Intent

Newbridge Design Technology

Curriculum Objectives

- To give the pupils at Newbridge an opportunity to develop their designing and making skills using a range of creative and practical activities.
- To develop pupils ability to understand their technical knowledge and understanding across a range of products and materials

Aims

· To give all pupils of both sexes the opportunity and confidence to tackle and solve problems, which are related to the needs of individuals.

· To encourage the pupils to question the world about them as well as being able to constructively evaluate they're own and other peoples work.

· To create a learning environment where the attributes of creativity, equality, cooperation and resourcefulness are developed and the pupil are interested and actively participate in the project work.

· To build where possible on the different backgrounds of the individuals in a group and where possible relate work to relevant cultural information.

· To encourage and make pupils aware of the similarities and the differences between school and the world of work.

· To encourage an open minded and an investigative approach when tackling problems.

· To encourage clear communication techniques whether oral, written or in a graphical form.

· To encourage cooperation and the social skills needed when working in a team in a problem solving activity. The pupils should be able to work as individuals when the need arises.

· To build and establish good working practices and an understanding of technical concepts and systems and their safe application.

· To encourage the use of I.T as a means of communication, learning and as designs tool.

Curriculum Structure

The Design Technology curriculum is structured to enable pupils to complete a project each half term. The projects coverage include:

Resistant Materials technology

Graphical skills

STEM Project

Basic Electronics

This is displayed in a curriculum road map in each classroom.

The separate projects are planned for the year to link and build on pupils' previous knowledge and ability. An example of how this is, year7 pupils will measure, cut and join wood together with glue and butt joints. Year 8 and 9 pupils will explore using a range of more advanced joining methods such as finger joints to combine different materials building on their prior knowledge.

The curriculum has a broad content giving pupils the opportunity to designing and making contexts. All pupils are supported with evaluating their work linking the subject vocabulary to literacy and sentence structure.

Design Technology is linked to STEM and also ICT with the use of electronics and modern 3D printing technology. Pupils are taught to draw and design projects in 3D using google sketch up software from year 7.

Implementation of Design Technology at Newbridge

Design Technology is delivered to all Key Stage 3 pupils for one 50 minute lesson per week. At Key Stage 4 pupils are given the opportunity to study Design Technology at GCSE level. Pupils are given the opportunity to study a range of topics:

- Resistant Materials Technology
- Graphical skills

- Basic electronics
- 3D drawing skills
- Healthy eating and cooking skills

Each subject is differentiated by teacher and TA support in lessons. Each project content allows pupils to develop their practical making skills and develop knowledge and understanding of material properties and making processers and equipment. This is developing the pupil's practical and fine motor skills within the school context of pupil's ability. All pupils are supported with literacy school targets with writing frames, key words and spelling when completing evaluations on each project. This is completed using ICT skills and also spell checker software.

- Clear structured projects in line with the National curriculum including knowledge and understanding.
- Delivery will show the design process research, design, make and evaluate.
- A range of skills will be taught ensuring pupils are aware of health and safety issues related to the tasks undertaken.
- Appropriate cross curricular links to underpin learning and life skills.
- Classroom displays to celebrate exceptional practice and subject related vocabulary
- In Design Technology pupils will be encouraged to solve problems and promote independent learning.
- Collaborative learning, also pupils will be involved in team tasks to help and support one another.

Assessment in Design Technology is on a stage criteria from 1 to 8 in each aspect of the curriculum (design, make, evaluate). Pupils will be assessed during each project with verbal feedback and

formative assessment at the end of the project. Summative assessment will be completed each term. The stages will then give an indication on GCSE performance e.g. a pupil on stage 5 should achieve a pass grade in year 11, a stage 2 will indicate Entry level ability. These are informed judgements and viewed as a guide, but some pupils may exceed expectations.

Impact of the Curriculum

The learning projects underpin the Design Technology Objectives in:

Design

Make

Evaluate

Technical Knowledge

Pupils attend this subject area with very little knowledge or practical skills learned from primary education. The pupils progress in this subject is formative during each learning activity using observations and individual support. Year 7 targets are set to embed the making objectives and technical knowledge using a scaffolding theory to build on previous knowledge. Each pupils progress is recorded in a personal file and used to focus on further learning and individual targets. At Key Stage 4 pupils can study GCSE in Design Technology and also undertake client centred projects to provide an insight in to working life.

- Pupils will have clear enjoyment and gain confidence and then apply this knowledge across the other curriculum areas.
- Pupils will remember more about Design Technology and develop using tools and equipment.
- Pupils can develop skills and attributes beyond school and into adult life.