

YSGOL GYNRADD CREIGIAU PRIMARY SCHOOL

POLISI DYLUNIO A THECHNOLEG

A POLICY FOR DESIGN AND TECHNOLOGY

Design and technology in the primary school is essentially a practical subject - a 'hands-on' experience in designing, making and evaluating using a range of materials and tools, skills and knowledge.

General Aims

To achieve the following by means of carefully planned technology activities.

- To develop the ability to design and make a product using skills, mechanisms, tools and materials appropriate for age and ability.
- To develop the skills of discussion and investigation as an integral part of design and technology work.
- To develop practical skills and processes including measuring, cutting, joining, some being acquired in other areas of the curriculum.
- To develop perceptual skills e.g. analysing, observing, planning, investigating, evaluating, problem solving and decision-making.
- To develop personal qualities and attitudes e.g. creativity, imagination, initiative, motivation and perseverance.
- To learn about a range of materials, to be familiar with their working and be able to select materials appropriate for tasks based on their knowledge and understanding of these materials.
- To learn and use a range of techniques and mechanisms and to choose appropriate ones in design and make activities.
- To develop the ability to link everyday experiences with design and technology work.
- To learn and use correct vocabulary associated with design and technology.
- To recognise quality in products.
- To develop the ability to evaluate their work and offer constructive suggestions for changes.

Objectives

Objectives, or how our aims are to be achieved, are set out in detail in scheme of work.

Delivery

Design and technology will be delivered through a range of design and make activities, focused activities and investigating activities, carefully planned with progression and continuity in skills, mechanisms, use of tools, materials and use of skills from other areas of the curriculum.

These activities will be linked with topics whenever possible and skills will be taught individually where needed.

At K.S. 2 organisation will be semi-integrated with longer sessions as groups and whole class. Children will work on projects individually, in groups and as a whole class. The nature of the activity will determine organisation and group size.

Differentiation

Differentiation will be mostly by outcome with opportunity for every child to succeed at an individual level through design. Differentiation by attention given will also feature prominently. Where necessary, activities will be *modified* to suit the individual needs of children. It is felt that setting a different activity would cause low self-esteem and a lack of confidence.

Special Educational Needs

For children with severe learning difficulties efforts are made to ensure that they participate as fully as possible in the same activities as the rest of the class, with any modifications they might need. Strategies for supporting children with special educational needs could include: -

- Breaking down the activity into small achievable steps.
- Presenting ways of doing things slowly and clearly.
- Demonstrating and modelling an activity
- Encouraging working with a sympathetic partner.
- Making use of parental help and teacher's aide.

Cross-Curricular Links

Links with science, art and mathematics are incorporated in the Scheme of Work and fit in quite effortlessly (it would be impossible to avoid these links in most of the activities). It is important that design and make activities draw upon scientific knowledge and mathematical skills that children have acquired.

Equal Opportunities

Every child will have every opportunity available through design and technology work regardless of sex.

Health and Safety

It is imperative to develop sensible and responsible behaviour and the importance for safety as an integral part of the practical activities involving any tools from the earliest experiences. An assessment of risk will be made for every design and make activity. Tools will be kept safely in technology area.

Progression

The school's Scheme of Work is designed to provide pupils with a balanced programme of design and technology activities which clearly builds on previous work and takes account of previous achievement. Progression in design and technology is measured by end of Key Stage statements.

Progression relates to what children learn (knowing how and knowing about) and what they are taught (the tasks set).

Aspects of progress in learning in design and technology include: -

- Progress in the use of existing skills and understanding.
- Development of new skills and understanding.
- Application of skills and understanding to a wider range of contexts.
- Increasing ability to apply a variety of skills and understanding to tasks.

Requirements of Design and Technology

The design and technology order requires us to cover five main strands of learning on our own design and make activities in both key stages.

Mechanisms

Structures

Textiles

Food

Control

Continuity is very important because children need to continue to practise and improve skills etc. that they have experienced to maintain and improve their competence and to experiment further with these components throughout the two key stages.

Monitoring

The design and technology co-ordinator will collect termly planning and visit classes to see activities and displays. Photographs of displays will be kept in design and technology portfolio.

