ST JAMES & ST JOHN
CHURCH OF ENGLAND PRIMARY SCHOOL

Design and Technology

Intent

Our design technology curriculum 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 would like 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 our units of work we aim to build an awareness of the impact of design technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future dealing with design advancements.

At St. James and St. John we use Kapow to support our teaching and learning of design technology. Our design technology curriculum 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.

Implementation

The design 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 is included with a focus on specific principles, skills and techniques in food, including where it 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

There is a clear progression of skills and knowledge within these five strands across each year group.

Our curriculum overview shows which of our units cover each of the National curriculum attainment targets as well as each of the five strands.

Our progressions of skills shows the skills that are taught within each year group and how these skills develop to ensure the attainment targets are securely met by the end of each key stage.

Pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in six key areas:

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

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. It 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 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 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 teaching 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.

Impact

The impact of our design technology curriculum can be supported by Kapow and through 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.

After the implementation of our design technology curriculum pupils should leave school equipped with a range of skills to enable them to succeed in their secondary education and innovative and resourceful members of society.

The expected impact of following our design 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 of 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 outlines in the National curriculum for Computing.