

Subject on a page

DT

We aim to develop pupils who...

At Grace Mary, we are DESIGNERS and TECHNOLOGISTS! We want our children to love Design and Technology. We want them to have no limits to what their ambitions are and grow up wanting to be architects, graphic designers, chefs or carpenters.

INTENT



Inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation.



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.



Inspire 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.



To encourage our pupils to be resourceful whilst developing skills that contribute to future design advancements.



To equip them with not only the minimum statutory requirements of the Design and Technology National Curriculum but to prepare them for the opportunities, responsibilities and experiences of later life.

IMPLEMENTATION

-How do we achieve our aims?

Design and Technology is an inspiring, rigorous and practical subject. Using creativity and imagination, our pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world.

Design and Technology at Grace Mary instils qualities such as curiosity, enquiry and determination. Our pupils are inspired, engaged and excited as they carry out a range of effective research, design and make tasks. Our children thrive in learning how to work independently and collaboratively to gain an in-depth understanding of the creative and problem-solving process.

Progression model

DT is taught within 4/5 mini blocks outlined on the long-term overview and there are 3-4 lessons within each unit. To ensure that pupils develop a secure knowledge that they can build on, our DT curriculum is planned and organised into a progression model that outlines the skills, knowledge and vocabulary to be taught in a sequentially coherent way. We use and adapt the Kapow scheme of work for DT.

Design Process

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

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

IMPLEMENTATION

(continued)

Assessment

Formative

- Children's knowledge, understanding and skills in DT are assessed by making observations of the children working during lessons. Teachers use this ongoing assessment to plan next steps and make curriculum adjustments.
- Regular recapping and testing of previous content is evident in all lessons. This testing of pupils is a learning activity in and of itself. Testing supports pupils in retaining knowledge in long-term memory
 - Feedback is given to children by their teacher or peers which is linked to outcomes identified in the curriculum planning.
- Children are also encouraged to be critical of their own work, highlighting their own next steps.

Summative

- End of unit assessments are carried out 1:1 to assess the knowledge and skills outlined in each unit. These assessments are used to identify which children are working at the expected standard and also allow the DT leader to make curriculum adjustments.
- Regular opportunities for pupil voice are built in so that the DT leader can judge the effectiveness of the curriculum.

IMPACT

-How will we know we have achieved our aims?



Pupils 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.



Pupils recognise where our decisions can impact the wider world in terms of community, social and environmental issues.



Pupils self-evaluate and reflect on learning at different stages and identify areas to improve.



Pupils are resourceful whilst developing skills and become more creative and independent thinkers that contribute to future design advancements.



Pupils meet the end of key stage expectations outlined in the National curriculum for Design and technology.

KAPOW

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 six key areas:

- Mechanisms
- Structures
- Textiles
- Food
- Electrical Systems (KS2)
- 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. Our 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. 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.