

Sir Alexander Fleming Primary School and Nursery

'Belonging, Being, Becoming'



DT Policy

Updated: January 2023

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Our school values



SAFE – keep ourselves and others safe by making sensible choices within school, online and in the community.



RESPECT – have the social, emotional and nurturing skills to respect ourselves, our families and our communities.



PRIDE – be proud of what we all achieve by aspiring to work hard and become your 'best self'



BRAVERY – to overcome barriers by attempting difficult challenges by being resilient, independent and inquisitive.



SUCCESS – achieving high standards with a belief that with effort anything is achievable.

How do we teach DT at Sir Alexander Fleming Primary School?

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1. What is the intent of the DT curriculum at Sir Alexander Fleming Primary School?

At Sir Alexander Fleming Primary School, we aim to provide all children with a broad and balanced curriculum which prepares them for life beyond primary education. We encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.

Design and Technology is an inspiring, rigorous, and practical subject. It can be found in many of the objects children use each day and is a part of children's immediate experiences. Design and Technology encourages children to learn, to think and intervene creatively to solve problems both as individuals and as members of a team.

At Sir Alexander Fleming Primary School, the Design and Technology curriculum combines skills, knowledge, concepts and values to enable children to tackle real problems. It can improve analysis, problem solving, practical capability and evaluation skills. We aim to make cross-curricular links with each piece of work. We believe it is essential that children recognise the purpose of what they are creating as they should be able to articulate, not only "what" they are creating, but "why" they are creating it.

Our children are encouraged to become innovators and risk-takers. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

2. How is the DT curriculum implemented at Sir Alexander Fleming Primary School?

We aim to provide children with the best opportunities to be creative and practical at Sir Alexander Fleming Primary School. We do this by planning engaging, exciting lessons with cross-curricular links from other curriculum areas such as Science and History. Each year group takes part in one Design and Technology topic each term, with there being a close cross-curricular link depending on the activity and topic they are linking it to. Food technology and cooking skills are also taught throughout the year, such as healthy eating during sports week and food from other cultures during Ghana week.

Our Design and Technology curriculum aims to:

- 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.

3. What is the impact of the DT curriculum at Sir Alexander Fleming Primary School?

Children will have developed their design and technology skills to be creative and practical, which will help them perform everyday tasks with confidence. Our children will leave Sir Alexander Fleming Primary School with the ability to design and make a variety of products, and to evaluate work by expressing what went well and what could be improved. They will leave our school to be confident and competent in design and technology in secondary education.

4. What is the process of DT at Sir Alexander Fleming Primary School?

Approaches to teaching

In design and technology, we want to ensure our children are challenged through our progressive curriculum so that they can apply their previous knowledge and skills to new topics. We want our children to be able to know more, understand more and remember more. We do this by breaking down our design and technology lessons into three parts: **Design, Make** and **Evaluate**.

Design:

This is where the new topic is introduced, and children can explore what sort of materials/equipment they will be using. This is also the opportunity where children will develop their creative, technical and practical skills through their designs of what they want their end product to look like. When the children are introduced to the new topic, the cross-curricular link will be made to show "why" they are making their products, which will add a meaning and purpose to their products.

Make:

Once they have completed their designs, children will then select the relevant tools and equipment they will need to create their designs by performing practical tasks (for example cutting, shaping, joining) accurately. They will also select materials and components they will need to make their products according to their functional properties and aesthetic qualities.

Evaluate:

Once their products are finished, children will then test their products by investigating and analysing the strengths and weaknesses of what they have produced. They will evaluate their work against their own design criteria (does the product match the design) and consider the views of others of how to improve their work. This will also be an opportunity where children will add meaning to their work, by testing their products (with their strong cross-curricular link) to see if their product would be effective for its purpose.

Cross-Curricular Opportunities

At Sir Alexander Fleming Primary School, we believe there needs to be a strong cross-curricular link to all design and technology topics as the children will be able to identify what purpose they are making each product for. We want our children to be able to not only describe

“what” they are creating, but also “why” they are creating. We feel that this way children will be able to identify the purpose to their learning and understand how performing everyday tasks can help them participate successfully in a technologically advanced world.

