Design & Technology Policy

Reviewed:

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Introduction

Design and Technology prepares children to take part in the development of today's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems. Through the study of design and technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts. Design and technology help's all children to become discriminating and informed consumers and potential innovators. We live in a technological age, surrounded by artefacts and systems which have been produced, designed and made for us by other humans working together in a complex range of activities.

Subject Leader Curriculum Intent, Implementation and Impact Overview

School has identified key intentions that drive our Design Technology curriculum. At Ryhill Junior Infant and Nursery School our Design Technology curriculum intentions are:

Intent	Implementation	Impact
To build a Design Technology curriculum which develops learning and results in the acquisition of knowledge and skills. Children will know more, remember more and understand more. To design a design technology curriculum with appropriate subject knowledge, skills and understanding as set out in the National Curriculum Design Technology Programmes of study, to fulfil the duties of the NC whereby schools must	• **Clear and comprehensive scheme of work 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. Whilst the EYFS and National Curriculum forms the foundation of our curriculum, we make sure that children learn additional skills, knowledge and understanding and enhance our curriculum as and when necessary.* • **Language** - The promotion of a language rich Design Technology curriculum is essential to the successful acquisition of knowledge and understanding in Design Technology. The promotion and use of an accurate and rich vocabulary throughout school is planned in Design Technology.	• More children will achieve age related expectations in Art at the end of their cohort year. • Children will retain knowledge about their focus artists for each unit of work, remember this knowledge and understand how to use and apply this in their own art work. • Children will understand what being in 'artist' means.

provide a balanced and broadly-based curriculum which promotes the spiritual, moral, cultural, mental and physical development of pupils and prepares them for the opportunities and responsibilities and experiences for later life.	**Knowledge Organisers -** Children have access to key knowledge, language and meanings to understand Design Technology and to use these skills across the curriculum. • **Independent learning:** In design technology children may well be asked to solve problems and develop their learning independently. This allows the children to have ownership over their curriculum and lead their own learning in Design Technology. • **Basic skills -** English, Maths and ICT skills are taught during discrete lessons but are revisited in Design Technology so children can apply and embed the skills they have learnt in a purposeful context. • **Enhancement -** We plan termly visits, visitors and involvement in the community activity to provide first-hand experiences for the children to support and develop their learning. This can be linked to Design Technology (please see cultural capital overview). We recognise that to have impact planned cultural capital must be clearly linked to the statutory design technology skills and knowledge to be acquired and provide the opportunity for children to better understand the knowledge or apply what they already know.	

Aims

At Ryhill Junior, Infant and Nursery School we aim to:

a) Develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making.

b) Enable children to talk about how things work, and to draw and model their ideas.

c) Encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.

d) Explore attitudes towards the made world and how we live and work within it.

e) Develop an understanding of technological processes, products, and their manufacture, and their contribution to our society.

Objectives

For pupils to gain experience, knowledge and understanding of Design & Technology through designing, making, investigating, and evaluating, and through the practice and development of skills.

- ☐ For pupils to experience a range of materials including stiff and flexible sheet materials, mouldable materials, textiles, food, and mechanical and electrical components.

- ☐ For pupils to develop their designing skills by drawing on their own experience and information sources to generate and present their ideas.

- ☐ For pupils to develop their making skills, by selecting appropriate tools and materials and developing increasing high standards of accuracy and finish.

- ☐ For pupils to develop knowledge and understanding of mechanisms and materials and how they can be controlled and changed, health and safety and the use of an appropriate vocabulary.

Curriculum Organisation

We carry out the curriculum planning in design and technology in two phases: long-term, medium-term/short-term. The long-term plan maps out the units covered in each term during the key stage. The design and technology subject leader works this out in conjunction with teaching colleagues in each year group.

We plan the activities in design and technology so that they build upon the prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move through the school.

Activities include:

- ☐ Activities in which children investigate, disassemble and evaluate products (IDEAs). – This means that children will examine and test the products of others (either commercial or of their fellow classmates) to make judgements about the quality or the methods by which it was produced.

- ☐ Focused practical tasks in which children practice particular skills (FPTs) - This means that children are set tasks which enable them to practice a particular skill. This should not be undertaken in isolation, children can still produce an object even though the main aim is skill development. E.g. Children produce a Christmas card but the main intention was to provide an opportunity for children to practice folding card accurately and in using adhesive for small-scale work.

- Assignments in which children design and make products (DMAs) - This means that children are set a design task or brief from which there will be a variety of outcomes, i.e. an open-ended task. Younger children can be set design tasks in which the teacher has specified the outcome but the children should be provided with some individual choice or decisions. Older children can work on a task in which the teacher has not given any indication of what the outcome might be, but assistance/feedback is given on an individual basis in response to their own design.

Foundation Stage

We encourage the development of creativity, skills; knowledge and understanding that help children make sense of their world as an integral part of the school's work. We relate the development of the children's arts and design to the objectives set out in the Early Learning Goals. These underpin the curriculum planning for children aged three to five. This learning forms the foundations for later work in design and technology. These early experiences include asking questions about how things work, investigating, using and being creative with a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control. We provide a range of experiences that encourage creativity, exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

Time Allocation

Teachers allocate their own time to teach design and technology in their own classrooms. Lessons are set out in their long term planning and this may be set out in a set block, or over a period of time.

