

Progression of Skills in Design Technology

Saltersgate Infant School

Curriculum Intent

Design and Technology is an inspiring, rigorous and practical subject. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. It requires children to be active learners with the confidence to 'have a go,' and the resilience to persist with a project when challenges occur. At Saltersgate Infants we encourage children to use their creativity and imagination, to design and make products, that solve real and relevant problems in a variety of contexts., considering their own and others' needs, wants and values.

We aim to, wherever possible, link work to other subject areas such as mathematics, science, engineering, computing and art thereby enabling pupils to notice connections and patterns in their learning. We also aim to, wherever possible, build relationships with local businesses and members of the school community.

Through Design Technology 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.

Curriculum Implementation

Through a variety of creative and practical activities we teach knowledge, understanding and skills needs to engage in a iterative process of designing and making. The children design and create products that consider function and purpose and which are relevant to a range of sectors.

When designing and making children are taught to:

To 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 a variety of means.

Make:

Select from and use a wider range of tools and equipment to perform practical tasks accurately.

Select from and use a wider range of materials, ingredients and components, including construction materials, textiles and ingredients, according to their functional properties, aesthetic qualities and, where appropriate, taste.

Evaluate :

Investigate and analyse a range of existing products.

Evaluate their ideas and products against their own design criteria and consider the view of others to improve their work.

Understanding how key events and individuals in design and technology have helped shaped 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

Understand and use electrical systems in their products

Apply their understanding of computing to program, monitor and control their products

Understand some of the ways that food can be processed and the effect of different cooking practises (including baking and grilling)

The Key skills we teach the children are:

Woodwork

Sewing and textiles

Food and nutrition

Using materials

Key skills and knowledge of D and T have been mapped across the school to ensure progression between year groups. The context of the children's work in Design and Technology is also well considered and children learn about real life structures and the purpose of specific examples, as well as developing their skills throughout the programme of study .Children's learning is embedded further through continuous provision activities which link to previously taught skills.

Statements from New
2020 EYFS Framework

3 to 4 year olds will be learning to:

Begin to develop complex stories using small world equipment like animals sets, dolls and dolls houses etc.

Make imaginative and complex small worlds with blocks and construction kits, such as a city with different buildings and a park.

Explore materials freely in order to develop their ideas and how to use them and what to make.

Develop their own ideas and then decide which materials to use to express them.

Join different materials and explore different textures.

Children in Reception will be learning to:

Return to and build on their previous learning, refining ideas and developing their ability to represent them

Create collaboratively sharing ideas, resources and skills

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| | <p>ELG: Safely use and explore a variety of materials, tools, techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the processes they have used.</p> | | |
| <p>KS1 Statement from National Curriculum Science</p> | <p>Design</p> <ul style="list-style-type: none"> ♣ 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 <p>Make</p> <ul style="list-style-type: none"> ♣ 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 <p>Evaluate</p> <ul style="list-style-type: none"> ♣ explore and evaluate a range of existing products ♣ evaluate their ideas and products against design criteria | | |
| <p>Nursery</p> | <p>Reception</p> | <p>Year1</p> | <p>Year 2</p> |
| <p style="text-align: center;">Design At Saltersgate Infants our children will:</p> | | | |

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| <p>Uses various construction materials</p> | <p>Manipulate materials to achieve a planned effect</p> | <p>Draw on their own experience to help generate ideas. • State if the products they intend to design are for themselves or someone else. • Say what their product will be used for and identify a simple design criteria • Suggest ideas and explain what they are going to do • Make a simple drawing of their design ideas</p> | <p>Draw on their own and others' experiences to generate ideas. • Identify a target group for the product they intend to design and make. • Identify a purpose for the product they intend to design and make. • Develop own design ideas through discussion, observation, drawing and modelling. • Make simple drawings of their design and label parts</p> |
| <p>Across the EYFS Begin to use the language of designing and making, e.g. join, build and shape . • Learn about planning and adapting initial ideas to make them better. • Use and explore various construction materials and other resources to construct with a purpose in mind. • Adapt work where necessary.</p> | | | |
| <p style="text-align: center;">Make At Saltersgate Infants our children will:</p> | | | |
| <p>Begins to construct, stacking blocks, making enclosures and creating spaces Join construction pieces together to build and balance</p> | <p>Constructs with a purpose in mind, using a variety of resources uses simple tools and techniques competently and appropriately</p> | <ul style="list-style-type: none"> • Make their designs using appropriate tools and techniques. • • With support measure, mark out, cut and shape a range of materials. • • Use tools safely and appropriately, with support. • • Assemble, join and combine materials and components together. | <ul style="list-style-type: none"> • Begin to select appropriate tools, materials and techniques – use technical vocabulary to name and describe them. • • Measure, cut and score with some accuracy. • • Use tools safely and appropriately. • • Assemble, join and combine materials and components in order to make a product. |

