

White Laith Primary School

Design and Technology Policy

Agreed by Governors: September 2017

Review date: September 2020

Safeguarding

At White Laith we are committed to providing a caring, friendly and safe environment for all of our pupils so they can learn in a relaxed and secure atmosphere. We believe every pupil should be able to participate in all school activities in an enjoyable and safe environment and be protected from harm. This is the responsibility of every adult employed by or invited to deliver services at White Laith. We recognise our responsibility to safeguard and promote the welfare of all our pupils by protecting them from physical, sexual or emotional abuse, neglect and bullying.

We also exercise this responsibility by educating our children so that they grow in their understanding of their rights and responsibilities to themselves and others, in safety consciousness, and, in their maturity and abilities to keep themselves and others safe.

We perceive this to be part of our role in promoting British values

School Aims

Through commitment, determination and a willingness to embrace change we will:

- Develop independent, effective learners who enjoy school and who will become life-long learners
- Create a cohesive school community in which there is mutual understanding, trust and respect
- Empower staff and children by raising confidence, self-esteem and self-belief
- Equip children with the attitudes, qualities, skills and understanding they need for success in our ever-changing, diverse world
- Bring about optimum achievement for every child
- Become an excellent school

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

Progression and continuity

The basis for each year groups' work is found in the National Curriculum for design and technology. Teachers will use various resource including, junk, construction kits, rigid and flexible materials, fixings, adhesives, interactive resource, ICT devices including digitals video cameras.

Design and technology will be embedded into each year groups' topic with the aim to ensure that design and technology becomes as 'real life' as possible. Therefore, timings of lessons will differ each week.

In design and technology, children will have the opportunities to participate in activities...

- to develop corporation skills.
- to develop plan and communicate ideas.
- to practical skills such as cutting, measuring, joining and fixing.
- to working with tools, equipment, materials and components to make quality products.
- to evaluate processes and products.

- to develop Knowledge and understanding of materials and components.

The Medium and Short Term Planning ensures that clear learning objectives, outcomes and assessment criteria are highlighted at each stage.

Progression is ensured as follows:

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].

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.

Differentiation and Entitlement:

Our aim is to present a differentiated curriculum that extends and fulfils the needs and potentials of every learner. Differentiation is provided through:

- the modification of tasks and activities that take into account individuals' strengths and weaknesses and enable them to participate at an appropriate level
- the provision of support by a teacher or TA
- the expectations of outcomes of tasks and valuing individual achievements and contributions.

Inclusion and Equality of Opportunities:

Our school aims to be an inclusive school. Within the teaching of design and technology, we aim to ensure that all pupils regardless of gender, ethnic origin, cultural background or ability have full access to the design and technology curriculum. Teachers respond to diverse learning needs so that pupils are appropriately supported and challenged to experience success in learning and achieve as high standard as possible.

Embedding design and technology in the curriculum and exploiting opportunities

At White Laith, we have a cross curricular approach to learning. Topics are planned to apply skills across the curriculum. Questions are used to inspire and motivate children's learning experience and deepen their understanding and involvement. Visits, visitors, resources and artefacts enhance the learning experience.

Where possible we are hoping to involve the wider communities by:

- Networking with other primary schools
- Involving of other adults / children to enhance pupils' experience

Staff roles and responsibilities:

The design and technology subject leader is responsible for:

- taking an overview of the whole school planning to ensure that there is continuity between year groups and that progression is taking place;
- supporting colleagues in their medium and short term planning to support in developing pupils' capability
- identifying needs and arrange training so that all staff are confident in how to teach and assess design and technology
- preparing an annual Subject Standard Statement to be shared with Governing Body
- monitoring overall standards and quality of teaching and learning

- monitoring pupils' overall progress on a regular basis so that potential underachievement can be identified and addressed as soon as possible
- ordering, updating and allocating resources
- keeping up to date with changes in the statutory orders and communicate it to staff
- attending relevant courses
- planning programme of INSET as part of the SDP
- updating the SLT and the governing body on any developments or changes in the policy
- managing the implementation of the school policy, updating the policy and scheme of work

Class teachers are responsible for:

- medium and short term planning
- ensuring that design and technology learning objectives are covered
- providing feedback to the design and technology leader indicating resources and training needs
- assessing the work and progress of pupils
- looking after and returning resources
- participating and acting upon training

Assessment, record keeping and reporting

The National Curriculum descriptors are used to describe the range of performance that the majority of pupils' will characteristically demonstrate at the end of each year. It is expected that most children will achieve the standard of the appropriate End of Key Stage Description. Teachers will indicate the extent to which a pupils' attainment relates to this expectation. This will be based on the ongoing informal assessments the teacher makes which is integral to teaching. Records of planning for each year group will provide information on the range of experiences and activities our children have encountered.

Assessment is both formative and summative and is used to support teaching and learning and inform future planning. (See assessment policy).

Feedback to pupils

We give children verbal feedback on their work whenever possible. We usually do this when the children are working during the lesson, although we sometimes give feedback on a particular lesson at the beginning of the next one. When lesson time does not allow for verbal feedback, we write comments on the children's work during marking. We give written comments to children of all ages.

When we give written feedback to a child, we relate this to the Learning Outcome and/or Success Criteria for the lesson. We make clear whether the objective has been met, and we produce evidence to support our judgement. If we consider that the objective has not been met, we make it clear why we think so. In either case, we identify what the child needs to do in order to produce (even) better work in the future.

Having children assess their own or each other's work can be very effective, because it enables them to clarify their ideas on progressing to the next step. Success Criteria are provided which enable the pupils to do this effectively.

We allow time during lessons for the children to absorb any comments written on their work, to answer any questions written on it by the teacher, and also to ask any questions of their own. There may also be improvements they can work on during this time.

Monitoring and review:

Monitoring is carried out regularly by the design and technology subject leader in the following ways:

- Informal discussion with staff and pupils
- Delivery of planning / lesson observation
- Observation of displays

Feedback is provided to staff, senior managers and governors following monitoring. It is used to inform CPD needs. Any resource requirements are also identified and purchased according to needs and budget as stated in school development plan. Resources requirement are clearly laid out in each unit of work and readily available for each member of staff to use.

This policy is a practical working document for the teaching and learning of design and technology throughout the school. It is therefore subject to regular review in the light of experience, monitoring and changes to national guidance.

Moderation of standards

All subject leaders study examples of children's work within their subject area. Subject leaders use the national exemplification materials to make judgements about the levels of the children's work. All our teachers discuss these levels, so that they have a common understanding of the expectations in each subject.

Opportunities to moderate judgements are planned throughout the year. By doing this, we ensure that we make consistent judgements about standards in the school.

It is each subject leader's responsibility to ensure that the samples that they keep of children's work reflect the full range of ability within each subject.

The Governors ensure that the statutory requirements are met.

This policy will be reviewed every three years, or earlier if necessary.