Design & Technology Policy

Wheatley Hill Community Primary School

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Wheatley Hill Primary School Design & Technology Policy

At Wheatley Hill Primary school we aim to provide an engaging curriculum that ensures our children become caring, confident, capable and creative individuals. This policy is a statement of our aims, principles and strategies for the teaching of Design & Technology at Wheatley Hill Primary School.

Introduction:

This policy outlines the purpose, nature and management of the Design & Technology taught and learnt in our school. Design & Technology is a foundation subject within the National Curriculum. The school policy for Design & Technology reflects the consensus of opinion of the whole teaching staff. It has been drawn up as the result of consultation with staff and has the full agreement of the governing body and teachers. The implementation of this policy is the responsibility of all the teaching staff.

Rationale for Design & Technology Teaching

Design & Technology is an integral part of the curriculum as it prepares children to take part in the development of today's rapidly changing world. Design & Technology develops children's creative thinking and encourages children to become independent and creative problem-solvers, as individuals and as part of a team. Design & Technology is a focus within the curriculum for understanding practical skills in food technology, textiles, structures and stability, mechanisms and woodwork, as well as understanding aesthetic, social and environmental factors when designing and making. The subject allows children to become informed consumers and potential innovators.

Design & Technology aims:

At Wheatley Hill Primary School we aim:

- To provide a range of exciting opportunities, both in and out of the classroom, which encourage children to build interest and enjoyment, knowledge, understanding and confidence, as well as allowing them to achieve to the maximum of their potential in the subject.
- To encourage children to develop their Design & Technology skills independently during continuous provision.
- To develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making.
- To develop a range of skills where children can select appropriate tools and techniques for making a product, whilst following safe procedures.
- To adopt an enquiring approach to the world around them, developing in their ability to formulate appropriate questions, research, handle data and draw conclusions.
- To develop the ability to critique, evaluate and test their ideas, products and the work of others.
- To instill a love of cooking in pupils, which is a crucial life skill.

Skills & Knowledge

Skills and knowledge are an integral part of Design & Technology teaching. Our curriculum is based on the teaching of skills (underpinned by knowledge) and therefore they are included in each lesson. The skills & knowledge are outlined on each year groups progression document. The teaching of skills & knowledge progresses through each year group to ensure children are given opportunities to build on and achieve each area. Children are given the opportunity to apply skills they have learnt, independently, during continuous provision.

The Role of the Design & Technology Co-Ordinator is to:

- Ensure the Design & Technology curriculum meets the aims and objectives of the school.
- Support, guide and motivate teachers and other adults of the subjects
- Ensure colleagues are aware of current initiatives.
- Evaluate and monitor the effectiveness of teaching and learning within the school.
- Monitor progress towards targets for pupils and staff to inform future priorities and targets for the subject through:
    - Book scrutiny (workbooks and floor books)
    - Scrutiny of planning
    - Lesson observations
    - Looking at displays and photographs
    - Discussions with staff
    - Analysis of assessments
    - Arranging appropriate CPD for staff members
- Review current practice in school, evaluating strengths and areas for development
- Lead staff meetings as appropriate
- Review and revise policy
- Audit resources and order resources when needed
- Keep regular contact with Governors
- Write School development plan and a SEF
- Attend relevant in-service training and prompt others about relevant training
- Representing the school in local cluster groups

Early Years Foundation Stage:

Design & Technology in EYFS is taught as an integral part of the topic work covered during the year. We relate the Design & Technology aspects of the children's work to the objectives set out in the EYFS, Expressive Arts & Design, which underpin the curriculum planning for Foundation Stage children. Children in EYFS explore and use a variety of media and materials through a combination of child initiated and adult led activities. Children develop skills within structures & stability, mechanisms, food technology, textiles and woodwork skills. Children have the opportunity to develop learnt skills independently during child initiated play through continuous provision which gives children access to a variety of DT resources, including a woodwork table. Work is evidenced in floorbooks and through the children's individual learning journals.

Key Stage One:

The National Curriculum Programmes of Study at Key Stage One focuses on developing children's knowledge, understanding and skills needed to engage in an iterative process of designing and making. Children should be encouraged to work in the classroom, in gardens and playgrounds, the local community and the wider environment to develop the above skills.

Pupils should be taught to:
- 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.
- 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.
- Explore and evaluate a range of existing products
- Evaluate their ideas and products against design criteria
- 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.
- Use the basic principles of a healthy and varied diet to prepare dishes.
- Understand where food comes from.

Each of the points above are taught and revisited several times throughout Key Stage One.

Key Stage Two:

The National Curriculum Programmes of Study at Key Stage Two also focuses on developing children's knowledge, understanding and skills needed to engage in an iterative process of designing and making.

Pupils should be taught to:
- 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.
- 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.
- 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
- 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.
- 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.

Each of the points above are taught and revisited several times throughout Key Stage One.

Capturing learning within Design & Technology:

Pupils record their work in their DT workbook which will show a unit of work. Within the unit, the children will show a progression of skills, they will plan, make and evaluate their design. Design & Technology may also be captured in class floorbooks. Floorbooks are used to evidence whole class activities, show learning stories for DT and show any skills developed during continuous provision.

It is important that children's success in DT is acknowledged and celebrated. This can be done through displays in classrooms and in communal areas of the school.