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| | | <ul style="list-style-type: none"> Use simple finishing techniques to improve the appearance of their product. | <ul style="list-style-type: none"> Cut, shape and join fabric using basic sewing techniques. Choose and use appropriate finishing techniques to improve the appearance of their product. |
| <p>Across EYFS Learn to construct with a purpose in mind.</p> <ul style="list-style-type: none"> Select tools and techniques needed to shape, assemble and join materials. Represent their own ideas, thoughts and feelings through Design and Technology | | | |
| <p>Evaluate At Saltersgate Infants our children will:</p> | | | |
| realises tools can be used for a purpose | Select appropriate resources and adapt work where necessary | <ul style="list-style-type: none"> Explore existing products – say who and what they are for and what they like/dislike about a product. Evaluate their product by discussing how well it works in relation to its purpose Evaluate their products as they are developed identifying strengths and possible changes they might make. Evaluate their product by asking questions about what they have made and how they went about it. | <ul style="list-style-type: none"> Explore existing products – say who and what they are for and what they like/dislike about a product, discussing how it could be improved. Evaluate their product against their design criteria Evaluate their products as they are developed, identifying strengths and possible changes they might make. Talk about their product, saying what they like and dislike about it. Identify how they made their product and if they would make any changes next time |
| <p>Across the EYFS Begin to talk about changes made during the making process, e.g. making a decision to use a different joining method. • Talk about existing products and begin to suggest why</p> | | | |

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| some materials or features could have been used | | | |
| | | Food technology | |
| | | <p>Year 1 Know that all food comes from plants or animals. • Know that everyone should eat at least five portions of fruit and vegetables every day.</p> <ul style="list-style-type: none"> • Select and use appropriate fruit and vegetables, processes and tools. • Prepare simple dishes safely and hygienically, without using a heat source. <ul style="list-style-type: none"> • Use techniques such as cutting to prep <p>Year 2 Know that food has to be farmed, grown elsewhere or caught. • Name and sort foods into the five groups according to the Eatwell guide. • Select and use appropriate combinations of ingredients, processes and tools. • Prepare simple dishes safely and hygienically • Use techniques such as chopping, peeling and grating to prepare simple dishes.</p> | |
| <p>Across the EYFS</p> <p>Begin to understand some food preparation tools, techniques and processes *Practise stirring, mixing, pouring, blending *Discuss how to make an activity safe and hygienic *Discuss use of senses *Understand need for variety in food *Begin to understand that eating well contributes to good health</p> <ul style="list-style-type: none"> • Have basic hygiene awareness. | | | |
| Technical knowledge | | | |
| <p>Across EYFS</p> <p>Learn how to handle a range of tools and equipment effectively, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters. • Learn how everyday objects work by dismantling things</p> | <p>Learn how to handle a range of tools and equipment effectively, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters. • Learn how everyday objects work by dismantling things</p> | <p>Understand the simple working characteristics of materials and components. • Understand about the movement of simple mechanisms including levers and sliders. • Know the correct technical vocabulary for the projects they are undertaking. • Understand how freestanding structures can be made stronger, stiffer</p> | <p>Understand the simple working characteristics of materials and components • Understand about the movement of simple mechanisms including wheels and axles. • Know the correct technical vocabulary for the projects they are undertaking. • Understand and demonstrate how to make freestanding structures stronger, stiffer and more stable.</p> |

Key vocabulary

Curriculum Impact

A variety of teaching and learning styles are used in Design and Technology lessons and activities are differentiated appropriately according to the needs of each child. Teachers ensure that the relevant subject-specific vocabulary is taught related to each topic, and that this vocabulary is applied, along with children's knowledge and understanding, when developing ideas, designing and making products and then evaluating them. This is achieved through a mixture of whole-class teaching and practical individual and group activities. During lessons children are given the opportunity both to work on their own and collaborate with others; and learning is shared through class discussions. Children critically evaluate existing products, their own work and that of others. They have access to a range of materials and resources, including ICT. Working walls and class floor-books display the learning journey, and work is recorded in an individual work-book where children have access to key vocabulary relating to each topic.

Design and Technology is assessed using 'I can...' assessment sheets with statements taken directly from the National Curriculum Programme of study. As each unit of work is covered, the related intended learning is considered, recognising children who are working at or beyond the expected level for Key Stage 1, as well as identifying children who need support.

Monitoring for Design and Technology includes lesson observations and/or learning walks, pupil voice interviews, book monitoring and a portfolio of children's work to ensure full coverage of curriculum content and quality of children's learning. This information is then used to inform further curriculum developments and provision.