



## All Saints Benhilton C.of E. Primary School Design and Technology Policy

**Mission Statement:** Together, within God's love, we nurture and inspire today's minds for tomorrow's challenges.

### 1 Aims and Objectives

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; and
- Understand and apply the principles of nutrition and learn how to cook.

### 2 Teaching and Learning Style

The school uses a variety of teaching and learning styles in Design and Technology lessons. The principal aim is to develop children's knowledge, skills and understanding in Design and Technology. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products, and then evaluating them. We do this through a mixture of whole-class teaching and individual or group activities. Within lessons, we give children the opportunity both to work on their own and to collaborate, listening to other children's ideas and treating these with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT. In all classes there are children of differing ability. We recognise this fact and 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.

### 3 Design and Technology Curriculum Planning and Assessment

#### Long Term Planning

Using the National Curriculum Programme of study, Design and Technology Scheme of work for Key Stage 1 and 2 and the curriculum guidance for the Foundation Stage as the basis of their long term planning document teachers refer to their year group planning which relates to the national curriculum level descriptors.

#### Medium Term Planning

• Using the objectives from the National Curriculum, teachers identify the learning objectives for each unit of work, matching possible teaching activities with learning outcomes and ensuring essential key objectives are covered at least once throughout the year. Where possible lessons are planned in a cross curricular manner.

When planning, the following should be kept in mind:

- IDEAs, investigating, disassembly and evaluation activities (how familiar products work and what they are supposed to do).
- FPTs, Focused Practical Tasks (developing a range of techniques, skills, process and knowledge).
- DMAs, Design and Make Assignments using a range of materials.

KS1 - Including food textiles and items that can be put together.

KS2 - Including electrical and mechanical components, food, mouldable materials, textiles and stiff and flexible sheet material.

#### **4 Design and Technology Assessment and Recording**

Work in Design and Technology may be assessed through judgments of recorded work but a large proportion of assessment is formative through observation of practical application and language development through discussion, description and explanation skills. Evidence may be seen in books, on 2-D displays and most commonly through 3-D models and photographs of children's work.

Information on a child's progress in Design and Technology will be communicated to parents in a written report at the end of each academic year.

#### **5 Resources**

There is a selection of class-based and centrally-stored materials and tools to ensure that all children have the necessary resources to access the subject and to make informed choices. The DT budget covers the costs of materials and the replacement of tools, although we do occasionally ask children to bring some materials from home if they can. The school will provide resources to any children who are unable to do this so as to allow all children to have the same opportunities.

#### **6 The Foundation Stage**

We encourage the development of skills, knowledge and understanding that help Foundation children make sense of their world as an integral part of the school's work. This learning forms the foundations for later work in Design and Technology. These early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control. We provide a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

#### **7 Key stage 1**

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]. At the end of Key Stage 1 most pupils will be able 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.

#### **8 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].

By the end of key stage 2, most children will be able 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.

## 9 Food Hygiene and Safety Issues

We enable pupils to have access to the full range of activities involved in learning Design and Technology. Where children are to participate in activities outside the classroom, for example in a museum or on a factory trip, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils. Teachers teach the safe use of tools and equipment and insist on good practice prior to starting the making part of a task. However, safety issues do arise when teaching this subject. These include:

- The use of electrical equipment such as glue guns
- The handling of food products
- The use of cooking appliances, including ovens and hobs
- Contact with sharp objects including wood, nails, needles, saws etc.
- Awareness of personal safety (jewellery, hair, eye protection)

It is the duty of all staff to:

- Recognise and assess the hazards and risks to themselves and others when working with food and other materials
- Take action to control these risks and hazards

Teachers should be aware of the following:

- Children must not use cooking appliances unless under direct supervision from a responsible adult.
- Saws and other sharp objects (nails, needles, craft knives, etc) must be used under direct supervision. The teacher will make a judgement on the undertaking of activities involving sharp and/or potentially dangerous equipment depending on the age/ability of the children in his/her class. Some activities may be undertaken by an adult or in a small group or one to one situation as appropriate
- Perishable foodstuff must be stored sensibly and refrigerated if necessary. Care must be taken to ensure food is not used after the given sell or use by date

Teachers and adult support staff must oversee that cupboards, table tops, cooker etc, are clean and in working order

- Children must wash their hands before and after any contact with food and other potentially harmful substances
- Teachers must take into account possible food allergies to food such as nuts and should be aware of the location of any medication for the allergy.

## **10 Equality, Diversity and Inclusion**

We aim to ensure that no pupil experiences harassment, less favourable treatment or discrimination within the learning environment because of their age; any disability they may have; their ethnicity, colour or national origin; their gender; their religion or beliefs. We value the diversity of individuals within our school and do not discriminate against children because of 'differences'. We believe that all our children matter and we value their families too. We give our children every opportunity to achieve their best by taking account of our children's range of life experiences when planning for their learning. The planning and organising of teaching strategies for each subject will be consistently reviewed to ensure that no pupil is disadvantaged. This is in line with our Equality, Diversity and Inclusion Policy.

## **11 Additional Needs Provision**

As an inclusive school we recognise the need to tailor our approach to support children with special educational needs as well as those who are identified as higher ability.

At our school we teach Design and Technology to all children, whatever their ability and individual needs. Design and Technology implements the school curriculum policy of providing a broad and balanced education to all children.

Through our Design and Technology teaching we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this.

Intervention through School Action and School Action Plus will lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to Design and Technology.

## **12 Policy Review**

This policy will be reviewed in keeping with the Policy Review Cycle.  
Every 3 years .

Next review September 2019