

# DESIGN & TECHNOLOGY POLICY

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Reviewed and approved by: Exec Team

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## Linked Policies

This policy is the umbrella policy for Somerville Primary School's curriculum. Each individual subject area has its own policy document or subject statement to add extra detail and clarification. It should be read in conjunction with the Curriculum, Teaching and Learning, Assessment, SEND, Marking and Feedback and Homework documents.

## DESIGN & TECHNOLOGY INTENT AT SOMERVILLE

Design and Technology offers children a chance to use critical thinking and creativity within a defined purpose and tangible outcome. Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in a process of designing and making.

Currently, all year groups plan DT projects around a given topic not linked to a theme but which develops their own skills. Through some topics children are encouraged to look at past and present technology and its impact on daily life and the wider world, this could be developed further. Emphasis will be on the 'how' children learn, developing their independence and creativity within the subject. This will be reflected in the development and implementation of resources to support project-based learning in a variety of contexts. The progression of knowledge and skills through the key stages will be a key area of focus this year to ensure that there is a logical development and mastery of skills to support children to take their learning to the next level as they progress through the key stages.

### *The Somerville Design & Technology Curriculum is designed to:-*

Challenge our children to tackle problems of a practical nature, develop a range of tool skills and promote critical thinking.

Develop appropriate subject knowledge, skills and understanding as set out in the National Curriculum Design Technology Programmes of study, to fulfil the duties of the NC whereby schools must provide a balanced and broadly-based curriculum which promotes the spiritual, moral, cultural, mental and physical development of pupils and prepares them for the opportunities and responsibilities and experiences for later life

Support knowledge and skills linked to other subjects, including Maths, Art & Design and Science. Skills are developed using materials, tools and mechanics which are used to design and make structures, mechanisms, textiles and food products. Children work collaboratively – discussing their design ideas; working cooperatively to make their products; evaluating the own work and the products of others.

From Foundation Stage onwards we plan opportunities for our children to explore materials, practice their construction and design skills and express themselves creatively. This is an experience we feel many of our children need when beginning their journey as designers and engineers at Somerville.

Much of our Design and Technology is taught in timetable blocks. During Design and Technology days, children are fully immersed in the whole design process and get the opportunity to practice a range of skills and express their creative ideas in a supportive, safe environment.

## CURRICULUM IMPLEMENTATION AT SOMERVILLE

### Approach to Teaching and Learning and Pedagogy

Staff plan lessons which will ensure skill progression is paramount. Clear and comprehensive planning is in line with the National Curriculum. Ensuring the Design Technology National Curriculum and EYFS is planned for and covered in full within the EYFS, KS1 and KS2 school curriculum. Whilst the EYFS and National Curriculum forms the foundation of our curriculum, we make sure that children learn additional skills, knowledge and understanding and enhance our curriculum as and when necessary.

Delivery of design and technology projects with a clear structure. Each year group will undertake a construction topic, a textile topic and a food/drink topic.

Delivery of lessons showing clear following of the design process where each project will follow: research, design, make and evaluate.

A range of skills will be taught ensuring that children are aware of health and safety issues related to the tasks undertaken.

Clear and appropriate cross curricular links to underpin learning in multi areas across the curriculum giving the children opportunities to learn life skills and apply skills to 'hands on' situations in a purposeful context.

Children will undertake design tasks and use skills from across the curriculum to fully explore the design process evaluating work ensuring that it is of the highest possible quality.

Children are also asked to self-evaluate their work.

Independent learning: In design technology children may well be asked to solve problems and develop their learning independently. This allows the children to have ownership over their curriculum and lead their own learning in Design Technology.

Collaborative learning: In design and technology children may well be asked to work as part of a team learning to support and help one another towards a challenging, yet rewarding goal.

From Foundation Stage through to Year 6, pupils are given opportunities to explore the use of materials and tools; to design and make prototypes; to discuss how things work; and to discuss how they could be improved. They are presented with design problems to solve, working as part of a team or independently. Design and Technology is taught through areas of learning in accordance with EYFS documents and the National Curriculum for KS1 and KS2.

The areas of design and making covered by each year group are:

**Food Technology** – emphasis is on healthy eating and a progression of skills using a variety of cooking techniques, including boiling, stir-frying, baking and grilling, and the safe use of kitchen equipment and appliances.

