Quality Respect Love Happiness Equality

# Madley Primary School

‘Be the best you can be’

# Design and Technology at Madley Primary School

## Curriculum Statement

Our Design and Technology curriculum is inspiring, creative and practical. Drawing upon the children’s imagination and creativity, pupils design and make products that solve real and relevant problems. Children are taught to select and use appropriate tools safely and effectively in order to make a product. Children are taught to effectively evaluate in order to develop and improve processes and prototypes. Our Design and Technology Curriculum is embedded in our thematic approach to learning and cross-curricular links are strong.

## Intent:-

What Design and Technology looks like in our school:


- Children work individually, in pairs and groups to develop their skills in Design and Technology.
- A progression of the key design skills is used across the school evidenced in D&T books which will be transition through the year groups with the children.
- Children's interests are captured through topics in our Creative Curriculum, ensuring that links are made in a cross curricular way and giving children motivation and meaning for their learning.
- Evaluation is an integral part of the design process and allows children to adapt and improve their product- a key skill which they need throughout their life.
- Children understand and apply the principles of nutrition and learn how to cook.

By the end of EYFS pupils will:

- Represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and materials in original ways, thinking about uses and purposes.

By the end of Key Stage 1 pupils will:

- Design purposeful, functional, appealing products for themselves and other users based on design criteria.
- Select from and use a range of tools, equipment and materials to perform practical tasks.
- Explore and evaluate a range of existing products and their own designs.
- Develop their technical knowledge - build structures, exploring how they can be made stronger, stiffer and more stable.
- Explore and use mechanisms in their products.
- Use the basic principles of a healthy and varied diet to prepare dishes and understand where food comes from.

- <u>By the end of Key Stage 2 pupils will:</u>
- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.
- Generate, develop, model and communicate their ideas.
- Select from and use a wider range of tools, equipment, materials and components to perform practical tasks.
- Investigate and analyse a range of existing products.
- Evaluate existing products and their own designs and understand how key events and individuals in design and technology have helped shape the world.


- Build on their existing technical knowledge including applying their understanding.
- How to strengthen, stiffen and reinforce more complex structures; using mechanical systems and electrical systems and applying their understanding of computing to program, monitor and control their products.
- Understand and apply the principles of a healthy and varied diet
- Prepare and cook a variety of dishes understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

## Impact:-

This is how it works:

- Lessons are taught through thematic units of work delivered through the Dimensions Curriculum as well as some cross-curricular opportunities.
- The skills and techniques developed will be evidenced in D&T book which will transition up the school with the children.
- A progression document is used to ensure that previous knowledge and skills are built on.
- By the time the children leave Year 6, they will have explored and discussed a range of different designers and their work, focusing on the techniques used or the features designers incorporated in their inventions or products. The children will then have a chance to recreate and reimagine these into their own designs.
- As part of our Year 6 Enterprise project, the children: design, make and sell products
- All children will be given a chance to work on a range of different collaborative design projects and have their work showcased across the school and in the local community.
- Where appropriate, links will be made across the curriculum to create a more deep and meaningful design education, for example Forest School.
- Workshops or Design and Technology days relevant to specific topics may be used to immerse children in the design experience.
- Progressing through each year allows prior knowledge to be built upon and vocabulary to be developed.

This is what adults do:-

- Plan inspiring, progressive lessons which work on developing or acquiring design skills and techniques.
- Create a positive learning environment where children feel comfortable discussing and sharing their own and others work and suggesting positive feedback and ways to improve.
- Regularly monitor books, listen to pupil feedback and audit planning.
- Raise the profile of Design Technology within the school, using displays, design and technology days and running extra-curricular design technology clubs.

This is how we support:

- Work might be differentiated so that all children are able to meet the learning objective in activities suitable to their own individual needs.
- Offering a range of equipment and resources so that all children can make progress during a lesson, e.g. use of templates or guides, different tools etc.
- Small group/1:1 adult support given where required.
- We use teacher and self-assessment to quickly identify any child who requires additional support developing specific skills and techniques.
- These pupils will then receive additional support or resources to use in order for them to successfully meet the learning objective.