Assessment

Summative assessment: Annual report should record pupils' achievements in design and technology in the two attainment targets. It may be helpful to refer to the skills, processes and attainment targets. It may be helpful to refer to the skills, processes and attainment targets when recording pupils' progress to parents. Assessment in design and technology is to be judged against level descriptors which describe the types and range of performance that pupils working at a particular level should characteristically demonstrate. These need only to be used the end of Foundation Phase and Key Stage.

Formative assessment: Pupils' work should be regularly and effectively commented upon so that pupils are provided with feedback on achievements.

Self assessment: Children should be encouraged to evaluate their own work orally and in written form. A topic evaluation sheet could be completed but it must not become an onerous task which takes the pleasure out of a practical activity.

Assessment and Record Keeping

Class teachers should:

- Retain examples of pupils work for assessment purposes.
- Photograph projects, completed tasks and ones in progress.
- Retain pupil's planning sheets, drawings and evaluation sheets as appropriate.

Links with outside agencies.

Active links between school and local communities are encouraged by means of visits and visitors to the school. Visitors include policemen, firemen, performance artists, and representatives from fund-raising organisations e.g. 2003 – AXA, 2009 – 2010 XL Wales, British Council/HSBC, Spanish Embassy.

Our local community holds a wealth of resources for design and technology work.

Resources

Resources will be stored in labelled storage boxes in technology resource area. Individual resources are too numerous to list but tools and materials are ordered to correspond with the requirements of this Scheme of Work. If additional resources are required please contact the technology co-ordinator.

Approaches to learning

Thought should be given during planning the Scheme of Work for an optimum use of resources and curriculum time e.g. links with literacy and numeracy. Links with ICT will encourage the use of data handling, word processing and graphics programmes to facilitate and enhance the learning of design and technology.

Design and technology should be taught through three types of activity:

- Investigating, disassembling and evaluating simple products.
- Focused practical tasks to develop and practice skills and knowledge.
- Designing and making activities.

It is the responsibility of the teacher to organise these activities in the most appropriate way e.g. individually, pairs groups or as a whole class. Children should be taught to include elements of the designing and making products in accordance with the National Curriculum requirements. The work carried out should be practical, relevant and enjoyable for later life:

- Creativity
- Imagination
- Independence
- Initiative
- Perseverance
- Reliability

Units of work for design and technology will be planned over a three-year cycle at Key Stage One and a two-year cycle at Key Stage Two to ensure balance and progression. Key Stage One and Two will cover one unit of work per term.

Foundation Phase

The emphasis in the Foundation Phase is for children to talk about how everyday products are made and the reasons why they are made the way they are. Design and technology fits under the caption 'Knowledge and Understanding of the World' in the Desirable Outcomes, as one of the stated aims of learning is: - "to provide a foundation for technological learning." Children will also be given the opportunity to learn simple cutting and joining techniques.

Cutting

Pupils should:

- Decide what needs to be cut and why
- Decide what materials are to be used
- Decide upon the best cutting tool for the job
- Understand why the above are important

Joining

Pupils should consider:

- Which is the best method of joining?
- Is this method, the best method for the material being used?
- What new skills are they learning?
- Why the above is important?

Folding

Pupils should consider

- Different ways of folding to produce different effects
- Why is folding being used?
- To what ends, and to what purpose?

Building

Pupils should consider:

- Which materials are the best for building?
- Why these materials, rather than others?
- That ends, and to what purpose?

There will be more teacher input and support within design technology in the Foundation Phase, but this will decrease as the pupils move through Key Stages One and Two.

Foundation Phase / Key Stage 1

Children will be given opportunities to use a variety of materials for constructive investigative play such as wooden blocks, large plastic blocks, duplo, mobilo, stickle bricks, plasticine, dough, reclaimed materials straws etc.

Children will be encouraged to learning through exploratory play.

Children will be given opportunities to design through simple models, drawings and paintings.

Children will be given the opportunity to explore a variety of materials and to choose materials for tasks.

Children will be given opportunities to create objects as stimulated by class work e.g. stories.

Children will be given opportunities to use different 'joining' materials such as glue, sellotape, etc.

Children will be encouraged to evaluate by discussing the effectiveness of materials, practicability of the object, design, aesthetic qualities etc.

Glenda Griffith (24.04.10)