Planning of Design & Technology:

Long Term Plans:

The Design & Technology curriculum follows the skills outlined by the National Curriculum. The skills presented on the schools long term plans are taken directly from the National curriculum for both Key Stages One and Two, as well as the Design & Technology progression document which clearly outlines the progression of skills for each year group. Along with other foundation subjects, Design & Technology is taught in block units.

Medium Term Plans:

Our medium-term plans break down the yearly overview into smaller steps providing clear details of the skills taught within each unit. Each year group has been provided with a progression document which outlines clearly all of the Design & Technology skills and objectives that need to be taught. The document splits the objectives into five categories including: Tools, Mechanisms, Structures & Stability, Food Technology and Textiles. The document also outlines key vocabulary which children need to be taught alongside each unit.

Short Term Plans:

The class teacher is responsible for writing the plans for each lesson (short-term plans). These weekly plans list the specific learning objectives and expected outcomes for each lesson and give details of how the lessons are to be taught.

Through Design & Technology we can also:

- Improve pupils' skills in reading, writing, maths, computing, science, art & design, history
- Develop pupils' thinking skills
- Develop pupils as active citizens
- Develop independent learning and collaborative skills
- Develop problem solving skills

Cross-curriculum links in Design & Technology:

English:

Children are encouraged to plan and evaluate their designs.

Mathematics:

Children develop mathematical skills when planning and measuring their designs. Children need to be able to measure and weigh accurately.

Science:

Children will gain an understanding of healthy eating and properties of materials.

Computing:

Children are encouraged to use computing as a tool for product advertising, research, data handling and to develop word processing skills.

Art & Design

Children plan how to use materials to make a final product and use finishing techniques.#

History

Children learn about the history of products, inventions and materials.

Assessments:

Assessment is an integral part of teaching and learning in school. Children's progress should be monitored through observation and worked produced against the teachers planning and learning objectives. Class teachers will assess children using the assessment sheets located at the end of the Design & Technology progression document. The Design & Technology Co-Ordinator will keep a copy of these levels. The assessment sheets then inform future planning as well as to sustain continuity between classes and progression of pupils learning.

Marking and feedback

Feedback to pupils should be provided on their attainment against the objectives of Design & Technology. During DT lessons teachers assess the children through observation, questioning, speaking and listening activities and through written tasks. Verbal feedback is provided to all children for every DT task to encourage the children to guide their own progress.

Monitoring and Evaluating:

Design & Technology will be monitored throughout the school by the Design & Technology co-ordinator who will be responsible for gathering samples of curriculum work.

The Design & Technology Co-ordinator will also monitor Design & Technology planning and children's workbooks to ensure that objectives and skills are being effectively taught and match the needs and abilities of the pupils.

Lessons ideally will also be monitored to help promote quality of learning and standards of achievement in Design & Technology.

The Design & Technology Co-ordinator will be responsible for evaluating Design & Technology within the school and ensuring appropriate strategies are put in place to improve.

Equal opportunity:

In line with our Equal Opportunities Policy, we are committed to providing a teaching environment that promotes learning. Children are given opportunities to work with others, listen to each other and treat everyone with respect:
- We plan our classroom activities to challenge and involve all pupils appropriately, according to age and capability, ethnic diversity, gender and language background.
- We are aware of different learning styles and the need to allow pupils to be able to work in their preferred learning styles for some of the time.
- We use materials for teaching which avoid stereo-typing, and bias, towards race, gender, role or disability.
- We deal with such issues clearly and sensitively when they arise.

Scaffolding & Differentiation:

At our school, we teach Design & Technology to all children, whatever their ability. Design & Technology forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our Design & Technology teaching we provide learning opportunities that enable all pupils to make progress. We use a range of strategies to support pupils and ensure that pupils' needs are catered for in each aspect of the curriculum. A few of these, particularly relevant to Design & Technology are:

- Different levels of written or oral planning and evaluations for pupils.
- The use of computing.
- Careful use of support for pupils with English as an additional language.
- Tools to support children with less able fine motor skills.

Our assessment process looks at a range of factors: classroom organisation, teaching materials, teaching style, and differentiation, so that we can take some additional or different actions to enable the child to learn more effectively. This ensures that our teaching is matched to the needs of all children.

To ensure all children achieve their full potential, intervention groups may be created. These groups would focus on key objectives identified by the class teacher. Interventions may be taught separately or additionally to the full class Design & Technology lesson. Staff delivering the interventions will use a variety of materials to further support children and where necessary these children may take part in 'pre-teach' sessions to ensure good progress within Design & Technology.

For our more able pupils we will expect:

- Greater independence in working, e.g. a pupil to be able to carry out their own design.
- Avoid giving gifted pupils additional writing tasks and encourage them instead to communicate their understanding in a variety of ways, giving them responsibility for choosing and evaluating the most appropriate method.
- Provide opportunities within Design & Technology for children to design structures for outside of school, for a purpose.
- Opportunities to make the school more environmentally sustainable.

Resources:

Cookery boxes of resources are stored in the resource cabin, available for all teachers to use during their lessons. There is a sign in and sign out sheet for teachers to record which resources they have used. The Design & Technology Co-Ordinator will pre-order resources which are required for each unit for each year group. The resources will then be distributed out to the class teachers.