Design Technology Framework

Intent

The 2014 National Curriculum for Design and Technology aims to ensure that all pupils:

● develop the creative, technical and practical expertise needed to perform everyday 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 users.

● 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.

Design and Technology is an inspiring, rigorous and practical subject that encourages pupils to learn to think and intervene creatively to solve problems, both as individuals and as members of a team. At Hemingbrough CP School, we encourage pupils to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts. We also aim to make links to designs and designers through history, providing opportunities for pupils to critically reflect upon and evaluate their designs. We aim to, wherever possible, link work to other disciplines such as Mathematics, Science, Computing and Art. This gives the learning purpose and relevance to pupils.

Implementation

A clear and comprehensive scheme of work is followed in line with the National Curriculum. The Design Technology National Curriculum and EYFS is planned for and covered in full within the EYFS, KS1 and KS2 school curriculum. Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an interactive process of designing and making. Pupils are made familiar with the design cycle:

Design - use research and develop design criteria to design for a purpose and communicate their ideas through a range of mediums.

Make - use a range of tools and equipment with accuracy, and use a wider range of materials and components according to their qualities.

Evaluate - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

Through this process, the aim is to develop technical knowledge and vocabulary in relation to structural design, mechanical and electrical systems, the integration of technology and food production and technology. Pupils will undertake four DT projects throughout the school year from a range of the above areas, organised into a Long Term Plan to ensure maximum curriculum coverage.

Scheme

Staff are to use the school's own scheme developed from the Kapow on-line resource to support their planning. This provides a clear progression of skills and knowledge to meet the end of Key

Stage expectations in line with the National Curriculum. Staff may source ideas from other areas but must ensure progression of skills and knowledge are met and all objectives are covered.

Assessment

Assessment opportunities will take place on a regular basis during lessons to ensure understanding and progression.
Assessments will take place at the end of each topic against the learning objectives.
Teacher will establish whether children are working at the expected level.

Provision for Inclusion

All pupils will have equal opportunities to reach their full potential across the DT curriculum and are given the opportunity to access the curriculum at their year group age.

Teachers will:

● set suitable learning challenges with scaffolds if needed.

● respond to individual pupil's learning needs in accordance with any education plans.

● overcome barriers to learning for individuals and groups by modelling, scaffolding and offering paired and group work in mixed ability.

● differentiate class work by supporting not constricting the curriculum.

Health and Safety/Safeguarding

The safety of pupils is the responsibility of the class teacher.

● Pupils are made aware of the safe use and correct procedure involved when using tools and equipment in the learning environment

● Pupils are taught how to follow proper procedures for food safety and hygiene.

● Pupils are informed of the need to be careful, and to understand that their actions can affect others.

● A range of skills are developed when using equipment to reduce unnecessary risk.

● All staff are made aware of food safety procedures when working with food to minimise any risks.

● Protective clothing is worn as necessary.

● Staff are made aware of any pupils with specific allergies when undertaking food preparation.

SMSC

At Hemingbrough Community Primary School we actively promote the spiritual, moral, social and cultural education and understanding of our pupils.

Spiritual Education

Spiritual development is very important in DT as the process of creative thinking and problem solving lies at the centre of the subject. A pupil's ability to think creatively and show innovation can be inspirational to other but also increase their own self confidence and belief in their own abilities.

Moral Education

During the planning and making process we encourage our pupils to consider the moral and ethical dilemmas raised. For example, the impact on the environment through the choices of materials are made or the opportunity to consider sustainable or environmentally acceptable materials.

Social Education

During DT there are many opportunities to promote social responsibilities. All the children have a collective responsibility to ensure they contribute to a safe working environment where the use of tools and equipment are involved. There is the opportunity to work collaboratively with a partner or take turns in a small group which requires effective social interaction and at times compromise. There is also the opportunity for peer evaluation and to act as a critical friend to give supportive comments to improve pupils learning outcomes.

Cultural Education

DT often originates from an idea or artefact and to develop a wider cultural awareness we explore our past heritage as well as investigate and use our stimulus products from different cultures and time periods.

British Values

British Values are promoted through DT:

Democracy

- The children must take the views and opinions into account but still have the right to make their own choices.
- To take turns both in speech and practically with others.
- To understand that it is not always possible or right to have their own way and understand the value of compromise.

The Rule of Law

- To understand the importance of safety rules when using tools.
- To understand and accept that if these rules are not followed that there are consequences to this.

Individual Liberty

- To understand that there are able to listen to others but can use their own ideas and design choices when making an artefact.
- To accept that others ideas may not be the same as their own but are able to accept this.

Tolerance

- To tolerate ideas from others that are different to their own.
- To understand that many great design ideas originate from other cultures.

Mutual Respect

- To listen to and consider the ideas and opinions of others even if they differ from your own.
- To be able to take turns during discussions to resolve difficulties or make decisions.
- To offer supportive comments in evaluations that will improve learning outcomes in a way that is objective but sensitive to the listener

Impact

We ensure pupils develop the following:

- Creative, technical and practical expertise needed to perform everyday tasks confidently.
- 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 users; and 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. Pupils will design and make a range of products.
- A critical understanding of the impact of DT on daily life and the wider world.