DESIGN & TECHNOLOGY AT PITMASTON

INTENT

At Pitmaston, our children are given the opportunity to design and make products that solve real and relevant problems within a range of inspiring contexts. As designers, pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently in an increasingly technological world.

Our ambitious, high quality and progressive curriculum starts in the Early Years and develops children's substantive and disciplinary knowledge through to Year 6.

Throughout the Design Technology topics, children will learn about designers, inventors and key events, both historical and from modern day, that have helped shaped the world. These will inspire children to take risks within their designs to develop as innovative, enterprising and capable citizens.

Cooking and nutrition is embedded in the Design and Technology curriculum and children are taught how to cook and apply the principles of healthy eating, from Nursery, as well as learn where their food comes from and how it is processed.

The Design Technology curriculum is carefully sequenced to ensure clear progression of substantive and disciplinary knowledge, as well as building on prior skills and knowledge and making links to their learning in Science, Computing and Health Education.

The Design Technology curriculum is structured into the following four key concepts to develop this substantive knowledge:

Design	Know how to design a product that is purposeful, functional and appealing to a specific group.
Make	Know how to cut, join and finish a range of increasingly complex materials ranging from paper to wood.
Evaluate	Know how to investigate, evaluate and analyse a range of existing products and their own designs based on a specific design criteria. In addition to this children will know key individuals have helped to shape the world in which we live in.
Technical knowledge	Know how to apply their knowledge of specific materials to meet the criteria listed above in the design, make and evaluate stages.

IMPLEMENTATION

At Pitmaston we fulfil the National Curriculum requirements through the use of the implementation of the Kapow scheme for Design Technology. Kapow Primary topics are based on the D&T Association's Projects on a Page. Through careful planning to ensure progression of substantive knowledge and skills, topics are selected for each year group based on the six areas of Design and Technology. The long term plan identifies where the areas of *Structures, Mechanisms, Textiles, Electrical Systems (KS2), Digital World (KS2) and Food and nutrition* are taught across school.

Substantive knowledge and disciplinary knowledge are mapped across year groups (starting with the EYFS Development Matters framework) to ensure clear progression. Key concepts and technical vocabulary are also included in the planning which follows the overall design, make and evaluate structure. Encouraging the use of technical vocabulary during discussion opportunities links to our school focus on oracy skills.

The whole school approach to teaching and learning in Design Technology involves the following:

- In the Early Years, children have the opportunity to be developing their Expressive Arts and Design skills, Understanding of the World and Physical Development as part of the continuous provision on offer throughout the year as well learning through topic themes that lend themselves naturally to more DT skills and exploration.

- From Years 1-6, a Design technology unit of work is taught each term and these lessons will take place on a weekly basis across a half term.

- Children begin each topic by disassembling and critically evaluating an existing product to ensure that they understand the product they are aiming to construct over a series of sequenced lessons.

- Iterative design is a key component of learning. The term 'iteration' is the repetition of a process in order to generate a sequence of outcomes. All children are encouraged to design and test before prototyping a final product. Pitmaston's Design Technology curriculum encourages children to concentrate on the steps involved in iterative design rather than solely focusing on the final outcome.

- Through a carefully planned scheme of work children learn the crucial life skills from preparing a healthy snack to cooking a three course meal.

Our teachers consider the needs of all learners in their provision, supporting those who have not had significant prior access to Design Technology opportunities, for example, tools and materials. In line with our inclusion policy, all pupils will have access to all activities including those with SEND, where additional resources have been provided to ensure that all pupils can learn and will achieve.

IMPACT

The focused and successful curriculum design results in highly engaging and memorable Design Technology education that prepares children for the rapidly changing world. Children develop as creative problem solvers, both as individuals and as part of a team. They leave primary school competent in practical skills as well as having an understanding of aesthetic, social and environmental issues. This allows them to reflect and evaluate past and present design and technology, its uses and its impact and to demonstrate they have the cultural capital to become global citizens in an ever changing and technologically advancing world.