

# Design and Technology Curriculum Intent, Implementation, and Impact Statement

## Intent

The Design and technology scheme of work aims to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation. We want pupils 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.

Through the KAPOW scheme of work, we aim to build an awareness of the impact of design and technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.

The KAPOW 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.

At Inkpen Primary School, our intent for our DT curriculum is to:

- **Foster Creativity and Problem-Solving:** Encourage pupils to generate innovative ideas and find solutions to real-world problems through a structured design process.
- **Develop Technical Skills:** Provide opportunities for pupils to build practical skills in using a variety of tools, materials, and techniques safely and effectively.
- **Connect Learning to the Real World:** Ensure that DT lessons are contextualised, making connections to other subjects, local industries, and community needs, thus enhancing relevance and application.
- **Promote Sustainability and Ethical Design:** Instil an understanding of the impact of design and technology on society and the environment, encouraging pupils to consider sustainable practices in their projects.
- **Cultivate Resilience and Collaboration:** Foster a culture of collaboration and resilience, enabling pupils to work effectively in teams while learning from mistakes and iterating on their designs.

## Implementation

By following the KAPOW scheme of work, our implementation of the DT curriculum is characterised by a rich, diverse, and engaging programme that adheres to the National Curriculum's requirements. 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 four subheadings. We have taken these subheadings to be our Kapow Primary strands:

- Design
- Make
- Evaluate
- Technical knowledge

Cooking and nutrition is given a particular focus in the National curriculum and we have made this one of our six key areas that pupils revisit throughout their time in primary school:

- Cooking and nutrition
- Structures
- Electrical systems (KS2 only)
- Mechanisms/ Mechanical systems
- Textiles
- Digital world (KS2 only)

Kapow Primary's Design and technology scheme has a clear progression of skills and knowledge within these strands and key areas across each year group. Our school DT overview shows which of our units cover each of the National curriculum attainment targets as well as each of the four strands. The KAPOW Progression of Skills document 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 Kapow Primary's Design and technology scheme, pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in the six key areas. 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. The Kapow

Primary scheme is a spiral curriculum, with key areas revisited again and again with increasing complexity, allowing pupils 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 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.

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 focuses on the key subject knowledge needed to deliver the curriculum, making links with prior learning and identifying possible misconceptions. At Inkpen Primary School, we are mindful of our teachers' workload so chose the KAPOW scheme of work for its comprehensive guide to lesson content, skills progression and subject knowledge information. KAPOW has been created with the understanding that many teachers do not feel confident delivering the Design and Technology curriculum and every effort has been made to ensure that they feel supported to deliver lessons of a high standard.

## Impact

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

At Inkpen Primary School, we understand the importance of ensuring children know more and remember more. We use a range of revisit and review techniques, as set out in the KAPOW scheme of work, to recall and activate prior knowledge before moving on to new content. This form of Assessment for Learning (AfL) allows teachers to monitor children's progress and adapt lessons as necessary.

After the implementation of Kapow Primary Design and technology, pupils should leave school equipped with a range of skills to enable them to succeed in their secondary education and be 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