

TECHNOLOGY EDUCATION

Syllabus for Primary Schools

RATIONALE

THE TECHNOLOGY EDUCATION PROGRAMME

For Primary Schools

Rationale

Technology Education is about children developing design and making skills to make products that are useful, both to themselves and other people. It is an opportunity for children to be creative; and, to develop an understanding of the appropriateness of technological actions.

General Aims

Technology aims at encouraging children to be innovative, creative and productive. Through Technology Education, children will become increasingly aware of the **technological contribution made to both our culture and quality of life.**

The process to designing, making and evaluating is central to technology. It is a dynamic process where the elements of designing, making and evaluating overlap and do not occur in a pre-ordained or lock-step sequence. Children consider the resources, equipment and techniques that are relevant to the context in which they are working. They examine the context of a task or activity to determine needs and opportunities, and to relate what is known to what might be done. They make, organise and modify techniques and products and communicate their plans to others. They evaluate technologies with which they have had no direct or first-hand experience and reflect on what has been done and how it can be improved.

Entitlement

All children are entitled to a technology programme matched to their **knowledge, understanding and previous experience** and will undertake at least a technology project* each term.

Activities (small tasks) leading to the project design and making components will involve children being taught the **relevant skills. Techniques and knowledge** required to undertake the project proper (big task) with increased confidence and understanding.

** the terminology project is generic and includes opportunities to investigate, disassemble and / or evaluate products in order to obtain knowledge that can be applied when designing and making models, artefacts, systems...including well planned educational excursions.*

Equal Opportunities and Special Needs

Activities both within and outside the classroom are to be planned in a way that encourage full and active participation by all children, irrespective of ability.

Every effort will be made to ensure that activities are equally interesting to both boys and girls. Activity planning should ensure that gender stereotyping is not reinforced in any way.

Cross Curricular Links

Technology Education draws upon **knowledge** and **skills** from all other areas of the curriculum, particularly Science, Maths and ART. Linking Science, Maths and the ARTs will provide children with opportunities to turn SMART*ideas* into SMART*technology* projects.

Furthermore, Technology Education contributes well to other areas of learning; especially through project work and theme link ups.

Planning

Wherever possible, Technology projects are to be planned within a school / year set up, to add increased relevance, relevance and wise management of resources.

Classroom Management

Children are encouraged to work as individuals, in pairs, in groups and also as a whole class when appropriate. It is important that the teacher identifies the most appropriate teaching strategy for a particular learning situation.

Safety

Only older children should have access to tools such as circle cutters and glue guns and they must be under direct adult supervision. A separate area should be set aside for the use of glue guns and instructions should be given to the whole class on their safe use.

Children should never use tools, which are designed for adult use only.

Direct safety instructions are to be given to children each time they undertake a technology activity.

Resources

Children should have opportunities to use quality resources that are appropriate to the project at hand, especially information technology in all its forms.

Schools should ensure that resources are readily accessible to all children.

Children are also to be educated in the safe and considerate use of tools and resources, including care of consumables and materials that are not easy to store.

Assessment

Technology is...an activity, not a readily definable area of knowledge. When we say that a child is capable in technology education we envision one who is able to reflect while taking action and who can act on his or her reflections. As children demonstrate their capability, children will draw on a developing repertoire of skills and knowledge that includes designing skills, making skills, and knowledge and understanding of materials and components, of structures, and of existing products.

Kimbell (1997) stated that “design and technology activity is so integrative, that the approach to the assessment of pupil performance in this area should ideally be holistic” (p. 73). He wrote: “the assumption that it is possible to use small, clear discriminators as a means for assessment in design and technology is a snare and a delusion” (p. 37). According to Kimbell, teachers are at their most reliable when assessing holism and at their worst when assessing the bits. He suggests that there are two types of evidence available to any teacher when assessing technology education : transitory evidence and permanent evidence. Transitory evidence may be collected through teacher observation of children, as well as through teacher interaction with children. Permanent evidence may be collected (a) about the process of designing and making, and (b) about the final product submitted by the child. There is an emerging consensus that the most appropriate form of permanent evidence for the assessment of a child’s capability with the *process* of technology is through the use of a design portfolio.

Kimbell, R. (1997). *Assessing technology: International trends in curriculum and assessment* . Buckingham, UK: Open University.

Primary Solutions in Design and Technology

Design and making fridge magnets is one of 24 innovative units created specially for the primary school environment by the Nuffield Primary Design and Technology Project. They cover working with food, fabric as well as simple control technology and software.

The approach and structure of the units has been validated by a comprehensive, in-depth and independent evaluation carried out by Patricia Murphy and her research team at the Open University.

You may wish to visit the site at www.primarydandt.org.uk for more information as well as for downloading all or those units that are appropriate for your children.