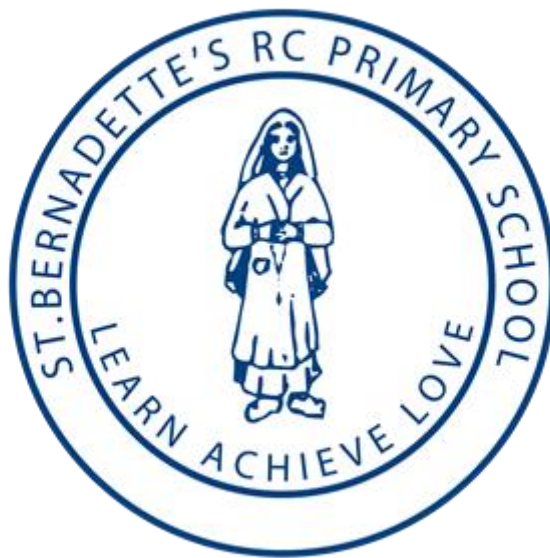


St. Bernadette's RC Primary School



Design & Technology Policy

*Together we Learn. Together we Achieve. Together we grow
in God's Love.*

Written: January 2023

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1. Subject Statement

Intent

At St Bernadette's RC Primary School, we aim to provide all children with a broad and balanced curriculum which prepares them for life beyond primary education. We believe that high-quality Design and Technology lessons will engage and inspire children to think innovatively, develop creative procedural understanding and exercise their creativity and imagination. The children are taught to combine their designing and making skills with knowledge and understanding in order to design and make a product that solve real and relevant problems within a variety of contexts, considering their own and others' needs wants and values. During Design and Technology, we teach children the language skills they will need to be effective communicators. We actively encourage our children to be critical thinkers, forward planners and effective problem solvers. We also teach our children to work on their own, as capable individuals, and as a valued member of a team. Resilience is an important element of our DT, and whole school, curriculum and our children are encouraged to 'innovate' and take risks.

Definition

Design and technology is an inspiring, rigorous and practical subject. 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. **(National Curriculum Document 2014)**

Our aims at St Bernadette's RC Primary School are to:

- Fulfil the requirements of the National Curriculum for Design and Technology
- Provide a broad and balanced curriculum, ensure the progressive development of knowledge and skills
- For the children to learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens through evaluation of past and present design and technology
- For the children to participate successfully in an increasingly technological world using the language of design and technology.
- 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
- Develop skills that they can then use effectively throughout their everyday lives
- Understand and apply the principles of nutrition and learn how to cook

Implementation

What do we teach? What does this look like?

Our whole curriculum aims to enable all children to flourish to become the very best version of themselves they can possibly be. Our whole school approach to the teaching and learning of Design and Technology involves the following:

- To teach the National Curriculum, supported by a clear skills and knowledge progression. This ensures that skills are built on year by year and are sequenced appropriately to maximise learning for all children.
- To follow the design, make and evaluate cycle with each stage being rooted in real life, relevant contexts to give meaning to learning.
- To build upon the knowledge and skill development of the children's previous learning and provide support and challenge. As the children's knowledge and understanding increases and as they become more proficient.
- To provide, and model, a range of tools which they can choose from freely and appropriately.
- Children experience a range of activities, including visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class.

Impact

What will this look like? By the time children leave our school they will:

- Have an excellent attitude to learning and independent working.
- Have gained the ability to use time efficiently and work constructively and productively with others.
- Have gained the ability to carry out thorough research, show initiative and ask questions to develop an exceptionally detailed knowledge of users' needs.
- Have gained the ability to act as responsible designers and makers, working ethically, using finite materials carefully and working safely.
- Have developed a thorough knowledge of which tools, equipment and materials to use to make their products.
- Have developed an ability to apply mathematical knowledge and skills accurately.
- Have gained an ability to manage risks exceptionally well to manufacture products safely and hygienically.
- Have developed and engaged in a passion for the subject.

This approach at St Bernadette's results in a fun, engaging, high-quality Design and Technology education.

2. Teaching and Learning

Design and Technology education makes a unique and valuable contribution to the education and preparation for students' future lives for work and or leisure. Our Design and Technology curriculum provides a broad and balanced range of opportunities to work with a wide range of materials, to develop new skills, experience new technologies and gain new knowledge. Open ended projects allow students to use their imaginations, express their feelings and problem solve as they work towards quality outcomes.

We will enrich our curriculum by:

- Establishing cross curricular links
- Encouraging students to work with 'real' contexts to develop their skills and knowledge in designing.

- Giving a deeper understanding of links between knowledge learnt and vocational context.
- The celebration of the key events in Design and Technology e.g. female engineers, healthy eating week, Fairtrade fortnight etc. to support wellbeing, diversity and culture

3. Assessment

Teachers will assess the children's work while observing them working during lessons. They will record the progress made by children against the learning objectives for their lessons. Photographs and examples of work could also be taken to enhance the teacher's knowledge and assessment of skills. This method of recording also enables the teacher to plan future work in accordance with skills learnt in addition being able to make an annual assessment of progress for each child, as part of the child's annual report to parents. We pass this information on to the next teacher at the end of each year. Children are encouraged to assess and evaluate both their own work and that of other pupils. This helps them to appreciate how they can improve their performance, and what their targets should be for the future.

