objectives. As pupils progress through school, they should also begin to think critically and develop a more rigorous understanding of Design and Technology. They should also know how Design and Technology both reflect and shape history and culture across the world;

- Situated in a global context. We want children to learn about great designers, innovators and scientists, and understand the historical and cultural contexts of their design. We want children to understand the chronology of technological and design advances, and how these have impacted both daily life and wider society.

We want children to be able to evaluate and analyse designs and technological advances by examining the design's intent, its impact and how it speaks to a wider picture, including its impact on our environment and society.

- Creative and imaginative. We want children to produce creative work, exploring their ideas and recording their experiences. We aim to foster innovation and risk-taking, helping children to understand some of the benefits and challenges of invention;

- Skill-based, enabling children to talk about how things work and to develop their technical knowledge. We want children to be able to apply a growing body of knowledge, understanding and skills in order to design and make prototypes and products for a wide range of users, and to be able to select appropriate tools and techniques when making a product, whilst following safe procedures;

- Purposeful and practical. We aim for children to think about the purpose of good design and technology, and therefore be able to critique, evaluate and test their ideas and products, and the work of others. We also aim to foster enjoyment, satisfaction and purpose in designing and making things, giving a wide range of hands-on experiences;

- Built upon and has continuity with the provision for Design and Technology established in the Early Years Foundation Stage;

- Inclusive in terms of delivering the same curriculum to all of our pupils irrespective of specific learning needs or disabilities and differentiating where necessary through, for example, in class support, providing different learning environments, alternative learning activities and assessment outcomes.

Implementation

At Ashmole Primary School, we implement a 'creativity-led, skills based' approach to learning and teaching in Design and Technology which develops our pupils as creative, innovative, purposeful and inspired learners and designers.

Our learning and teaching in Design and Technology is creative and hands-on, allowing opportunities for pupils to work independently, in pairs and in groups of various sizes both inside and outside of the classroom. Lessons are brought to life through memorable experiences including practical making and designing activities, going on trips and inviting visitors to our school.

Each learning objective for a Design and Technology lesson is skills-based and links to the wider project across the curriculum; objectives and anticipated outcomes are clear, but not limiting, as we want to give children the opportunity to innovate and find practical solutions. Lessons are designed to be purposeful and encourage independent thinking.

Lessons are planned with the 'design, make, evaluate' cycle and children and encouraged to continually problem-solve and think critically about their own designs and those of others. When specific technical knowledge is taught, it applies directly to an exciting and engaging project to situate the children's new knowledge in context. Children are given the opportunity to learn about cooking and nutrition through practical cooking lessons, and as a Barnet Healthy Schools Bronze Award holder, we teach the understanding of a healthy and balanced diet throughout the children's time at our school.

Pupils examine and analyse the work of famous designers, innovators, and scientists linked to their project. Pupils have the opportunity to analyse their designs and situate their designs in a historical and cultural context. Designing for a purpose, pupils explore what problem the designer was trying to solve, and the benefits and limitations of their design, using the language of Design and Technology. Pupils are also offered the opportunity to respond to design and designers orally, in written contexts and through their own artistic and design responses.

We adopt a policy of immersive learning in Design and Technology that provides sufficient time and space for our pupils not only to acquire new skills and technical knowledge and subject vocabulary but also to develop subject concepts and understand the significance of what they have learned. Key vocabulary is taught in context and displayed in each classroom. As children progress through their learning, they revisit the key vocabulary, deepening their understanding and building on a cross-curricular approach.

We provide varied and differentiated ways for pupils to record the outcomes of their work. Prior learning is revisited to enable children to make links to previous learning. The curriculum has been carefully planned to enable children to build upon their skills and knowledge year on year. KW boards, self-evaluations and assessment are used to help children develop their skills and knowledge.

Impact

Each Design and Technology lesson has a clear objective and set outcomes for pupils in terms of a skills acquisition or the acquisition of technical knowledge. We recognise and encourage that children may go beyond or outside of our set learning intentions, and innovation and problem-solving is at the forefront of our teaching. Lessons are differentiated to ensure all children are challenged, included and engaged.

We ensure that when assessing pupils, evidence is drawn from a wide range of sources to inform the process, including: interaction with pupils during discussions and related questioning; day-to-day observations; the pupils' designs and projects; and pupils' written responses and evaluations.

At the end of each year, we make a summative judgement about the achievement of each pupil. At this point teachers decide upon a 'best fit' judgement as to whether the pupil has achieved and embedded the expected learning goals, exceeded expectations or is still working towards the goals.

These decisions are based on the professional knowledge and judgement that teachers possess about the progress of each pupil, developed over the previous three terms, which allows an informed and holistic judgement of attainment to be made. Achievement against the learning goals for Design and Technology at the end of the year is used as the basis of reporting progress to parents.