



# Bright Futures

EDUCATIONAL TRUST

The best *for* everyone, the best *from* everyone

## Elmridge Primary Design Technology POLICY

Policy Version			
Date	Document Version	Document Revision History	Document Author/Reviser
June 2020	1	A new policy to reflect schools' vision	Helen Bridge
June 2021	2	Amended reference to The Dunham Trust	Helen Bridge

This policy will be reviewed every 12 months in light of local and Government legislation.

## School Mission and Aims

*"Empowering children to shape the world of tomorrow"*

Elmridge strives to ensure that all its pupils meet their full academic, social, emotional and physical potential through building solid foundations during this first chapter of their lifelong learning journey.

Our goal is to develop confident, understanding, global citizens with a love of learning and respect for each other and the world around them.

## **Elmridge Curriculum Aims**

- Enable pupils to build essential knowledge and skills within each subject and provide opportunities for them to use and apply what they have learnt across other subjects
- Develop pupils' confidence, leadership, resilience and enjoyment of learning through inspiring learning experiences
- Support and encourage pupils to establish good routines to help them maintain good physical and mental health now and into the future.
- Develop pupils' awareness of current national and global issues and understand their locality in the context of the wider world
- Develop pupils' moral values and spiritual awareness
- Develop pupils' understand of the relevance of their learning, how their learning could be built upon in the next stages of their education and awareness of careers where their knowledge and skills could be applied

## **Design Technology**

Through a variety of creative and practical activities, pupils at Elmridge will be taught the knowledge, understanding and skills needed to engage in an interactive process of designing and making. They will work in a range of relevant contexts and children will be taught how to design, make and evaluate. Over the course of their primary schooling they will develop a bank of technical knowledge.

Design Technology at our school develops children's skills and knowledge in design, architecture, mechanisms and mechanical systems, textiles, cooking and nutrition, programming and electronics, electrical systems and structures.

Our curriculum will allow pupils to become self -motivated and confident learners, who can work independently and as part of a team. We aim to ensure that learners develop technical and practical competencies as well as the wider skills valued by employers. Our main priority is for learners to be problem solvers who are not afraid of making mistakes. Each unit of work will begin with a design question which will enable pupils to use analytical and investigation skills to solve the challenge they have been set.

Through our innovative curriculum we want children to be passionate to want to become tomorrow's designers and engineers. Every unit of work links to a designer, engineer, chef or textile designer to highlight to pupils how the skills we are teaching them can be a future career.

Cooking and Nutrition is an integral part of our Design Technology curriculum at Elmridge. It is our aim through cooking at school, children will learn an essential life skill and become competent cooks. Each year group, will spend six weeks a year learning the theory in the classroom as well as practical lessons in our purpose built kitchen facility. Children will learn new skills but will also gain a greater understanding about why food is so important to our health.

## Curriculum Intent

Our curriculum aims to inspire children through a broad range of practical experiences to create innovative designs which solve real and relevant problems within a variety of different contexts. The iterative design process is fundamental throughout our curriculum and is a central thread from Y1 up to Y6. This iterative process encourages children to identify real and relevant problems, critically evaluate existing products and then take risks and innovate when designing and creating solutions to the problems. As part of the iterative process, time is built in to reflect, evaluate and improve on prototypes using design criteria throughout to support this process. Each unit of work starts with a real designer who has helped shape the world, showing the real impact of design and technology on the wider environment and helping to inspire children to become the next generation of innovators. The Design Technology curriculum aims to shape tomorrow's engineers and designers through developing inventing, creating and evaluating skills.

## Early Years

Within the Early Years Foundation Stage, design technology is included as part of Physical Development, Understanding the World and Expressive Arts and Design. At Elmridge Primary School, we give children opportunities to develop design technology skills as soon as they begin their journey with us. This is achieved through continuous provision areas within the classroom as well as some dedicated topics. This curriculum lends itself to an integrated approach to learning. Nursery and Reception teachers plan quality learning opportunities for design technology using the Early Years Curriculum. There is an emphasis on independence and self-initiated learning, which enables foundation stage children to freely explore resources and pursue their own creative interests and talents in addition to the planned learning experiences.

The Early Learning Goals which are linked to Design Technology:

- To handle equipment and tools effectively, including pencils for writing;
- To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;

- To 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 technology, art, music, dance, role play and stories.

## Key Stage 1

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They will work in a range of relevant contexts.

At the end of Key Stage 1 most pupils will be able 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.

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.

## Key Stage 2

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They will work in a range of relevant contexts

By the end of Key Stage 2, most children will be able 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.

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.

- Throughout every key stage at ElmrIDGE, at least one cooking and nutrition unit will be taught in every year group. We feel this element of the curriculum is a fundamental life skill which will benefit our learners in the future.

