Design and Technology Policy

Taken from the Statutory Guidance provided by the Department of Education, National Curriculum in England; Design and Technology Programs of Study

Objectives
Pupils will be required to design and make products that solve real and relevant problems taking into account their own needs and wants. They will look at Design and Technology in a variety of contexts, relating their ideas to an evaluation of past and present technological advances. They should develop a critical understanding of how DT helps us in our daily lives and how it contributes to the creativity, culture, wealth and well-being of the nation.

Aims of DT
Design and technology is a practical subject.
- To provide opportunities for all the children to design and make quality products.
- To provide children with the opportunity to explore food and cooking techniques along with healthy eating and environmental issues within food production.
- To develop design and making skills, knowledge and understanding to the best of each child’s ability; using and selecting a range of tool, materials and components.
- To become creative problem solvers as individuals and members of a team.
- To develop an ability to criticise constructively and evaluate their own products and those of others.
- To help the children develop an understanding of the ways people in the past and present have used design to meet their needs.
- To reflect on and evaluate such techniques, its uses and effects.

Content of DT at Key Stages 1
Content will be planned by teachers within year groups and supported by the co-ordinator. The programmes of study will be used to provide opportunities for teaching skills and knowledge, and application of these to making products of quality. To ensure children are developing the relevant skills associated with Design and Technology in the wider world, children should work in a range of contexts such as the home and school, gardens and playgrounds, the local community, industry and the wider environment.

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

Key stage 2
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].

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
As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.
Pupils should be taught to:

**Key stage 1**
- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from

**Key stage 2**
- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

**Southfield Primary School DT Overview 2019**

<table>
<thead>
<tr>
<th></th>
<th>Autumn 1</th>
<th>Autumn 2</th>
<th>Spring 1</th>
<th>Spring 2</th>
<th>Summer 1</th>
<th>Summer 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>KS1 Years 1 and 2</td>
<td>Seaside</td>
<td>Tudor</td>
<td>Pop up cards</td>
<td>X</td>
<td>Animal shelters</td>
<td>X</td>
</tr>
<tr>
<td>Year A</td>
<td>Picnic</td>
<td>Houses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td>Poison</td>
<td>Superhero</td>
<td>Roman</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dart Frog</td>
<td>Energy Food</td>
<td>Drawstring</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bean Bag</td>
<td>Food</td>
<td>Purses/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shields</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td>Design</td>
<td>X</td>
<td>Carnival</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>and make a Boat</td>
<td></td>
<td>Costumes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 5</td>
<td>Design</td>
<td>X</td>
<td>Design and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>and make</td>
<td></td>
<td>make a Toy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biscuits</td>
<td></td>
<td>(Space)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 6</td>
<td>Victorian Light up House</td>
<td>Design and make a Healthy Balanced Meal</td>
<td>Design and make a piece of clothing for an African Child</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N/B KS1 are currently following Year A as set out above. Once Year B has been confirmed it will be added.

**Safety in Design and Technology**

The safety of the children is the responsibility of the class teacher. The children are made aware of the safe use and correct procedure involved when using tools and equipment in a learning environment and how to follow proper procedures for food safety and hygiene. The children are made aware of the need to be careful and to understand that their actions can affect others.

The children build up a range of skills when using equipment to reduce unnecessary risk. Rotary cutters are to be used with a safety ruler. Craft knives are used only by 5/6 under direct supervision of an adult. Glue guns are used (low temperature) under supervision. All staff, including helpers, are made aware of food safety procedures when working with food to minimise any risks. The children wear protective clothing if necessary.

**Role of the Co-ordinator**

The co-ordinator works with the whole staff to develop a cohesive Design and Technology experience throughout the school. The co-ordinator will also:

- Developing good practice in the classroom
- Audit and monitor the resources in school
- Ensure resources are ordered when required
- Monitor planning and the delivery of the curriculum
• Work together with all colleagues to raise standards
• Ensure the policy remains current

**Evaluation of DT**
The co-ordinator monitors long and medium term planning, classroom organisation, continuity and progression. Teachers monitor child progression each lesson within year groups then feedback to key stage co-ordinators and the subject co-ordinator. Whole staff discuss any changes which need to be made. Assessment is achieved through observations, discussions and evaluations of finished products. Records are kept in the form of an assessment grid. Assessment is used for future planning, to report to pupils, parents and teachers. These relate to the programmes of study and statements of attainment.

**Resources**
Our school has a wide range of resources to support the teaching of Design and Technology. The school is fortunate in that it has a large, fully equipped classroom specifically tailored for Art and Design and Technology. It is well resourced for all aspects of the subject.