Teaching and Learning Strategies

The school uses a variety of teaching and learning styles in design and technology sessions. The principal aim is to develop children's knowledge, skills and understanding in design and technology. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. We do this through a mixture of whole-class teaching and individual/group activities. Within lessons, we give children the opportunity both to work on their own and to collaborate with others, listening to other children's ideas and treating these with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including computing.

In all classes there are children of differing ability. At Ryhill Junior Infant and Nursery School we recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

Teaching design and technology to children with special educational needs

At Ryhill Junior Infant and Nursery School we teach design and technology to all children, whatever their ability. Design and technology forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our design and technology teaching we provide learning opportunities

that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against ARE.

We try to enable pupils to have access to the full range of activities involved in learning design and technology. Where possible we try allow children to participate in activities outside the classroom, for example, a museum, factory trip or outdoor learning within the school grounds.

Reasonable Adjustments in Design Technology

The curriculum leader in Design Technology recognises the importance of ensuring that children with identified Special Educational Needs and/or Disabilities have access to an ambitious Design Technology curriculum. Within the curriculum area of Design Technology SEND children will be provided with reasonable adjustments through their tasks and level of challenge provided. Advice can be sought from the school's SENDCO where applicable.

Resources

Our school has a wide range of resources to support the teaching of design and technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept in the design and technology store.

Health and Safety

- All children should be made aware of the need to use equipment safely and take responsibility for safe working, handling and storage of tools and equipment.

- Guidelines for safe food handling are in school. The LA manual on Health and Safety is kept in the Head Teacher's office.

- A list of children with specific allergies is available from the office. Teachers should familiarise themselves with this and avoid using foods such as nuts or foods high in colouring etc., which might cause an adverse reaction. Staff should also be sensitive to any cultural food taboos of children within their class.

- An oven is available in the family learning room for food-based DT. A risk assessment for the use of this resource has been devised.

Equal Opportunities

- All pupils should have equal access to the design and technology curriculum irrespective of race, gender or ability. Examples of technology from other cultures can be a rich resource in the curriculum.

- Pupils with special needs should be considered when planning units of work and opportunities for differentiation should be considered for both more able and less able pupils.
- Design and Technology provides opportunities to address some of the gender stereotypes children may have. Steps should be taken in classroom organisation to ensure that all pupils experience all activities, tools and materials.

<u>Contribution to other areas of the Curriculum</u>

English: Design and technology contributes to the teaching of English in our school by providing valuable opportunities to reinforce what the children have been doing during their English lessons. Discussion, drama and role-play are important ways that we now employ for the children to develop an understanding that people have different views about design and technology. We also ensure that we are letting the children write to allow them to evaluate their work and suggest improvements for following learning.

Computing and E-Safety: We use computing to support design and technology teaching when appropriate. Children use software to enhance their skills in designing and making and use technology to collect information. Children will be made aware of suitable websites and how to filter specific images. During DT lessons children will have access to iPads and computers when needed but this will be monitored by the staff in the classroom and ensure that child friendly websites are being used. Children will not use the internet without supervision and all websites will be checked first for suitability.

Personal, social and health education (PSHE) and citizenship: Design and technology contributes to the teaching of personal, social and health education and citizenship. We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets. Their work encourages them to be responsible and to set targets to meet deadlines, and they also learn through their understanding of personal hygiene, how to prevent disease from spreading when working with food.

Spiritual, moral, social and cultural development: The teaching of design and technology offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. Our groupings allow children to work together, and give them the chance to discuss their ideas and feelings about their own work and the work of others. Through their collaborative and cooperative work across a range of activities and experiences in design and technology, the children develop respect for the abilities of other children and a better understanding of themselves. They also develop a respect for the environment, for their own health and safety and for that of others. They develop their cultural awareness and understanding, and they learn to appreciate the value of differences and similarities. A variety of experiences teaches them to appreciate that all people are equally important, and that the needs of individuals are not the same as the needs of groups.

Cross Curricular links are made wherever possible.

Community Links

Opportunities to use the community as a resource for lessons should be encouraged. Parents are welcomed into the school to talk to children about aspects of this subject. Reference to the agricultural and horticultural nature of the county should be made when dealing with food topics and agricultural machinery viewed.

Assessment and Recording

Teachers assess children's work in design and technology by making assessments as they observe them working during lessons. They record the progress that children make by assessing the children's work against the learning objectives for their lessons. In accordance with the school marking and feedback policy, class teachers complete a whole class feedback grid which is shared with pupils at the beginning of the following lesson. In addition to this a marking summary sheet is also completed. At the end of each full term data is imputed into Target Tracker to record if children are at, above or below Age Related Expectations.

Professional Development

Whole school INSET and staff meetings will be arranged when D & T is a main focus on the SDP. Staff will be invited to attend courses according to the prioritised needs of the school.

Policy and Scheme of Work Revision

The policy and scheme of work will be reviewed by the staff and adjustments made in response to staff evaluations, as outlined in the SDP.

The monitoring of the standards of children's work and of the quality of teaching in design and technology is the responsibility of the design and technology subject leader. The work of the subject leader also involves supporting colleagues in the teaching of design and technology, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school.