## **Curriculum Implementation**

### **Teaching and Learning**

*We use a variety of teaching and learning styles in order to develop children's knowledge, skills and understanding.*

*Across our school, each Design Technology unit of work begins with studying a relevant, real life designer linked to the project being taught. This aims to inspire children at ElmrIDGE to want to become future designers. Each project also begins with a design question, which gives children the opportunity to develop problem solving and analysis skills so we can shape tomorrow's engineers and designers. Throughout key stages, skills, prior knowledge are constantly being revisited and consolidated. The revision and introduction of key vocabulary is built into each lesson. This vocabulary is then included in display materials and additional resources to ensure that children are allowed opportunities to repeat and revise this knowledge. Through our lessons, we intend to inspire pupils and practitioners to develop a love of Design and Technology and see how it has helped shaped the ever-evolving technological world they live in.*

### **Long Term Planning**

- details what is to be taught over the year
- provides teaching guidelines and overall objectives for each year group for the whole year

### **Medium Term Planning**

- organises the subject into termly or half-termly sections
- is more detailed and the objectives are more specific in nature
- is developed by the teachers, who respond to the needs of their pupils
- ensures a balanced distribution of work is undertaken across each term

### **Inclusion**

Elmridge Primary school is an educationally inclusive school as we are concerned about the teaching and learning, achievements, attitudes and well-being of all our pupils. We aim to provide places for all pupils who express a preference to join this school. We work hard to offer equality of opportunity and diversity to all groups of pupils within school such as children:

- from both sexes;
- who have Special Educational Needs;
- who are looked after;
- from minority faiths, ethnicities, travelers, asylum seekers, refugees;
- who are gifted and talented;
- who are at risk of disaffection;
- who are young carers;
- who are sick;
- who have behavioural, emotional and social needs;
- from families who are under stress

We believe we have a duty to ensure that all children have equal rights to the opportunities offered by education and that all children will be encouraged to fulfil their potential in their academic, physical and creative achievements. We want to give all children the right to access high quality educational experiences, to take part in a broad and balanced curriculum and to be part of the social life of the school.

We recognise that within the school we have more-able, gifted and talented children. We believe that:

- more-able children demonstrate a higher ability than average for the class and often require differentiated tasks and opportunities to learn through challenges;
- gifted children are those who have the ability to do well in more than one subject;
- talented children demonstrate an innate talent or skill in creative, cultural or sporting fields

We have an even greater obligation to plan and deliver well-structured lessons with appropriate assessment plus ambitious targets for pupils who have low levels of prior attainment or come from disadvantaged backgrounds.

Also, we have a duty to cater for pupils whose first language is not English by planning teaching opportunities to help them develop their English and to gain full access to the National Curriculum.

## **Differentiation**

Differentiation is best defined as 'the process by which differences between learners are accommodated so that all students in a group have the best possible chance of learning.'  
(Geoff Petty)

The main purpose of differentiation is to challenge and raise standards of learning by ensuring that curriculum objectives are accessible to all our children despite their backgrounds or abilities. We see differentiation as a form of integration and not exclusion.

Differentiation must reflect the learning objective and can be achieved in a variety of ways either by task, by support or by outcome and should be chosen by fitness for purpose.

At Elmridge Primary School we want children to achieve success, therefore we will ensure they are given differentiated tasks that are matched to their level of attainment so that they can demonstrate successfully what they know, understand and can do.

The main feature of effective differentiation is good planning resulting in effective teaching and learning with children making good progress. Also we expect to see in design technology sessions interested well motivated children responding to challenges, children working productively on task and being aware of their own progression.

## **SEND**

At Elmridge Primary school we teach design technology to all children, whatever their ability. Design Technology forms part of the school curriculum policy to provide a broad and balanced education to all children. We enable pupils to have access to the full range of activities involved in learning about Design Technology.

## **Assessment and Recording**

Teachers assess children's Design Technology knowledge, understanding and skills through observations of the children during lessons and through the marking of children's books. As part of the Assessment for Learning progress – and in-line with Elmridge's Assessment Policy – students will receive both verbal and written feedback to yield effective progression. Children are also encouraged to be critical of their own work and respond to feedback questions in blue pen. Children also consider their own progress and have opportunity to evaluate their own and others work.

# Curriculum Impact

The impact of using the scheme of work, including display materials, will be seen across the school with an increase in the profile of Design and Technology. The learning environment across the school will be more consistent with design and technology technical vocabulary displayed, spoken and used by all learners. Annual Design Technology theme days will also raise the profile of the subject across our school. Pupils will understand the iterative process we employ throughout each project we teach, they will also understand the skills they are developing throughout each project. We want to ensure that Design and Technology is loved by teachers and pupils across our school, therefore encouraging them to want to continue building on this wealth of skills and understanding, now and in the future. Through studying real life designers, our pupils will consider being designers and engineers in the future. Impact can also be measured through key questioning skills built into lessons, child-led assessment such as pre and post assessment grids, evaluation of their own work at the end of projects and end of unit teacher assessments.

## Assessment and Recording

Termly assessment grids are completed by class teachers to show the children's attainment within Design Technology units and to inform future planning. Termly Design Technology assessments are monitored to ensure children are making good progress within Design Technology .

## Monitoring

The Design Technology subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in Design Technology. The Design Technology subject leader is also responsible for supporting colleagues in the teaching of Design Technology, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school.

