Vernon Primary School

Design Technology Policy

The intent of the Design & Technology curriculum at Vernon Primary School is to provide every pupil with:

- Significant levels of originality and the willingness to take creative risks to produce innovative ideas and prototypes.
- An excellent attitude to learning and independent working.
- The ability to use time efficiently and work constructively and productively with others.
- The ability to carry out thorough research, show initiative and ask questions to develop an exceptionally detailed knowledge of users' needs.
- The ability to act as responsible designers and makers, working ethically, using finite materials carefully and working safely.
- A thorough knowledge of which tools, equipment and materials to use to make their products.
- The ability to apply mathematical knowledge.
- The ability to manage risks exceptionally well to manufacture products safely and hygienically.
- A passion for the subject and knowledge of, up-to-date technological innovations in materials, products and systems.

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. 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.
(DFE, 2013)

Introduction

This document is a statement of the aims, principles and strategies for teaching and learning Design and Technology at Vernon Primary School. It is based upon practice within our school and reflects the National Curriculum.

Subject Aims

Design and Technology is a foundation subject within the National Curriculum. It prepares children to take part in the development of tomorrows' rapidly changing world. Creative thinking encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team.

The intent of Design & Technology

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In all classes there are children of differing abilities. 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. Our pupils will therefore work at the level appropriate to their ability.

The Principles of Teaching and Learning Design and Technology

The school uses the National Curriculum and 'milestones' as the basis for its curriculum planning in Design and Technology. The subject needs to be taught in context as it contributes to our social and cultural understanding. It does this by exploring the contribution of products to the quality of life and by understanding the responses of people from different cultures to design problems they face.

The inclusion of a range of Design and Technology contexts should permeate all activities, rather than being seen as a one-off project. There is an integrated learning environment that is reflected in the choice of design briefs, teaching and learning materials displayed and products chosen for evaluation.

Products and systems from different cultures and contexts should be valued and understood in there own right. Products cannot be isolated from the people who develop and use them or from an interaction with the environment. Analysing and evaluating existing products and their applications teaches pupils a great deal about how products are designed and manufactured. Pupils' critical awareness and knowledge will be developed and they can use what they have learnt to inform their own design techniques. They can also identify the choices made by a

designer, the thought processes behind these decisions, and outside factors that inspired and constrained the product.

Key Skills

Practical skills and processes: assembling, joining, cutting, bending, forming, tying, shaping and modelling, problem solving, testing, finishing, colouring, organising materials, clearing away, using tools safely.

Perceptual skills: analysing, observing, planning, evaluation, investigating, problem solving, decision making.

Personal qualities and attitudes: creativity, enterprise, imagination, initiative, flexibility, invention, motivation, perseverance, reliability.

Planning

Design and Technology planning is based on the National Curriculum; plans for Reception are based on the 'Early Learning Goals', and we use the 'Essentials' milestones as a reference point for progression in Years One to Six.

All teachers are involved in the planning of Design and Technology which is monitored by the Head teacher, Assistant Head teachers, SLT and the subject leader. Further details are as follows:

- The curriculum map for each year group identifies the Design and Technology units to be covered in each term and ensures an appropriate balance and distribution of work in Years One to Six. This also outlines a designer or architect linked to the topic for them to study.
- The holistic overview for each year group provides further details of the units of work for each term including: learning objectives, outcomes and cross-curricular links for each unit. The Design and Technology subject leader reviews these plans on a regular basis.
- Teachers may write individual lesson plans detailing specific learning objectives and outcomes and outlining how the lesson will be taught.

Teachers are responsible for annotating their plans to identify successful aspects of lessons as well as any areas or gaps which may inform future planning.

Remote Learning

Where remote learning takes place due to closures/lockdown, Google Classroom is being used to support vital online learning at Vernon Primary School. The children will be able to access teaching and learning securely using this platform. Any tasks submitted by the children will be marked by a member of staff with a brief comment related to the learning objective.

Progress and Continuity

Within the Early Years Foundation Stage opportunities are created for children to learn through first hand experiences. They will be encouraged to explore, observe, solve problems, think critically, make decisions and to talk about why they have made them. Children are encouraged to use their imaginations and respond to sensory experiences using a range of materials. They will experience construction, cooking and using a range of tools.