**Structures** – emphasis is on using wooden Jinx frame constructions as a basis for products, ensuring a progression of skills and using tools safety.

**Mechanisms** – this element is incorporated into the products made during the structures topic and includes: levers/sliders, chassis/axles/wheels, pneumatics, electrical circuits, cams, gears and pulleys.

**Textiles**– emphasis is on sewing skills, progressively taught across each key stage and including fastenings and other design elements to make a product appealing.

### **Health and safety**

Risk assessments will be carried out prior to design and technology projects by the class teacher. 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 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 when working with food.

### [Enrichment Experiences](#)

All students at Somerville have the opportunity to experience the Design and Technology elements of the curriculum and produce individual or group projects that they can take home and enjoy.

Each unit of work is designed to promote enjoyment along with learning. Students will have the opportunity to reinforce previous skills learnt while developing new skills as each unit unfolds. All students will also have the opportunity to develop their own elements within the unit to promote individuality while working within the unit brief.

Running parallel with the core units, technology at Somerville also offers an enrichment programme aiming to:

- Promote self-esteem
- Promote team work across the key stages
- Develop lifelong interests
- Develop planning and budgeting/ costing skills
- Offer new learning opportunities
- Promote the transfer of knowledge

### [Reading and Vocabulary](#)

A strong focus for teaching is the use of correct technical vocabulary. Teachers carefully plan the language they use during their sessions and model, through discussion, specific technical vocabulary to help embed this language in the children's long-term memory and to ensure technical language progresses throughout their school life.

### Special Educational Needs and Design Technology

Children with SEND are taught within the lessons where support is given as required. Additional support staff may withdraw small groups or individuals to adapt the learning to allow for child-specific needs. Subject leader will ensure that the assessment of Design & Technology is taking place across the school and use this to monitor the progress of children with SEND. Class teachers will monitor the progress of their SEND pupils and ensure their planning highlights how lessons are differentiated/scaffolded to ensure that SEND pupils are appropriately supported and are making progress from their individual starting points. We ensure that we meet the needs of all pupils, allowing them the opportunity to access the full and broad curriculum through carefully planned support and scaffolding as required.

### CURRICULUM IMPACT AT SOMERVILLE

Design and Technology is monitored through a variety of strategies, including: planning and evaluation, book looks, learning walks and lesson observation. Summative assessments take place throughout the year and teachers record the progress and attainment. Teachers use this information to inform future lessons; ensuring children are supported and challenged appropriately.

Children in Foundation Stage are assessed within Expressive Arts and Design and their progress is tracked termly. Age related expectation levels are reported to parents at the end of each year.

The teaching of the use of tools, cooking equipment and sewing equipment is progressive, building year on year, to ensure that by the end of Key Stage 2, pupils have a full range of skills and understand how to use equipment safely.

### Wider outcomes for our children:

Children will have clear enjoyment and confidence in design and technology that they will then apply to other areas of the curriculum.

Children will ultimately know more, remember more and understand more about Design Technology, demonstrating this knowledge when using tools or skills in other areas of the curriculum and in opportunities out of school.

As designers children will develop skills and attributes they can use beyond school and into adulthood.

The large majority of children will achieve age related expectations in Design Technology.

## EQUALITY IN DESIGN & TECHNOLOGY EDUCATION

Somerville Primary School is committed to valuing diversity and to equality of opportunity. We aim to create and promote an environment in which pupils, parents and staff are treated fairly and with respect, and feel able to contribute to the best of their abilities. The Governing Body recognises that it is unlawful to take into account anyone's gender, marital status, colour, race, nationality, ethnic or national origin, disability, religious beliefs, age or sexual orientation. Full consideration has been given to this during the formulation of this policy as it is the governors' aim that no-one at Somerville Primary School should suffer discrimination, either directly or indirectly, or harassment on any of these grounds.

## SMSC

When writing this policy and planning for lessons we have planned in opportunities that allow discussion and learning around pupils social, moral, spiritual and cultural development. Teachers will raise questions in a range of topics and children will also be encouraged to raise their own questions.

Children will have opportunities to think creatively and problem solve supporting their spiritual development. Children when planning in DT consider the impact on the environment and sustainability which supports children's moral education. The children can collaborate in partners and in pairs which requires effective social interactions as well as having a collective responsibility to contribute to a safe working environment. Finally, where possible we make links to past heritage and the use of food, textiles, structures to support children's cultural education.