Royal Borough of Kingston upon Thames

Green Lane Primary and Nursery School

Design and Technology Policy

Reviewed: Autumn 2017   Agreed: Autumn 2017   Review: Autumn 2019

Design and Technology Policy

Rationale

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 wider world. At Green Lane, children are supported in developing their skills to fulfil their potential and learn to appreciate the place of Design Technology in the world around them.

Aims and Objectives

In Design and Technology children will have the opportunity to:
- develop the creative, technical and practical expertise needed to perform 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 purposes
- 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

They will acquire and apply knowledge and understanding of:
- designing
- making
- evaluating
- technical knowledge
- health and safety

By the end of key stage 1, most children will be able 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
- select from and use a range of materials and components, including construction materials, textiles and ingredients
- 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 in their products

By the end of key stage 2, most children will be able to:
- use research and develop design criteria to inform the design of products that are fit for purpose
- generate, develop, model and communicate their ideas through discussions, annotated sketches, diagrams, prototypes, pattern pieces and computer- aided design
- select form and use a wider range of tools and equipment to perform practical tasks
- select form and use a wider range of materials and components
- 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 structures in their products
- understand and use electrical systems in their products
- apply heir understanding to program, monitor and control their products

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Teaching and learning style
Design and Technology is taught through class specific topics and the processes are presented during 'Fantastic Finales'.

The teaching of DT is based on the National Curriculum objectives. Children learn through individual and group based tasks which are of mixed ability and are given support where necessary to either reinforce or extend their learning and skills. Design Technology links to other subjects across the curriculum and develops skills and understanding of concepts from a Design Technology perspective.

Curriculum Planning in Design Technology
Long term planning for Design Technology follows The National Curriculum objectives. Teachers select appropriate skills, to fit in with the current topic for the year group which provides a more meaningful basis for them to learn the skills of making and designing. However, teachers ensure that skills are taught in more than one year group to make sure that progression is evident and pupils are not repeating the same skills in different year groups.

Inclusion
Through our teaching, we provide learning opportunities that enable all pupils to make good progress. We plan carefully to meet the needs of all pupils, including pupils with special educational needs, disabilities, those who are gifted and talented and those with English as an additional language.

Assessment, Recording and Reporting
Teachers follow pupils' progress through each topic and keep a record of each child's ability. The annual school report to parents shows whether the child is working at the expected year group standard, above or below.

Monitoring
The Design Technology co-ordinator monitors the planning of the subject by looking at examples of planning and ensuring that all the correct skills are being taught. The co-ordinator also ensures resources are available for teachers to be able to teach effectively and monitors this through checking resources and asking teachers directly. Teachers are able to approach the co-ordinator for help and support and fill out a questionnaire indicating any needs they may have.

Resources
Resources are kept in a central storage area for staff to access and are the responsibility of all teachers. They are kept up to date and in good order by the D.T co-ordinator, who carries out an audit and purchases resources in consultation with teachers when appropriate. ICT is an important resource, allowing for communicating information, handling information, control, modelling and gaining knowledge of existing product designs. The library is used for various research and reference purposes.

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