This is how we challenge:

- Children's lessons and activities will be differentiated.
- There will be additional activities to extend learning and further develop certain skills and techniques.

This is how we ensure all children can access the curriculum:

- Children who have SEN or EAL needs are introduced to specific subject relevant language prior to the lesson.
- Seating children alongside good role models to support one another or working in groups to enable children to discuss their design choices.
- By providing equipment and resources relevant to each individual child, e.g. templates, relevant vocabulary necessary for writing up design choices, writing frames.

## Implementation:-

You will typically see:

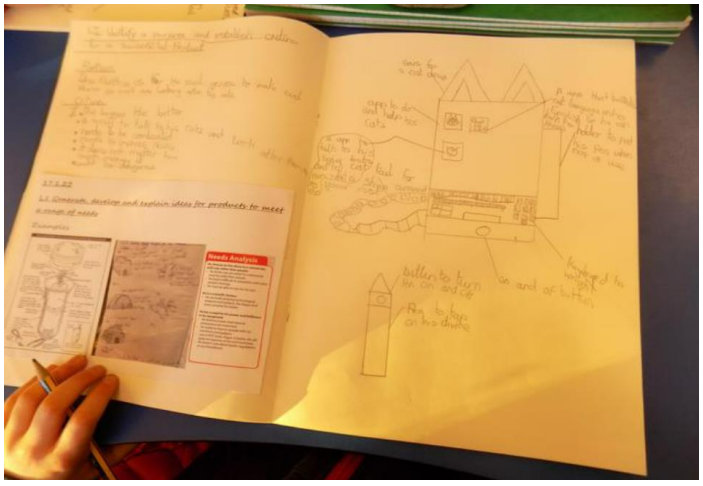
- Happy and engaged learners.
- Children posing questions about designs that they wish to research.
- A range of different activities including practical lessons, research lessons, showcase of inventions and evaluations of designs.
- Children able to self-reflect on their designs and the making process, finding both areas of success and evaluating areas of possible improvement.
- Displays around the school and showcases of children's designs.
- Confident children who are willing to persevere with skills and techniques they are developing.

This is how we know how well our pupils are doing:

- Marking and feedback by teacher and peers.
- Monitoring of progress.
- Photographic evidence.
- Assessment is tracked and entered onto our tracking system.
- Displays of work in classes.
- Book scrutiny, pupil voice and planning audits.
- Targeting both Teacher and Learning Assistant support during lessons to ensure progress of all children.

This is the impact of the teaching:

- Children who enjoy Design and Technology.
- Children who can confidently discuss their learning and progress in Design and Technology.
- Children who are able to showcase their developing skills and techniques by creating different products and inventions.
- Children who are resilient learners.
- Children who are prepared to share their learning they have acquired in a variety ways.
- Children who are able to apply the different design skills and techniques they have acquired to design innovative, functional, appealing products.
- Children who are inspired by the inventions and achievements of the designers they have learnt about.
- Children who aspire to becoming designers of the future.



## Cultural capital:-

Cultural capital can be defined as powerful knowledge. Knowledge that is one of the key ingredients a child will draw upon to be successful in society, their career and the world of work. Cultural capital gives a child power. It helps them achieve goals, become successful, and rise up the social ladder without necessarily having wealth or financial capital.

Powerful subject knowledge in Design and Technology:

- The Design Technology curriculum.
- Design and Technology units related to food preparation and nutrition.
- The knowledge of how and why children need to take care of their personal health and wellbeing.
- The knowledge of how to use tools and equipment safely in Design Technology.
- The knowledge of local, national and worldwide inventions and their importance to society.
- The knowledge of famous designers and how their products have affected the world today.

Powerful personal knowledge in Design and Technology:

- The celebration of achievements in Design and Technology.
- Visits linked to specific Design Technology topics.
- Highlighting the relevance and transferability of D&T for students' daily and future lives.
- Learning about the importance of a healthy, balanced diet.
- Learning how to cook a nutritious meal.
- Understanding the opportunities that are available in the future to allow them to become life-long learners.