Moorside Primary School

Design and technology policy

MOORSIDE PRIMARY SCHOOL

PURPOSE, VISION & VALUES

Our Purpose

Moorside Primary is a school at the heart of our diverse community in the West End of Newcastle.
We pride ourselves in being a caring school community where everyone is welcome.
We strive to deliver an outstanding education for all our children.
We help everyone to become caring and active citizens
We encourage everyone to thrive and achieve their full potential.

Our Vision

We want everyone in our school to work together to make us as good as any school can be.
We want to create new opportunities for everyone to succeed.
We want to create a culture which broadens all of our horizons.
We want everyone to be able to tackle the challenges we will face in an ever changing world.
We want all of our children to effectively engage with each other and with our community.

Our values

We all believe that

Our local community deserves a school they can be proud of
We are a caring community where everyone is welcome
We all value, respect and support each other
Our community has the right to be safe and healthy.
Our children should have the chance to enjoy and be enthused by their time in our school

We all work together to make sure that

Everyone always tries their best and take pride in all that they do
Everyone demonstrates good manners at all times
Everyone respects each other and show consideration
Everyone respects and cares for our environment and resources
Everyone celebrates each other's successes and achievements

Purpose of study

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.

Aims

The national curriculum for design and technology 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

Early years

In the foundation stage, design and technology plays an important role in the curriculum through the knowledge and understanding and creative aspects of the early learning goals. This supports all pupils to be able to develop the ability to:

➢ show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones
➢ show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images
➢ use various construction materials
➢ begin to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces
➢ join construction pieces together to build and balance
➢ realise tools can be used for a purpose
➢ selects tools and techniques needed to shape, assemble and join materials they are using

Key stage one

Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an interactive process of designing and making. They apply skills and understanding linked to a range of relevant contexts for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment.

When designing and making, pupils will be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria
- use increasing technical knowledge and vocabulary
- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products

Key stage two

Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an interactive process of designing and making. They apply skills and understanding linked to a range of relevant contexts for example, the home, school, leisure, culture, enterprise, industry and the wider environment.

When designing and making, pupils will be taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world
- use increasing technical knowledge and vocabulary
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures

- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products

Cooking and nutrition

As part of the work with food, pupils will be taught how to cook and apply the principles of nutrition and healthy eating. 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.

In the Foundation Stage - Nursery and Reception - the curriculum is guided by the Early Learning Goals which lead directly into the National Curriculum.

In key stage one pupils will be taught to:

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from

In key stage two pupils will be taught to:

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

Planning

Planning is undertaken at three levels.

Long term planning:
- details the content and coverage of design and technology for the academic year across all stages on a termly basis
- is progressive across school to avoid unnecessary repetition
- includes special events, visits, visitors, cross-curricular opportunities are identified

Medium term planning:
- each year group identifies specific skills to be taught alongside content, ensuring breadth and depth

Short term planning:
- lessons are planned for and taught on a weekly basis
- lesson plans detail learning objectives, delivery, resources, use of adult support, key vocabulary
- based on assessment for learning, the sequence of lessons will be adapted accordingly based on ongoing individual needs

At Moorside we recognise the importance of establishing a secure foundation in design and technology and of teaching and using vocabulary appropriate to the task. We endeavour to set work that is challenging, motivating and which encourages the pupils to talk about what they have been doing.

Assessment

Design and technology assessments are purposeful and designed to inform and shape the future learning, allowing progression for all pupils. Assessment for learning is continuous throughout the planning, teaching and learning cycle. It is carried out in a variety of ways including observing pupils in their learning and questioning, discussing and listening to pupils.

Reporting

All parents receive an annual written report that includes a summary of their child's progress in design and technology over the year.

Equality and Inclusion

We ensure that all pupils have the opportunity to gain and develop their knowledge, skills and understanding. Our expectations do not limit pupil achievement. Design and technology is taught in a broad global and historical context. It is valued as a vehicle for the development of language skills by encouraging pupils to talk constructively about their experiences and observations. Where appropriate, design and technology is linked to English, mathematics and history. We develop all pupils' enquiry by encouraging the ability to ask questions and critical thinking.

Date to be implemented	May 2019
Date to be reviewed	April 2020