SSMJ POLICY FOR

Design and Technology

Following the example of Jesus, together we learn, love and respect one another to be the best we can be.

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Design and Technology Policy May 2024

Contents

The Purpose of studying Design and Technology:

At SSMJ we follow the National Curriculum Programme of Study for Design and Technology. Design and technology is an inspiring, rigorous and practical subject, taught through our own personalised curriculum. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Aims:

This area of learning contributes to the achievement of the curriculum aims for all young people to become:

- Successful learners who enjoy learning, make progress and achieve.
- Confident individuals who are able to live safe, healthy and fulfilling lives.
- Responsible citizens who make a positive contribution to society.

The national curriculum for design and technology aims to ensure that all pupils:

- 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.

Intent:

At SSMJ

we intend to build a Design Technology curriculum which develops learning and results in the acquisition of knowledge and skills. Children will know more, remember more and understand more.

We intend to design a design technology curriculum with 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

Implementation:

- Clear and comprehensive scheme of work in line with the National Curriculum. 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 showing clear following of the design process where each project fill 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.
- 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.

Impact

- 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.
- The large majority of children will achieve age related expectations in Design Technology.
- As designers children will develop skills and attributes they can use beyond school and into adulthood.

Teaching and Learning

The school uses a variety of teaching and learning styles in design and technology lessons. Our principal aim is to develop the children's knowledge, skills and understanding in design and technology. We ensure that the act of investigating and making includes exploring and developing ideas, evaluating and developing work. We do this through a mixture of direct

teaching and individual/ group activities. Teachers draw attention to good examples of individual performance as models for the other children. They encourage children to evaluate their own ideas and methods, and the work of others, to say what they think and feel about them. We give children the opportunity within lessons to work on their own and collaborate with others, on projects in two and three dimensions and on different scales. Children also have the opportunity to use a wide range of materials and resources including other artists' work, educational visits and computing.

We recognise the fact that we have children of differing ability in all our classes, and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies which are differentiated by task, expected outcome and/or support from peers or adults.

Assessment:

The National Curriculum states that:

'By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant (Design and Technology) programme of study.'

At St Michael and St John's RC Primary School assessment is an integral part of the teaching process. Assessment is used to inform planning and to facilitate differentiation. The assessment of children's work is on-going to ensure that understanding is being achieved and that progress is being made.

Assessment for learning is continuous throughout the planning, teaching and learning cycle. Key Design and Technology knowledge is taught to enable and promote the development of children's design skills. Assessment is supported by use of the following strategies:

- Monitoring and observation;
- Differentiation;
- Quality questioning
- providing effective feedback
- Assessment

(See appendix (i) SSMJ's Assessment Policy)

Planning and Resources:

At St Michael and St John's RC Primary School Design Technology is taught through a curriculum which is carefully planned to engage and excite all our learners.

Our school has a wide range of resources to support the teaching of Design and Technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept in the Design and Technology school store. Audits will be carried out regularly to monitor the resources, any shortfalls should be reported to the coordinator who will arrange for replenishment. This room is not accessible to children without adult supervision.

Organisation:

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, gardens and playgrounds, the local community, industry and the wider environment].

EYFS:

In our EYFS unit, the children's experiences provide firm foundations for later work in design and technology within the school. These experiences include: asking questions about how the world around them works, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling tools safely and with increasing control. These experiences, both indoors and outdoors, engage the children's natural curiosity.

KS1:

In Year 1 & 2, when designing and making children will 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.

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 will be taught to:

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

KS2:

When designing and making, pupils will 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

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The children will be taught to:

- 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.

We will teach the children the principles of food hygiene and safe practice in food preparation which lead to in-school certification.

Equal Opportunities:

At SSMJ Primary school, we are committed to providing a teaching environment which ensures all children are provided with the same learning opportunities regardless of social class, gender, culture, race, special educational need or disability. Teachers use a range of strategies to ensure inclusion and also to maintain a positive ethos where children demonstrate affirming attitudes towards others. Support for specific individuals is well considered and planned for, with consideration given to how deeper learning and further challenge can be provided for and demonstrated by children who require further challenge.