The use of an integrated and holistic approach to all areas of the curriculum at Key Stage 1 and 2, allows teachers to decide on the time allocation for a Design and Technology project. It may be more effective to work on an intensive project until completion, achieving a balance with other curriculum subjects over the longer term. However, class teachers and the Design and Technology subject leader endeavour to ensure that the subject is effectively represented in terms of the overall timetable in each class, through the monitoring of long term plans.

Assessment

When assessing a child's progress in Design and Technology, teachers need to consider:

- Knowledge of a variety of materials, tools and equipment
- Understanding of mechanisms and structures
- Ability to use materials and equipment safely
- Ability to communicate the design ideas and explain the purpose of what they are doing
- Interest and motivation in designing and making
- Ability to appreciate and produce items of quality
- Ability to evaluate their idea and products against their own design criteria.

Feedback is given three times each year in the form of two meetings with parents in the Autumn and Spring terms and an annual written report sent out to parents in the Summer term. Reports focus on appropriate use of tools, ability to design for a purpose, and evaluation of work.

Roles & Responsibilities

The Headteacher will:

- Actively support and encourage staff, praising good practice and supporting staff development.
- Encourage in-service training and provide resources.

The Design and Technology Leader will:

- Create an action plan to develop Design and Technology within the school.
- Take the lead in policy development.
- Encourage colleagues in their Design and Technology teaching and give support where appropriate.
- Audit resources regularly and take overall responsibility for the provision of equipment.
- Keep a portfolio of Design and Technology experience within the school that will include photographs of pupils at work, curriculum walk reports and examples of planning and of pupils' work.
- Keep staff informed of developments or changes in the Design and Technology curriculum.

The Class Teacher will:

- Develop and update their skills, knowledge and understanding of Design and Technology.
- Identify CPD needs and attend training sessions.
- Plan and teach stimulating and inspiring Design and Technology lessons that foster a love of the subject.
- Provide valuable and regular feedback to the pupils.
- Evaluate their planning.

The Teaching Assistant will:

- Support the class teacher in delivering Design and Technology, and in particular, support those children with Special Educational Needs where timetabled to do so.

Resources

A variety of resources are provided for the children and they are encouraged to make choices for themselves. Resources required for work-in-progress are made accessible to the children within the classrooms or practical area. Tools and material are stored centrally and potentially dangerous equipment is stored in each class teacher's room or in the main storage area.

ICT Implementation

Opportunities for the use of ICT are included in lesson plans. These help children's learning by:

- Enhancing their skills in designing and creating products.

- Providing a range of information sources such as databases to find properties of materials or nutritional value of foods.
- Collecting and presenting information.
- Presenting their designs in a concise manner.
- Contributing to children's awareness of the impact of ICT on the changing world
- Using a digital camera to record outcomes and to evaluate work having scanned an image.

Special Educational Needs

Within each lesson, activities are planned so that all children are encouraged to participate. Teachers use appropriate differentiation within their planning to ensure that all pupils are being challenged at their own level. This allows all children to develop in confidence and express themselves as success in Design and Technology does not depend on academic ability.

Health and Safety

An important aspect of Design and Technology is the requirement to develop the children's awareness of the need to work safely with due regard for the health and safety aspects. Children will be shown how to use equipment correctly and will be given the opportunity to practice skills and techniques under supervision. Annual Health and Safety checks are carried out in line with the schools Health and Safety policy. Teachers are continually made aware of the need for vigilance in this area.

Teachers are the final decision makers concerning safety in their classroom. If there is any doubt about how to work safely, or the capacity to provide the necessary level of supervision then the activity should be postponed until advice from the Subject Leader or Head teacher has been obtained. If activities are deemed to be dangerous, then alternatives should be sought.

Monitoring and Review

We are aware of the need to regularly review our policies to take into account any new initiatives, changes in curriculum or developments in technology.

Amy Muir
Subject Leader for Design and Technology

Policy date – July 2021
Review Date – July 2024
Ratified by Governors – July 2021