The Design Technology subject lead will use unit scrutiny, lesson observations and stakeholder questionnaires to ensure that design technology knowledge and skills are covered effectively and progressively throughout school, ensuring that there is a clear link between objective, activity and outcome.

Issues identified from scrutiny are shared with staff during meetings and opportunities to share ideas and good practise to develop teachers' skills and confidence are planned for. They also inform annual subject development plans.

A termly meeting with link governor for Design Technology take place where developments, progress and plans for the subject can be shared and discussed.

The practical application of this policy will be reviewed annually or when the need arises by the coordinator, the Headteacher and the nominated governor.

## Resources

The school has a full range of resources to support the teaching of this subject throughout all year groups. Resources are upgraded and replenished when the need arises. An annual stock take and audit is undertaken by the subject coordinator in the summer term in preparation for the next academic year.

## **Roles and Responsibility for the Policy**

### **Role of the Governing Body**

The Governing Body has:

- appointed a member of staff to be responsible for the curriculum leadership of Design Technology;
- delegated powers and responsibilities to the Headteacher to ensure all school personnel and stakeholders are aware of and comply with this policy;
- responsibility for ensuring compliance with the legal requirements of the National Curriculum;
- responsibility for ensuring that the school complies with all equalities legislation;
- nominated a designated Equalities governor to ensure that appropriate action will be taken to deal with all prejudice related incidents or incidents which are a breach of this policy;
- responsibility for ensuring funding is in place to support this policy;
- responsibility for ensuring this policy and all linked policies are maintained and updated regularly;
- responsibility for ensuring all policies are made available to parents;
- the responsibility of involving the School Council in the development, approval, implementation and review of this policy;
- nominated a link governor to visit the school regularly, to liaise with the Headteacher and the coordinator and to report back to the Governing Body;
- responsibility for the effective implementation, monitoring and evaluation of this policy

### **Role of the Headteacher and Senior Leadership Team**

The Headteacher and the Senior Leadership Team will:

- ensure all school personnel are aware of and comply with this policy;
- work closely with the subject leader and the link governor;
- ensure compliance with the legal requirements of the National Curriculum;
- consider disapplying a pupil from all or part of the National Curriculum for a period of time if this will benefit the child;
- encourage parents to take an active role in curriculum development;
- provide leadership and vision in respect of equality;
- provide guidance, support and training to all staff;
- monitor the effectiveness of this policy by;
  - observing teaching and learning
  - planning scrutinies and work trawls

- discussions with pupils and members of the school council
- annually report to the Governing Body on the success and development of this policy

### **Role of the Subject Leader**

The Subject Leader will:

- lead the development of this policy throughout the school;
- work closely with the Headteacher, the nominated governor and SENCO;
- be accountable for standards in this subject area;
- monitor standards by;
  - auditing the subject area
  - review of the scheme of work
  - monitoring teachers planning
  - lesson observations
  - scrutinising children's work
  - discussions with pupils
- ensure continuity and progression throughout the school;
- devise a subject improvement plan;
- provide guidance and support to all staff;
- provide training for all staff on induction and when the need arises regarding;
- attend appropriate and relevant INSET;
- keep up to date with new developments;
- undertake an annual audit and stock take of resources;
- purchase new resources when required and in preparation for the new academic year;
- manage the subject budget effectively;
- undertake risk assessments when required;
- review and monitor;
- annually report to the Governing Body on the success and development of this policy

### **Role of the Nominated Governor**

The Nominated Governor will:

- work closely with the Headteacher and the subject leader;
- ensure this policy and other linked policies are up to date;
- ensure that everyone connected with the school is aware of this policy;
- attend training related to this policy;
- report to the Governing Body every term;
- annually report to the Governing Body on the success and development of this policy

## **Role of Teachers**

Teachers will:

- comply with all aspects of this policy;
- work closely with the subject leader to develop this policy;
- devise medium and short term planning;
- develop mathematical fluency, numeracy and mathematical understanding in all subjects;
- develop pupils' spoken language, reading, writing and vocabulary in all subjects;
- plan and deliver good to outstanding lessons;
- plan differentiated lessons which are interactive, engaging, of a good pace and have a three part structure;
- have high expectations for all children and will provide work that will extend them;
- assess, record and report on the development, progress and attainment of pupils;
- achieve high standards;
- celebrate the success of pupils in lessons
- implement the school's equalities policy and schemes;
- report and deal with all incidents of discrimination;
- attend appropriate training sessions on equality;
- report any concerns they have on any aspect of the school community

## **Role of Pupils**

Pupils will:

- be aware of and comply with this policy;
- be encouraged to work in partnership with the school by making decisions and exercising choice in relation to their educational programme;
- listen carefully to all instructions given by the teacher;
- ask for further help if they do not understand;
- participate fully in all lessons;
- participate in discussions concerning progress and attainment;
- treat others, their work and equipment with respect;
- support the school Code of Conduct and guidance necessary to ensure the smooth running of the school;
- liaise with the school council;
- take part in questionnaires and surveys

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Review date: \_\_\_\_\_