Forest Hall Primary School

Design and Technology Policy

Adopted: June 2019

Review date: June 2022

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Design Technology Policy

Purpose

"*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 2014]*

Aims

The teaching of design and technology at Forest Hall Primary school aims to ensure that all pupils:-

- Develop practical problem solving skills needed to perform tasks in a wide range of contexts.
- Build and apply a repertoire of knowledge, understanding and skills to design and make products using a range of tools, materials, equipment and technology effectively.
- Evaluate and test their ideas, products and those of others
- Develop an understanding of basic nutrition and begin to learn how to cook basic dishes.

We aim to provide opportunities for pupils to experience designing, making and evaluating, using a wide range of materials including card, textiles, construction materials and ingredients.
We aim to develop pupils' design and technology capability through:

- Providing meaningful tasks / projects that allow pupils to develop and formulate ideas based on design criteria through discussion and planning
- Providing opportunities to develop and refine practical skills such as cutting, shaping, joining and finishing
- Providing activities which build technical knowledge, understanding how to strengthen structures and use mechanisms such as levers, sliders, wheels and axles.
- Providing opportunities to evaluate and discuss end products.
- Providing a range of learning contexts linked to half term topics, which reflect the breadth of the curriculum and SMSC.
- Providing the opportunity for pupils to work independently, in pairs and groups
- Providing a safe working environment.

Teaching and Learning

Design and technology is planned for across the key stages, meeting statutory guidelines and taught as projects within themed half term topics, allowing pupils to combine knowledge and skills from a wide range of other curriculum areas. Learning activities are planned to build on prior learning to ensure progression and so that pupils extend their repertoire through enjoyable practical activities, making good quality products, fit for their intended purpose.

- Medium term plans identify skills to be taught and expected outcomes linked to the half term theme.
- Weekly plans detail the learning intention and how the lesson is to be taught.

Pupils will be taught to consider their audiences when developing design briefs, fit for their product. Pupils will use an iterative design process whereby ideas may be transformed into objects as they continually evaluate their work.
They will also have the opportunity to disassemble, investigate and evaluate existing products.

Early Years Foundation Stage
EYFS pupils begin to develop the skills, knowledge and understanding needed to make sense of their world through the linked aspects of the EYFS curriculum and forms the foundations for later work in design and technology. They follow a themed approach each half term covering the aspects of learning and offering activities which 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 materials safely and with increasing control.

Key Stage One
Through a variety of creative and practical activities linked to the half termly theme and through a range of relevant contexts, pupils begin to acquire the knowledge, skills and understanding needed to engage in the iterative process of designing and making.

Design – follow design criteria to design functional, attractive products for an identified end user. Generate, model and communicate ideas through discussion, drawing templates, creating mock-ups and use of technology

Make – select and use appropriate tools to perform a task and select and use appropriate materials according to the design brief.

Evaluate – explore and evaluate existing products and evaluate their own ideas and products against design briefs

Technical knowledge - Specifically be able to build structures and know how they can be made stronger and more stable

Cooking and nutrition – understand where food comes from and understand the basic principles of food groups to make up a healthy and varied diet.
Experience making food from basic recipes.

Key Stage Two
Design –research and develop design criteria to design innovative, functional, attractive products, fit for purpose for an identified end user.
Generate, model and communicate ideas through discussion, annotated sketches, diagrams, prototypes, pattern pieces and use of technology

Make – select from and use a wider range of appropriate tools to perform a task accurately and select from and use a wider range of appropriate materials according to their properties.

Evaluate –investigate and analyse existing products and evaluate their own ideas and products and consider the views of others to improve their work.
Understand how key events and individuals in DT have helped shape the world.

Technical knowledge – apply understanding of how to strengthen more complex structures.
Understand and use mechanical systems in their products eg gears and levers**.**
Understand and use electrical systems eg switches, buzzers and motors.

Use technology to program and control products made.

Cooking and nutrition –understand what constitutes a healthy and varied diet and the consequences of following a diet which is not nutritionally sound.
Prepare and cook a range of mainly savoury dishes using different techniques.
Understand the seasonal availability of produce and how various ingredients are grown, caught and processed.

Time Allocation

DT activities can be taught in weekly sessions over a half term gradually building up to an end product or in blocked sessions over a week to complete the design process.
Each year school holds STEMFest which is a week when all classes come off timetable to focus on a cross curricular topic drawing upon the practical application of knowledge, skills and understanding in science, technology, engineering [DT] and maths.

