Design Technology at Eleanor Palmer

Early Years and Key Stage 1

Design Technology Teaching and Learning at Eleanor Palmer

There are two elements in our DT work: Classteachers use the DT Association Scheme working from projects linked to the National Curriculum and weaving them into termly topics where possible.

We also use external experts to develop skills and to lead special projects in each year group.

We are a STEAM school and as such are part of the Camden STEAM Hub: work with the Crick Institute and the Wellcome Institute. Where possible we connect our DT with science, computing and art.

Every Spring term there are two major events that bring together all our pupils' design skills. Firstly, taking part in the Young Engineer Award. Over three years we have had many finalists and 3 overall London regional winners. We set up meeting with engineers and the challenge is then to design and explain something that will make a positive change to their own, others' or global lives.

Secondly, our annual Egg Race (now in its 18th year) in which children design an 'egg-mobile' to transport an egg the length of the school hall. This is a highlight of the school year.

Early Years

Exploring and using media and materials: children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Being imaginative: children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role-play and stories

Nursery Key learning

Understand enclosing a space and use them to represent objects.
Construct using variety of materials
Begin to use tools for a purpose

ENRICHMENT

Visiting architects

Reception Key learning

Constructing with a purpose in mind
Experiencing a variety of materials
Using simple tools and techniques safely
Select resources independently

ENRICHMENT

Work alongside our artist in residence Kally creating 3D structures

Key Stage 1

When designing and making, pupils should 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

TECHNICAL KNOWLEDGE

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.

COOKING AND NUTRITION:

use the basic principles of a healthy and varied diet to prepare dishes

understand where food comes from

Year 1 Key learning

MECHANISM - Sliders and Levers

TEXTILES - Templates and Joining Techniques

FOOD - Preparing Fruit and Vegetables

ENRICHMENT

Spring - Engineering Award and Egg Race

Year 2 Key learning

MECHANISM - Wheels and Axles
- make a car

STRUCTURES - Freestanding Structures

FOOD - Preparing Fruit and Vegetables

Design Technology at Eleanor Palmer

Key Stage 2

KEY STAGE 2

When designing and making, pupils should 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

TECHNICAL KNOWLEDGE

- 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:

Understand and apply the principles of a healthy and varied diet

Prepare and cook a variety of predominately savoury dishes using a range of techniques

Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Year 3 Key learning

MECHANISM
- Levers and Linkages

STRUCTURES
- Shell Structures

FOOD
- Understand seasonality and how indigenous crops grow

ENRICHMENT

Bernadette - gardening
Growing and harvesting EP allotment

ENRICHMENT

Work alongside our artist in residence Kally creating 3D structures

Spring - Engineering Award and Egg Race

Year 4 Key learning

ELECTRICAL SYSTEMS
- Simple Circuits and Switches

STRUCTURES
- 2D/3D Structures

FOOD
- Healthy and Varied Diet

ENRICHMENT

Project with Mike Vanis engineer

ENRICHMENT

Automaton workshop with Stephen Guy

Year 5 Key learning

MECHANICAL SYSTEMS
- Axles and Cams

TEXTILES
- Combining different fabric strips

FOOD
- Celebrating culture and seasonality

Year 6 Key learning

STRUCTURES
- Frame Structures

MECHANICAL SYSTEMS
- Pulleys and Gears. Create a moving car.

FOOD
- Understand seasonality and principles of organic farming

ENRICHMENT

Residential at Wick Court Organic Farm

INTENDED OUTCOME BY THE END OF YEAR 6

Children will leave EP as keen makers. They will be able to design, make and evaluate a project with a specific purpose. They will be able to use a range of tools and materials and make use of current technologies in their designs.