**Malpas Alport Primary School**

**Policy for Design and Technology**

**Introduction**

Design and Technology is the process of designing, making and evaluating products fit for a purpose or improving, refining and extending the use of existing products. It involves the creative application of knowledge, skills and understanding. Design and technology teaches children to become problem solvers as individuals and as part of a team. This subject combines practical skills with an understanding of aesthetics, social and environmental issues, function and industrial practices.

**Intent**

At Malpas Alport, **our Design and technology curriculum aims to** encourage children to think creatively and be critical in order to solve problems, both as individuals and as part of a team. We aim to encourage children to be risk-takers, and design and make products that solve real and relevant problems, whilst considering their own and others’ needs, wants and values. We aim to, wherever possible, link work to other subjects such as history, mathematics, science, engineering, computing and art. Through the evaluation of past and present design and technology, children develop a critical understanding of its impact on daily life and the wider world. We aim to enable children to understand how design and technology can impact the world by linking their learning to famous designers and engineers, to raise aspirations and cultural knowledge and understanding of our ever-changing world.

**By the end of EYFS children will be able to create a simple design for a basic product, use temporary methods to join materials together, know how to use scissors safely, and talk about their ideas, discussing what is good and what they would do to make their work better.**

**By the end of KS1 children will be able to design purposeful, functional and appealing products for themselves and others based on design criteria, and be able to develop and communicate their ideas through talking, drawing, templates and mock-ups. They will be able to select from and use a range of tools, equipment and materials to make their product. They will be able to build stable structures and explore simple mechanisms such as levers and sliders. Children will be able to say where food comes from and understand what hygienic means when preparing food. Children will be able to explore and evaluate a range of existing products, and evaluate their own products and ideas against design criteria.**

**By the end of KS2 children will be able to use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, and be able to develop and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams, exploded diagrams and prototypes. Children will be able to select from a wider range of tools, equipment, materials and components in order to make their product effectively. They will be able to apply their understanding on how to reinforce complex structures, include mechanical systems such as gears and pulleys, and use electrical systems in their products. Children will be able to apply the rules for basic food hygiene and other safe practices. They will be able to investigate and analyse a range of existing products, evaluate their work against their own design criteria, and understand how key events and individuals have helped shape the world in design and technology.**

**Vision**

**Our vision for Malpas Alport School is one of high standards, achieved through the creative aspects of the curriculum. The design and technology curriculum at Malpas Alport Primary prepares our children to be confident to deal with tomorrow’s rapidly changing world in a creative way. It encourages children to become independent, creative problem solvers and thinkers – both as individuals and as part of a team. Design and technology at Malpas Alport enables our children to identify the needs and opportunities offered by a product and to respond by developing a range of ideas and by making products and systems.**

**Our approach at Malpas Alport enthuses the children and leads to really exciting design and technology opportunities within the overall topic-based approach. Children are encouraged to value, appraise and evaluate work of their own, their peers and work of famous designers. As pupils progress, this helps them to be able to think critically and develop a more rigorous understanding of design and technology. Through the study and the evaluation of past and present design and technology, our children develop a critical understanding of its impact on daily life and the wider world.**

**The design and technology curriculum is structured into three main strands as derived from the National curriculum and within each strand children plan and design, make and evaluate whilst using the correct terminology and having a greater technical knowledge which is built upon each year. The three strands are;**

1. **Materials and textiles**
2. **Food and nutrition**
3. **Structures, constructions and mechanisms including electricity and technology**

**A unit of planning from each of the strands is in place for each year group which builds on previous learning and ensures progression in both skills and knowledge and understanding throughout the school. Our children are inspired to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. We encourage children to take risks and to be resourceful in their experiences and learning in Design and technology, which helps them become more resourceful and innovative.**

**Aims and objectives**

* Develop the knowledge, skills and understanding necessary to design, make and evaluate products for a purpose;
* Develop the practical skills to work with a wide range of materials and components;
* Develop the understanding of control systems, energy and structures;
* Help pupils acquire and develop skills and confidence to undertake investigation, problem solving and decision making.
* Provide opportunities for links with the wider curriculum including developing Literacy and Mathematics skills and use of ICT through the study and designing processes of Design and Technology

**Special Educational Needs and Inclusion**

Children with Special Educational Needs have equal access to DT. All children matter and are given every opportunity to achieve their best. We achieve this by planning a curriculum that will meet the needs of children with special educational needs, children who are more able, children with disabilities, children from all social and cultural backgrounds, and different ethnic groups.. This enables all children to be included happily.

 We meet the needs of all children by:

* providing resources that reflect diversity and are free from discrimination and stereotyping
* using a range of teaching strategies that are based on their needs
* ensuring access to every activity is safe

**Health and Safety**

In this subject the general teaching requirement for health and safety applies. We teach children how to follow proper procedures for food safety and hygiene. Teachers will always ensure safe use of tools and equipment as general good practice.