In the EYFS, we assess the children using the early years outcomes at the relevant age range.

4. Planning and Resources

Planning is a process in which all teachers are involved. Planning should be done with parallel teachers. We have KAPOW membership for high quality resources and lesson plans. The key knowledge and skills of each Design and Technology topic is available.

Further evidence of good practice in Design and Technology taking place in classrooms includes:

- An active learning environment
- Children being encouraged to ask and answer questions and discuss their ideas.
- Children devising and conducting their own 'projects' within the context of the relevant curriculum content, as well as being given opportunities to develop their skills.

Design and Technology resources to support the teaching of this subject are kept in the Science Cupboard, where they will be labelled and easily accessible to all staff. EYFS have a range of resources kept in classes but can also access the resources available. There are also books available in the library to enhance the children's' learning in this area.

5. Organisation

Design and Technology is taught by the class teacher in units, linked where possible, to our topic "themes" to provide a creative scheme of work, which reflects a balanced programme of study. This is illustrated in our Curriculum Roadmap and is followed by all class teachers.

A summary of the learning focus at each phase is described below. However, more detailed progression documents have been devised and are used by class teachers to plan units of work. These are St Bernadette's R.C. Primary School Design and Technology Curriculum Document and the Skills Progression Document.

6. EYFS

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. The aim of this document is to help subject leaders to understand how the skills taught across EYFS feed into national curriculum subjects.

The most relevant statements for DT are taken from the following areas of learning:

- Physical Development
- Expressive Arts and Design

Design

- Begin to use the language of designing and making, e.g. join, build and shape.
- Learning about planning and adapting initial ideas to make them better.

Make

- To learn to construct with a purpose in mind.
- Selects tools and techniques needed to shape, assemble and join materials.

Evaluate

- Begin to talk about changes made during the making process, e.g. making a decision to use a different joining method.

Technical Knowledge

- To learn how to use a range of tools, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters.
- Learn how everyday objects work by dismantling things.

Cooking and Nutrition

- To begin to understand some of the tools, techniques and processes involved in food preparation.
- Children have basic hygiene awareness.

Children in the Early Years Foundation Stage will undertake investigative and skills based tasks during independent, child-led activity time. The 'Creative/Workshop/Art' areas will be available to them on a daily basis and they will be encouraged to undertake focused practical tasks through directed and self-initiated stimuli. They will be provided with resources based on topics within the focus of the classroom and will be encouraged to design and develop ideas independently.

Children in EYFS will work on a range of creative themes and tasks, and their work in Expressive Arts and Design links closely to other areas of the EYFS profile, namely 'Moving and Handling' through the opportunity to develop skills in using various tools, and 'Shape, Space and Measure' through access and exploration of a range of construction materials.

7. Key Stage One:

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]. 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 Two:

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:

EYFS

- Know the importance for good health of physical exercise and a healthy diet

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.

8. Equal Opportunities (e.g. Gender, Race)

At St Bernadette's we are committed to providing all children with an equal entitlement to scientific activities and opportunities regardless of race, gender, culture or class.

9. Inclusion (e.g. EAL/SEN/PPG/Provision for HA)

In school we aim to meet the needs of all our children by differentiation in our planning and in providing a variety of approaches and tasks appropriate to ability levels. This involves providing opportunities for SEND children to, with support, develop speech and language skills, as well as specific skills and knowledge. This will enable children with learning and/or physical difficulties to take an active part in DT learning and practical activities to achieve the goals they have been set. Some children will require more adult support to allow them to progress whilst more able

children will be extended through differentiated activities. By being given enhancing and enriching activities, more able children will be able to progress to a higher level of knowledge and understanding.

Teachers will use the school's inclusion policy to ensure that a range of strategies are used which include and motivate all learners, ensuring that optimum progress is made throughout each part of the lesson.

10. Role of the Subject Leader

The Role of the Design and Technology Co-ordinator is to:

- Lead the development of design and technology in school
- Provide guidance to individual members of staff
- Keep up to date with local and national developments in design and technology and disseminate relevant information
- Review and monitor the success and progress of the planned units of work
- Order stock linked to the planned units of work at the end of each term
- Be responsible for the organisation and maintenance of design and technology resources
- Co-ordinate any display of design and technology work

It is the responsibility of the subject leader to monitor the standards of children's work. The subject leader is also responsible for supporting colleagues in their teaching, for being informed about current developments in the subject, and for providing a strategic lead and direction for science in the school. The subject leader will also audit resource annually and purchase equipment required. The subject leader will fulfil the task of reviewing samples of children's work, training, liaising with other subject leaders from other schools and organising Design and Technology related school events, such as special DT Days.

11. Parents

Parental input is highly valued and parents are welcomed into school to share their own expertise with the children. Children may receive D&T homework based upon their child's current topic. Parental views about our Design and Technology Curriculum are sought through a parental questionnaire.