DESIGN & TECHNOLOGY GUIDELINES (CURRICULUM)

Reviewer: Jane Mackie

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Introduction

This document is a statement of the aims, principles, strategies and procedures for the teaching and learning of Design and Technology throughout the school.

Intent

Design and Technology in Whitegrove develops children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials, including food. It encourages children's creativity and encourages them to think about important issues and the ever-changing world in which they live.

Design and Technology education involves two important elements - learning about the designed and made world and how things work, and learning to design and make functional products for particular purposes and users.

At Whitegrove, children investigate and evaluate how products and systems are designed and manufactured. They are encouraged to be innovative and to make creative use of a variety of resources including digital technologies, to improve the world around them. Design and Technology, alongside other STEAM subjects, gives children the opportunity to develop skills, knowledge and understanding of design and its importance in the modern world.

Design and Technology is a practical and valuable subject. At Whitegrove, we hope to enable pupils to actively contribute to the creativity, culture, wealth and well-being of themselves, their community and the wider world. Design and Technology allows children to take risks and so become more resourceful, innovative, enterprising and capable.

Aims

- To develop children's designing and making skills,
- To teach children the knowledge and understanding, within each child's ability, that will be required to complete the making of their product,
- To teach children the safe and effective use of a range of tools, materials and components,
- To develop children's understanding of the ways in which people have designed products in the past and present to meet their needs,
- To develop children's creativity and innovation through designing and making,
- To develop children's understanding of technological processes, their management and their contribution to society.

National Curriculum

At Key Stages 1 and 2, schemes of work are planned in accordance with the requirements stated in the National Curriculum document. Cross-curricular links are explored where appropriate, including the use of ICT.

Planning & Teaching

Design and Technology engages the children in a broad range of designing and making activities involving a variety of methods of communication, e.g. speaking, designing, drawing, assembling, making, writing and using information and communication technology.

These activities are differentiated through careful planning and the selection of resources appropriate for different ages and abilities. All children are encouraged to design and make and are challenged in designing and making. Teachers of parallel classes plan D&T using our curriculum themes to contextualise the children's making.

Projects are taught in blocks allowing for more effective learning in which teachers can focus on DT skills. Teachers ensure that they have a clear idea of the skills, knowledge and understanding to be taught in each unit of work. Units of work are selected and planned to ensure a balance of materials, skills, knowledge and understanding throughout each Key Stage.

Units of work (based on the Design and Technology Association's Project on a Page) are planned to include *Investigative and Evaluative Activities* (IEAs), *Focused Tasks* (FTs) and *Design, Make, Evaluate Assignments* (DMEA). Each unit is child led and allows flexibility in planning and outcome. All children should have a breadth and balance of experience. Care is taken to ensure activities do not have a gender bias. Use of multicultural stimuli wherever possible enhances and enriches design possibilities.

At Whitegrove, we use cross-curricular or themed weeks to engage the whole school or individual key stages in various STEAM projects. During such weeks, the children have a specific focus and learn, utilise or extend key D&T skills. The staff follow a clear progression of D&T skills and vocabulary to ensure continuity across the school.

Implementation

Progression for all pupils

At Whitegrove we provide a broad and balanced curriculum for all our pupils. We recognise the fact that there are children of widely different abilities and varying needs in all classes, and we provide suitable learning opportunities for all children by differentiating activities within DT to ensure that the specific needs of individual children are best met. Children are encouraged and supported to develop their skills in this subject.

We achieve this by:

- responding to pupils' diverse learning needs;
- setting tasks which are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty;
- providing resources of different complexity, according to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children.

- increasing both the degree of skill (e.g. sewing stitches) and knowledge and understanding.
- this means asking and answering increasingly challenging questions to develop a deeper understanding of a wide range of skills and concepts.

Assessment

Children's progress in DT is assessed against the Age-Related Expectations. These describe the types and range of performance that the majority of pupils should characteristically demonstrate, having been taught the relevant programmes of study. Assessments should be made against the agreed original design brief and objectives chosen at the beginning of each project.

As of September 2022, all children complete written DT work in a DT specific work book. These books will be passed on as a child moves through the school to demonstrate their progress in all areas of the design process. Photographic records of all finished products should also be kept and used as part of the evaluation process.

Hygiene and Safety

It is important that children are taught essential life skills to enable them to participate confidently and safely in designing and making in society. Teachers have a duty to introduce children to a wide variety of production processes and the correct tools for the task. Children must design considering health and safety issues and consequences and operate in a safe and hygienic manner when designing. The subject leader, if required, supports teachers to teach the skills necessary ensuring that children can design and make safely. Teachers can refer to Primary DT National Curriculum Guidance folder which highlights safe practice when using tools/materials and equipment in KS1 and KS2 (in resources cupboard). Additional support is available on the data.org website.

The Role of the Design & Technology Subject Leader

The main task of the DT Subject Leader, in consultation, is to support colleagues and so improve the quality and continuity of DT teaching in the school. During the Autumn term 2022, all staff will be introduced to the new scheme of work (POAP) and begin to incorporate into the units into their year group planning. Our aim is to deliver three DT units per year group (including one food-based unit) during each school year.

The subject leader is responsible for:

- Supporting and working with colleagues and keeping them informed of changes and developments within their subject;
- Monitoring the relevance, continuity and progression of the DT curriculum throughout the school and recommending any action needed;
- Providing advice about the DT guidelines and schemes of work;

- Keeping, updating and extending resources, ensuring staff are aware of their availability and identifying future needs;
- Keeping own skills and knowledge up to date through reading and attending relevant courses and by developing links with sources of expertise and information beyond the school.