



## Design & Technology Policy

“The nature of design and technology is such that it should provide opportunities for pupils to engage in activities that are challenging, relevant and motivating. This should give pupils enjoyment, satisfaction and a sense of purpose.” (DATA Primary Guidance, p4)

### Introduction

At Silvertree Primary School & Nursery we are committed to providing all children with learning opportunities to engage in design technology. Our planning and practice is based on the National Curriculum for Design Technology.

### Value of Design and Technology

We believe design and technology is about designing and making products for a specific user and purpose. It involves children in learning about the world we live in and developing a wide range of knowledge and skills through designing and making. It helps children to think through problems creatively, about how to organise themselves and how to use knowledge and skills to bring about change and to shape the environment. Through design and technology children become discriminating and informed users of products and become innovators.

### Aims of Design and Technology

We believe Design and Technology offers opportunities for children to:

- Develop their capability to create high quality products through combining their designing and making skills with knowledge and understanding;
- Develop a sense of enjoyment and pride in their ability to make;
- Nurture creativity and innovation through designing and making;
- Develop an interest and understanding of the ways in which people from the past and present have used design to meet their needs.

In the Early Years Foundation Stage we provide opportunities for children to:

- Develop a curiosity and interest in the designed and made world through investigating, talking and asking questions about familiar products;
- Develop confidence and enthusiasm through frequent exploration of construction kits to build and construct objects, and activities for exploring joining, assembling and shaping materials to make products;
- Extend their vocabulary through talking and explaining about their designing and making activities.

## **Implementing Design and Technology**

Design and technology will be taught for 8-12 hours each term, depending on the project being undertaken.

Each design and technology project will be taught weekly, in half term blocks or during Design and Technology mornings/ afternoons/ days, dependant on the needs of the project being worked on.

### **Planning**

The D&T Association's Projects on a Page scheme of work provides the framework for learning and teaching in design and technology. (See long term plan in appendix).

- One project is planned and undertaken each term.
- Colleagues should use the project planners in the scheme imaginatively, whilst ensuring the learning objectives remain the same in order to ensure progression.
- In the EYFS, daily design and technology activities are planned; some initiated by the children and some led by adults.
- Children in their designing and making will apply knowledge and skills of: textiles, food, mechanisms, mechanical systems and structures. Electrical systems are taught in KS2.
- Every year group to do a food project per year.
- All design, make and evaluate assignments provide learning opportunities for developing creativity through designing skills such as generating, exploring, modifying ideas through drawing, modelling with materials and problem solving.
- All projects should include the three types of activity:
  - Investigative and Evaluative Activities (IEAs) where children learn from a range of existing products and find out about D&T in the wider world;
  - Focused tasks (FTs) where they are taught specific technical knowledge, designing skills and making skills;
  - Design, make and evaluate Assignments (DMEA) where children create functional products with users and purposes in mind.

### **Links with other subjects and key competencies**

- We believe design and technology provides a natural opportunity for children to practice and improve basic skills such as spoken language, English and mathematics.
- In our design, make and evaluate assignments we aim to provide learning opportunities for developing key competencies such as problem-solving, teamwork, negotiation, consumer awareness and organisation.
- One project each year will have an opportunity to engage in team or group work in Key Stage 2.
- Through evaluating the process and their final products children will be encouraged to improve their own in Key Stage 2.

- Children develop and apply knowledge and skills from art and design, science, computing and English in design and technology. Teachers will make links wherever possible to help raise standards in both subjects and enhance children's learning.
- The school curriculum map indicates how relevant subjects are grouped together with design and technology; specific links are made with science.
- Design and technology is used to raise children's appreciation of British Values.

### **Computing**

- Programming and control is used in electrical systems projects in Y4 and Y6 to operate children's products.
- Paint software is used for finishing techniques and simple paper pattern making in textile projects.

### **Extending the curriculum**

- Children should develop an understanding of the design and made world through first-hand experience.
- Wherever possible children will be given opportunities to visit local museums, shops and restaurants and meet with designers, engineers, chefs, architects and students from college or secondary schools.

### **Organisation**

All class teachers will have responsibility for planning and teaching D&T to their classes.

### **Inclusion**

- A wide range of cultural images and contexts will be used in design and technology, and we will use these opportunities to challenge stereotypes.
- For all children to produce their best, we plan differentiated resources and tasks through:
  - adapted worksheets;
    - changing the demands of a task;
    - more limited choices;
    - greater teacher intervention, small group work and teaching assistant support;
    - ensuring manipulative skills needed are manageable;
    - selecting appropriate tools and equipment.
  - Talented or able children are challenged through more demanding tasks such as more open-ended design briefs, rigorous testing of their products, carrying out independent research, giving additional responsibilities such as leading a team.
  - A design and technology club is held each term for those who show a particular aptitude or enthusiasm.

### **The learning environment**

- We aim to provide a learning environment where children feel secure and creative risk-taking and problem solving is encouraged and children's design ideas and suggestions are valued.

### **Assessment, recording and reporting**

- The design and technology subject leader will collect selected examples of children's work from the projects in our scheme of work Project on a page. The examples will be used for identifying progression and expectations.
- Children in Key Stages 1 and 2 will keep sketches, plan drawings, paper mock-ups, notes and evaluations in a process diary. These can be used for assessment purposes and for monitoring progression.
- Teachers make notes at the end of projects on children who were significant above or below expectations set out in the project planners; this will inform future planning.
- Children are encouraged to make personal assessments of their own work through evaluating activities and identifying what they need to do to improve.

### **Management and organisation of resources**

- The design and technology subject leader will order consumable resources towards the end of each term for specific planned projects. A request for alternative or additional resources can be made at this time.
- The consumable resources are stored centrally in the Art /DT cupboard. Teachers will have access to supporting materials from the subject leader: help sheets, exemplar models, power points, worksheets and products for investigation, posters and photographs.
- Teachers are asked to check that supporting materials are complete prior to returning them.
- An audit of consumable materials such as masking tape and PVA glue will be completed and given out to teachers at the beginning of each academic year.
- Tools and equipment such as glue guns, wire strippers, hacksaws, bench hooks and snips are kept centrally and are safety checked annually and replaced when required.
- Craft knives and cutting mats are kept in the DT Cupboard
- Food will be bought and used on the day it is needed.
- Utensils and equipment for food will be stored in the kitchen or in the DT cupboard.

### **Health and safety**

- Risk assessments will be carried out prior to design and technology projects.
- Teachers will always teach the safe use of tools and equipment and insist on good practice.
- Children will be taught how to take steps to control risks.
- Glue guns will be used by Key Stage 2 children under supervision, only when there is no other appropriate joining technique.

### **Food – hygiene and safety**

- A trained teaching assistant will support with work on food. He or she will ensure all equipment is clean and in working order. Plastic aprons will be worn by adults and children working with food. Adults and children will always follow the preparation and cleaning routine that is displayed in the food utensils cupboard.
- Prior to food activities, children who are not permitted to taste or handle food products or ingredients will be identified.

### **Role of the design and technology subject leader**

The subject leader will:

- Inspire learning through bringing design and technology alive for our children;
- Monitor and evaluate the learning and teaching of design and technology within the school;
- Devise an action plan to show future developments and review progress;
- Provide specialist support and guidance to colleagues on teaching projects and planning;
- Purchase and organise resources and maintain equipment to make them easily accessible for colleagues;
- Attend courses and cluster meetings for CPD and report back to staff;
- Explore ways to raise the profile of design and technology within school and make links with local businesses;
- Encourage parents to be involved in their children's learning in design and technology.

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Mr C. Dhiman

D&T Subject Coordinator