

Design and Technology Subject Policy

Milton Road Primary School



Where Learning is an Adventure

INTENT

“We want our children to be happy and healthy today, fulfilled in the future and able to make their world an even better place.”

At Milton Road Primary School, we seek to ensure that Design and Technology (D&T) enthuses and stimulates children to take part in the development of our rapidly changing world. We believe that the subject encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team.

The iterative design process is fundamental. This encourages children to identify real and relevant problems, critically evaluate existing products, then take risks and innovate when designing and making. As part of the iterative process, time should be built in to reflect, evaluate and improve on prototypes using design criteria throughout to support this process.

We aim for opportunities must be provided for children to evaluate key events and individuals who have helped shape the world, showing the real impact of design and technology on the wider environment. This will help to inspire children to become the next generation of informed consumers and potential innovators and to ‘make their world an even better place’.

The national curriculum and Milton Road DT aims to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- Critique, evaluate and test their ideas and products and the work of others
- Understand and apply the principles of nutrition and learn how to cook.

IMPLEMENTATION

For planning, we have used the Projects on a Page scheme and made adaptations to ensure cross curricular links where possible.

Our D&T curriculum is based on the six essentials of good practice. These are in place in teachers' planning so that children's learning is genuinely design and technological in nature. They are consistent with the new National Curriculum requirements and should be applied whenever children are making products:

- **User** – children should have a clear idea of who they are designing and making products for, considering their needs, wants, interests or preferences. The user could be themselves, an imaginary character, another person, client, consumer or a specific target audience.
- **Purpose** – children should know what the products they design and make are for. Each product should perform a clearly defined task that can be evaluated in use.
- **Functionality** – children should design and make products that function in some way to be successful. Products often combine aesthetic qualities with functional characteristics. In D&T, it is insufficient for children to design and make products which are purely aesthetic.
- **Design decisions** – when designing and making, children need opportunities to make informed decisions such as selecting materials, components and techniques and deciding what form the products will take, how they will work, what task they will perform and who they are for.
- **Innovation** – when designing and making, children need some scope to be original with their thinking. Projects that encourage innovation lead to a range of design ideas and products being developed, characterised by engaging, open-ended starting points for children's learning.

- **Authenticity** – children should design and make products that are believable, real and meaningful to themselves i.e. not replicas or reproductions or models which do not provide opportunities for children to make design decisions with clear users and purposes in mind.

Children will complete three D&T projects every year in which they will design, make, evaluate and develop technical knowledge. During each project the children will follow this teaching sequence:

- Introduction and recap of new and existing vocabulary (this will include a glossary in all year groups and a diagram to support understanding in KS1)
- Investigate and evaluate existing products
- Focus task based on the skill for each project
- Design criteria (with clearly labelled diagram and ‘what I will need’)
- Prototype and testing
- Making final product
- Evaluation (including ‘others think my design is...’ in KS2)

EYFS

The EYFS curriculum at Milton Road has been designed using the 7 educational programmes identified within the EYFS Statutory Framework. The progression of knowledge and skills are delivered through a combination of adult directed learning during whole class inputs, enhancements, challenges and activities as well as child initiated through access to an ever evolving provision. Design and Technology promotes learning and development in Communication and Language, Physical Development, specifically Fine Motor Skills, as well as Express Arts and Design. Also through continuous provision and a well-resourced creative station, loose parts in the small world and constructions areas inside and outside children in EYFS are encouraged to ‘have a go’, observe, explore and be curious.

Links to the curriculum

The teaching of D&T is closely integrated with other areas of the curriculum, these subjects are often used to enhance children’s skills and background knowledge in preparation for each project. For example, in Year 3, children design and make pyramids as part of their History topic on Ancient Egypt. While in Year 4, they make lighthouses following their Science unit on electricity. Textiles projects in Years 1, 4, and 5 build upon skills developed in earlier years, with additional recapping of skills through the Art curriculum in Year 3. In addition, each year group undertakes a food-based project every year, which supports our PSHE curriculum's emphasis on healthy eating and lifestyle choices. Our pupils also benefit from our unique Cambridge Connected Curriculum. In D&T, this includes a visit from a local pizza entrepreneur in Year 6, growing seasonal vegetables in Year 2, and taking a walk to a local food shop in the EYFS to purchase ingredients for their soup project.

Link Governor

There is a link governor for Design and Technology whose name is Ben Sillis, the subject champion and link governor work closely together and meet regularly to discuss opportunities with D&T at Milton Road

Health and Safety

A risk assessment for DT activities has been carried out and maintained each year by the subject champion to highlight, plan for and mitigate potential hazards. CLEAPSS Primary is used to support staff on how best to use high quality practical work to support children learning. Staff will carry out risk assessments when planning practical activities. Risks are not only highlighted to the children, but pupils are taught how to take action to control the risks for themselves by recognising the hazards and taking steps to reduce the danger.

Professional Development

Professional development for staff is addressed through the use of INSET and strategic support enabling improvement to take place. This may be led by the DT subject leader or by an external provider. Staff are given the opportunity to highlight professional development needs within their performance management and this may include DT training.

Resources

The class teachers are responsible for ordering, replacing, updating and storing resources for all the units addressed by their year groups from the general DT budget. The

IMPACT

At Milton Road Primary School, we assess children into 3 groups: greater depth, at expected or working towards expected. Teachers assess children at the end of each unit, according to the National Curriculum and the skills covered in the project. We track pupil attainment and progress on Insight Tracking.

The children are encouraged at the end of each unit to evaluate their own and others' work, suggesting steps for improvement. We collect photographs of the children's work so that coverage and progression can be monitored over a longer period of time in their DT books.

Monitoring and review

Teachers have a responsibility for evaluating the effectiveness of their own classroom teaching on a day to day basis.

The subject leaders are committed to effective monitoring and improvement cycle to inform development in science. This will include book scrutinise, lesson observations, learning walks, pupil voice and surveys.

The subject leader is also responsible for supporting their colleagues in their teaching and for being informed about current developments in the subject. The subject leader seeks to provide a strategic lead and direction for science in the school.

Policy Review

This policy will be reviewed at least every two years.