Learning Environments

Whenever carrying out a design and technology activity, we ensure our classrooms are a safe and stimulating environment. If children are using practical equipment where risks would be involved, then a risk assessment will be carried out to ensure everyone is in a safe working environment. This risk assessment will then be checked by both the D&T coordinator and the risk assessment lead of the school. Adults will also demonstrate/model to the children how to use the equipment safely and constantly monitor children as they use the equipment during the activity.

5. How do we assess DT at Sir Alexander Fleming Primary School?

Class teachers assess a pupil's progress through observation, recorded work and specially planned assessment activities in line with our assessment objectives. The learning outcomes in each unit show how children might demonstrate what they have learnt. Pupils should be involving in actively evaluating their work and thinking about possible improvements. The actual work children produce will serve as a record of the achievement; therefore it is not necessary to make detailed records of each child in relation to the outcomes.

Examples of work will be kept as evidence of each unit of work across all Key Stages. These examples of work will also demonstrate the performance of children at different levels within their year group. The work can be evidenced either in topic books with pictures of completed work or can be uploaded onto seesaw.

6. How is DT supported in the Early Years Foundation Stage at Sir Alexander Fleming Primary School?

Design and Technology is taught in EYFS as a part of the topic work covered during each term. Children are encouraged through to develop their Design and Technology skills through daily independent activities and termly focused work as outlined in the Development Matters document. Design and Technology contributes to a child's Expressive Arts and Design development and Physical Development.

7. KS1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, forest school, base camp and playgrounds, the local community, industry and the wider environment].

At the end of KS1 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 [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.

8. KS2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

At the end of KS2 pupils 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 [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.

9. How do we ensure equal opportunities and inclusion at Sir Alexander Fleming Primary School?

In line with our 'Equal Opportunities Policy' we are committed to providing a teaching environment that promotes learning. Children are given opportunities to work with others, listen to each other and treat everyone with **respect**.

We will:

- Plan our classroom activities to challenge and involve all pupils appropriately, according to age and capability, ethnic diversity, gender and language background.
- Be aware of different learning styles and the need to allow pupils to be able to work in their preferred learning styles for some of the time.
- Use materials for teaching which avoid stereotyping, bias towards race, gender, role or disability.
- Deal with such issues clearly and sensitively when they arise.
- Plan a curriculum that is diverse and reflective of the demographic of our school.

Children identified as needing extra support will be given the appropriate adaptations as building blocks to help them to be **successful** and **confident** designers, evaluators and makers. Providing for SEND pupils should take account of each pupil's particular learning and assessment requirements and incorporate specific approaches which will allow all individuals to succeed.

10. How is DT monitored at Sir Alexander Fleming Primary School?

The Design and Technology co-ordinator is responsible for monitoring the standards of children's work and the quality and breadth of teaching. The coordinator supports colleagues in the teaching of Design and Technology by informing them of current developments in the subject and by providing a strategic lead and direction for the subject in school.

The co-ordinator is also responsible for evaluating strengths and weaknesses in the subject and identifying areas for improvement and development. Subject Leader release time will enable the coordinator to fulfil the role, reviewing medium term plans, monitoring children's work and observing teaching in the subject.

The Role of the Co-ordinator:

- Lead the development of Design and Technology throughout the school and encourage cross-curricular links with other subject areas.
- Provide guidance on planning suitable activities for each unit of work.
- Review and monitor the success and progress of the units of work.
- Order and replenish resources and stock linked to each unit of work.
- Be responsible for the organisation and maintenance of design and technology resources.
- Keep up to date on local and national developments within Design and Technology and advise staff as appropriate.

11. Policy links

Equal opportunities policy

Marking and feedback policy

SEND policy

Curriculum policy

Long term overview and progression in DT

Assessment policy