Inclusion

At Forest Hall Primary School there are pupils of differing abilities in different subjects in every class. We recognise that not all pupils with ability in literacy and numeracy have similar skills in DT and that pupils experiencing challenge in meeting expectations in literacy and numeracy can demonstrate skills and prowess in more practical tasks. We intend all pupils to enjoy the opportunity to develop creativity and imagination in this practical subject by providing suitable learning opportunities for all pupils by matching the challenge of the task to the ability of the pupil through a range of strategies

- setting common tasks that are open-ended and can have a variety of results
- providing challenge through the provision of different tools, equipment and materials
- modifying or scaffolding tasks
- using additional adults to support the work of individual children or small groups

Resources

DT tools and materials are purchased to resource year groups' projects in DT, then kept in the large storeroom. Cooking ingredients are not kept in school. Teachers are advised to check stock levels at least 3 weeks prior to commencing a unit of work. Ingredients for food technology are purchased as needed.

Health and safety

Risk assessments are put in place for practical lessons and safety procedures and ratios of pupils per adult are followed with particular equipment to ensure complete safety.
Where pupils are to participate in activities outside the classroom e.g. on a visit, a risk assessment is completed prior to the activity to ensure that the activity is safe and appropriate for the pupils.

Teachers model 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 handling of food stuffs
- The use of cooking appliances - ovens and hobs
- Contact with sharp objects including wood, nails, needles, saws etc.

It is the duty of all staff taking part in DT activities 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:
- Pupils must not use cooking appliances unless under direct adult supervision. Portable ovens may be used in class in a discreet area away from the pupils at the teacher's discretion
- Saws and other sharp objects (nails, needles, knives, graters 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 pupils in the 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 appropriately and refrigerated if necessary.
- Food is not to be used after the use by date.
- Teachers and support staff must oversee that utensils, pans, work surfaces, cooker etc, are clean and in working order prior to the activity and ensure that equipment is washed and returned after the activity.
- Pupils must wash their hands before and after any contact with food and other potentially harmful substances
- Teachers must take into account pupils' food allergies and check prior to starting the activity.

Assessment

As this is a practical subject, teachers assess end products in relation to design briefs or learning intentions over the year to make a written comment summarising skills, knowledge and engagement in the annual report to parents/carers.

Evidence of activities may be in the form of photographs, annotated designs and evaluations in topic work books.

Monitoring

The leadership team oversee the coverage of the thematic curriculum and monitor teachers' planning to ensure that the programmes of study for design and technology are being covered.

Roles and Responsibilities

The Governing Body is responsible for ensuring compliance with the legal requirements of the National Curriculum. The Curriculum Sub-Committee are responsible for the approval and review of this policy. There is a nominated governor for STEM, who may liaise with the headteacher and subject lead and report back to the governing body.

The headteacher will monitor the effectiveness of this policy by:
- Ensuring all teaching staff are aware of and comply with this policy
- Ensure compliance with the legal requirements of the National Curriculum
- Maintain and overview of the provision of DT across school
- Ensure the provision of adequate resources through the school budget.
- Provide leadership and vision in respect of equality

- Provide guidance, support and training to all staff

The leadership team will monitor the effectiveness of the teaching of design and technology by:

- Observing teaching and learning
- Monitoring teachers' planning, conducting work scrutiny and learning walks
- Having discussions with pupils
- Ensuring continuity and progression of knowledge and skills throughout the school
- Provide guidance and support to all staff

Class teachers will:

- Devise medium and short term planning following the programmes of study
- Develop pupils' knowledge, understanding and skills through links with the half termly theme
- Plan and deliver engaging lessons
- Ensure pupils handle tools and equipment with care, work safely and hygienically when cooking
- Evaluate and feedback to pupils on end products achieved
- Report on progress and attainment following school guidance.

Parents/carers are encouraged to take an active role by joining the school in celebrating success of their child's learning through attending progress evenings, assemblies and open morning sessions. They are informed via termly newsletters of their child's topics and encouraged to show support in the completion of homework.
Parents support their child by having them at school on time and ready to learn.

Pupils support their learning by always trying their best and being ready to learn.

Links to Other Policies

- English Policy for standards relating to quality of written work.
- Computing policy
- Art and Design policy
- Marking and Feedback policy
- Health and Safety policy

Review Date
This Policy will be reviewed by the leadership team following consultation with staff and the Governing Body of our school three years from ratification by the Governing Body.

CM Parker
Headteacher
June 2019