



LATCHMERE
ACADEMY TRUST

Design & Technology Policy

October 2021
To be reviewed September 2022

NB: Throughout this document Latchmere Academy Trust may be abbreviated to "LAT"

The Importance of Design Technology

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, 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. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation. We want our pupils to recognise that good design and engineering can help to solve some of the most important global issues of our time and in the future.

Aims and Objectives

Intent - What are we trying to achieve?

By the teaching of design technology, we aim to provide relevant experiences to help develop children's interests and skills to enable them to better understand and access our ever-changing world.

Specific aims that will be employed are:

- To develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- To 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
- To critique, evaluate and test their ideas and products and the work of others
- To understand and apply the principles of nutrition and learn how to cook.

Teaching and Learning

Implementation – How is the curriculum being delivered?

EYFS

Children are encouraged to find out about the technological world through investigative activities and play. Through this, children are able to develop the crucial knowledge, skills and understanding to help them make sense of the world. Through cross-curricular planning activities are provided which allow children to make for a purpose. Children are encouraged to think imaginatively and to talk about what they like and dislike when designing and making. They learn how to use tools safely and correctly, modelled by the adults around them. Design technology falls under the Understanding the World and Expressive Arts and Design.

KS1 and KS2

When appropriate, Design and Technology lessons are taught as part of a half-termly topic, which links with other areas of the curriculum: history, geography and art & design. We recognise, however, that Design and Technology is often best taught in discrete lessons to ensure the knowledge, skills and understanding is secure.

We use the Kapow resources to support our curriculum and meet the national curriculum programme of study for Design and Technology. The curriculum objectives are divided into strands: Cooking and Nutrition, Mechanisms, Structures, Textiles, and Electrical Systems. The curriculum has been divided into year group objectives, presented on a subject progression map. All strands are taught within each phase (KS1, LKS2, UKS2), apart from Electrical Systems which only applies to KS2. This ensures that pupils are provided with a good balance of the D & T curriculum throughout their schooling at Nelson. Planning and teaching are supported by the Kapow resources, which are designed by expert teachers but adapted as necessary by teachers at Nelson.

A Design and Technology Progression Map has been created to outline the curriculum objectives that will be taught in each year group, as well as the key vocabulary to be learnt, and the opportunities to develop cultural capital. Pupils will have opportunities to use a variety of resources and use our outdoor environment (particularly in the Early Years setting) to support and inspire their learning. Pupils will be given feedback for each piece of work (written or oral) so that they can make rapid and sustained progress over their school life.

Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. At Nelson we have a children's kitchen for EYFS and another for Primary.

Organisation, Special Educational Needs and Entitlement

Design and technology is usually taught weekly in a lesson lasting one hour. Sometimes it is more appropriate to block periods of time so that the making of a product is concentrated into one or two weeks. The overall length of time spent on a termly project will be in line with the new creative curriculum. The practical activities are carried out in classrooms and food technology in the the EYFS kitchen and Primary Kitchen: with due regard to the safety guidelines published in RBK's Guidelines for Technology and hygiene.

In design and technology lessons children are encouraged to challenge the stereotyped roles of men and women. Where possible, both male and female teachers are seen working on mechanical and constructional tasks and working with food and textiles. The subject develops children's cultural awareness and understanding and leads children to appreciate the value of differences and similarities. It leads to an understanding that all people are equal regardless of age, race, gender or ability and that there need to be alternative solutions to meet the needs of individuals and groups of people.

Differentiation is by outcome and additional adult support. All children work on the same design- and- make task but will learn more or less in doing so, according to ability. Design and technology activities enhance the special educational needs provision within the school as it provides further opportunity to develop hand eye co-ordination, develop fine motor skills and to encourage socialisation.

Assessment and Record keeping

The class teacher may photograph examples of pupils work as evidence of learning.

Cross-curricular and extra-curricular links

DT opportunities are often available through Mantle of the Expert teaching. Classrooms can be a designers' studio / a factory/ an advertising agency, etc. All promote creative thinking skills, questioning and problem solving. Finished artefacts are often a by-product of Mantle work.

Children may have the opportunity to make and wear costumes for whole school events, such as Christmas and End of Year productions.

Children will be encouraged to:

- Apply scientific skills *e.g. predicting and fair testing.*
- Apply mathematical skills *e.g. measuring to an appropriate number of decimal places, drawing and interpreting tables, graphs and bar charts.*
- Apply ICT skills, *e.g. making things happen by use of control, handling information through the use of a database or spreadsheet.*
- Apply art skills, *e.g. investigating texture and colour, sketching and formal drawing.*
- Read non-fiction texts and extract information, determining what has value and what does not *e.g. from reference books and the Internet.*

Use of Computing

Where appropriate, planning will incorporate the use of computing through the use of software, digital cameras, internet and other control peripherals.

Health and Safety

- At all times, the teacher should consciously question and check the safety of the activity and any tools to be used. Classroom organisation and spacing are a significant issue.
- All tools should be used under adult supervision. Children are to be informed of health and safety guidelines and encouraged to look out for and report potential hazards whilst they are working.
- Children are not to use the school glue guns as they become extremely hot. Children in Years 5 and 6 may use the 'low temp' glue guns under adult supervision. Teachers to check with DT leader if they are unsure or access current advise.

- When handling food, all preparation and cooking areas must be cleaned – following hygiene rules and guidance. Many of the cleaning products are available from the Premises team.
- Children and adults should wear aprons, wash hands and tie long hair back.

Care of Equipment

Most equipment such as glue guns and saws, are stored in designated cupboard areas. Teachers have a responsibility to collect all the equipment needed prior to lessons and return to the correct position in a neat organised fashion, ready for the next class. Children are to be encouraged to treat tools and materials with respect during the lesson and tidy away neatly. When using electrical equipment, care must be taken to position wires away from paths or wet areas.

Resources

All general equipment or consumable resources are kept in a designated cupboard. Specific year group resources maybe kept in classrooms. The drawers and shelves within the cupboards are labelled. Pupils must not be given permission to collect materials unless they have consulted with an adult.

Impact - What difference is the curriculum making?

Pupils are able to develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They 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. Pupils critique, evaluate and test their ideas and products and the work of others. Pupils are able to understand and apply the principles of nutrition and learn how to cook - an essential life skill!

Design and Technology will promote British Values by contributing to the creativity, culture, wealth and well-being of the nation.

Design and Technology will help pupils develop a Growth Mindset by encouraging the children to take risks, become resourceful, be innovative and imaginative.

Design and Technology will promote the pupil's spiritual, moral and social and cultural development by evaluating past and present design and technology and developing a critical understanding of its impact on daily life and the wider world.