Inclusion:

(eg EAL/SEN/PPG/Provision for HA) All pupils are entitled to access the Design and Technology curriculum at a level appropriate to their needs. To ensure inclusion, teachers use a range of strategies in line with the school's inclusion planning key. Independent tasks, as

well as teaching, are also well-adapted to ensure full accessibility, as well as to provide appropriate challenge to different groups of learners. The school makes full use of additional adults who are deployed effectively to ensure that identified children are able to make progress in each curriculum area, according to their full potential.

Through the use of KWL and spider diagrams, teaching takes account of the children's own interests to ensure topic relevance to all individual learners. Opportunities for enrichment are also fully utilised, to ensure a fully inclusive and engaging Design and Technology curriculum and this is supported through a number of links with places of historical interest in the immediate and wider locality which engage the children further through practical learning activities.

The Role of the Subject Leader:

The Subject Leader's responsibilities are:

- To ensure a high profile for the subject
- To ensure a full range of relevant and effective resources are available to enhance and support learning.
- To model the teaching of Design and Technology.
- To ensure progression of the key knowledge and skills identified within each unit and that these are integral to the programme of study and secure at the end of each age phase.
- To monitor books and ensure that key knowledge is evidenced in outcomes, alongside and as supported, by SLT
- To monitor planning and oversee the teaching of Design and Technology.
- To lead further improvement in and development of the subject as informed by effective subject overview
- To ensure that the Design and Technology curriculum has a positive effect on all pupils, including those who are disadvantaged or have low attainment
- To ensure that the Design and Technology curriculum takes account of the school's context, promotes children's pride in the local area and provides access to positive role models from the local area to enhance the geography curriculum
- To ensure that approaches are informed by and in line with current identified good practice and pedagogy.

(See appendix (ii) Subject Leader Policy)

Parents (Including Homework):

We, at SSMJ, actively encourage the involvement of families and the wider community to help support the teaching of Design and Technology. Parents and carers are involved with supporting their children with topic- based homework.

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Parents and carers are involved with supporting their children with topic-based homework. Design and Technology homework tasks are well communicated and have a clear purpose, often providing children with the means to practise their skills to support their classroom work.

ROLES AND RESPONSIBILITES

SEC Committee
▪ Evaluation of Impact ▪ Hold the HT to account ▪ Whole school overview record ▪ Summary of attainment and progress for each cohort and significant groups
Headteacher
▪ Whole school analysis (including trends over time) ▪ Highlighting areas for improvement and allocation of resources (staff / materials / training / accommodation etc) ▪ Managing the monitoring/assessment calendars ▪ Ensuring that decisions made and agreed are carried out ▪ Prepares whole school data for presentation to the governors
SLT
▪ Monitoring the performance of teachers and overview of pupils ▪ Analysing cohort/group data and preparing it for presentation to governors ▪ Holding subject leaders/teachers to account for targets set ▪ Holding pupil progress meetings to discuss individual/group/class performance using data prepared by the teachers ▪ Hold teachers to account for impact where resources have been allocated ▪ Ensure targets set lead to improved performance/ rise in attainment
Subject leaders
▪ Monitor the performance in their subjects ▪ Analyse and report on attainment and progress in their subject for SLT ▪ Highlight areas of strength to celebrate and weakness to support ▪ Moderate and address issues arising from mismatch between data/pupil books / observations etc. ▪ Hold teachers to account for performance in their subject area
Teachers
▪ Operate within the assessment time frame ▪ Meet or exceed the targets set for each child ▪ Record and analyse pupil/ group results

- Highlight areas to celebrate and to address ready for pupil progress meetings
- Prepare for pupil progress meetings
- Plan for timely intervention where needed and report impact
- Record results ready for input onto the Tracker

  Aware of the impact of their performance upon the whole school