

Design & Technology Policy



Statement of Intent

Acorns School is a GLD primary special school situated in Preston, Lancashire. The pupils here at Acorns, have a wide range of learning disabilities, which may also be compounded by additional issues such as a visual or hearing impairment, challenging behavior or complex medical needs. Acorns School aims to offer a broad and balanced curriculum to all, which includes: Maths, English, Science, Computing, P.S.H.E, Modern Foreign Languages, Geography, History, Physical Education, Art, Music and Design Technology. We aim to provide a wide variety of engaging learning experiences throughout our adapted curriculum which cater to the wide range of learning styles and educational, social and emotional needs of our pupils.

This pupil-centred and inclusive approach to the planning and delivery of Design and Technology has implications for the whole school. It promotes and facilitates the development of key skills relating to both individual targets and cross-curricular objectives and so is relevant to all aspects of our school's curriculum. This includes our multi-sensory provision, language and communication work and the development of fine motor skills and dexterity. It offers our children a chance to explore the world around them in a inquisitive and creative way through planned, structured and differentiated activities. These may take place in the classroom or as community-based activities.

AIMS

Working from the National Curriculum we have adapted the Design Technology coverage for Key Stages 1 & 2 (see appendix 1) to ensure that the content and delivery of the subject is appropriate, engaging and challenging for all our pupils.

Our aims in the teaching of design and technology are to allow pupils to:

- Develop design and making skills.

By exploring materials, communicating simple choices, developing fine motor skills to manipulate materials or handle tools for example.

- Develop knowledge and understanding of some of the materials.

By exploring materials in their environment in increasingly complex ways, exploring their properties and observing how they are used by others. Through using materials in their own projects and assessing their suitability by trial and error for example and using their developing understanding to inform future design.

- Learn to use a wide range of tools and materials, using adapted equipment if appropriate.

Adaptations might include: using a switch operated sewing machine, a scissor block, chunky handled glue spreaders etc but also by working co-actively with a peer or an experienced staff who can provide and appropriate level of practical support

- Learn about/experience health and safety and protective measures.

For example pupils may be involved in the routine of washing hands, putting on an apron etc before a food technology lesson.

- Work individually or within a group in a variety of contexts.

Pupils might design a pizza at school and visit a Pizza restaurant to make their own pizzas. They may work one to one on a felting project or create a group model using recycled materials.

- Introduce creativity and innovation as part of the design process.

Pupils should be allowed to create their own design without barriers to their creativity and should be encouraged to share their ideas freely, knowing they will be appreciated and considered.

- Explore the man-made world and our place within it.

Pupils might visit places of industry and watch how everyday things are made and apply this knowledge and understanding in their own work. They might explore where and how a material is produced and how it used in everyday life.

- Develop an interest in technological processes.

Pupils may be encouraged to disassemble a simple mechanism and observe how it works. They might transfer their experience of levers and pulleys in the classroom to a local sand and water play area for example.

- Learn the key principles of nutrition, healthy eating and how to cook simple meals.

Pupils might try different tastes, textures and food from around the world. They might learn how food is prepared or try it in different states ie. Carrots;, raw/cooked, whole/mashed. They might learn to make simple recipes following instructions and practising individual skills with support.

SUBJECT PLANNING

Acorns School uses a unit planning system which is designed to break down and differentiate the long term National Curriculum objectives into smaller more achievable objectives that meet the needs and learning styles of our pupils. For example particular areas may be emphasised or expanded where as others may be reduced and scaffolded into a series of short-focused guided tasks.

Long-term plans outline the broad content of the curriculum and the allocation of the key areas to be focused on for each year group: Construction or Sheet Material Products; Textile Products and Food Products. In addition, they establish a framework for progression in pupils' learning.

Medium-term plans or unit plans as they are here at Acorns are more detailed plans for what will be taught during each term. They include the way the subject will be taught, resources needed/used and the assessments that will be undertaken to ascertain improvement and inform future planning. In addition, they include detailed learning objectives and outline the teaching and learning activities to be undertaken. These objectives may need to be modified depending on the class and the outcomes modified accordingly.

TEACHING

Activities are organised at the teacher's discretion and according to the availability of materials and the needs of their class. Design and technology activities may be carried out individually, as a small or large group, or as a whole class activity.

Principles for effective teaching in design technology include:

- *Set tasks in the context of pupils' prior knowledge, perhaps using a cross-curricular thematic approach.*
- *Promote active learning in the classroom and out in the community, allowing the pupils hands on experiences to help scaffold their learning.*
- *Produce inspiring, exciting and motivating activities which engage the pupils interest and encourage inquisitive and creative thinking.*

Strategies for effective teaching in design technology include:

- *The use of a variety of teaching methods including, whole class work, small group study, investigative work, practical work and individual study.*
- *Ensuring the method used suits the purpose and needs of the children.*
- *Providing a meaningful context and clear purpose when assigning tasks.*
- *Including investigative, disassembly and evaluative activities.*
- *Using focused practical tasks to help the children make and evaluate products.*

- *Ensuring tasks are built on skills and understanding.*

THE LEARNING ENVIRONMENT

Pupils are supervised at all times during activities.

A risk assessment covering the use of saws and other sharp tools, along with heated tools, such as glue guns, has been conducted and is updated as needed.

Pupils are only allowed to use a lower temperature glue gun under 1:1 supervision. An adult must use a glue gun at all other times. The use of glue guns will be considered alongside all viable alternatives such as adhesive tapes, blue tack, string and other fasteners, to ensure the most suitable materials are used for each project.

A fire safety blanket must be kept with the cooker at all times.

If cooking is taking place in the classroom, the cooker must be returned in a suitably clean and tidy condition after use.

Parent helpers/students/volunteers must be supervised when cooking with groups of children.

Children must follow hygiene procedures and obey rules during cooking sessions.

EQUAL OPPORTUNITIES

Equal opportunities are addressed in the whole school Equality Policy and care is taken in design and technology lessons to ensure all pupils are provided opportunities to experience the range of activities on offer at a suitable level. We ensure that the pupils have an appropriate level

of support and that strategies are in place to support their learning and communication needs.

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**CONTRIBUTION OF DESIGN AND TECHNOLOGY
IN THE CORE CURRICULUM**

English

Design and technology encourages children to ask questions about the starting points for their work. They learn to compare ideas and approaches and to express their feelings. This can be supported using alternative and augmentative communication, and a range of simple recording techniques.

Maths

Design and technology allows children opportunities to develop their understanding of shape, pattern, space and dimensions.

I.T

I.T is used to provide children with additional equipment, extending the possibilities for developing, recording and sharing their work.

PSHE

In design and technology lessons children are taught to share how they feel about their own work and the work of others.

SMSC

Design and technology offers opportunities for social development. Working in groups allows children to learn from each other and to share ideas and feelings. Design and technology helps them to develop a respect for the abilities of other children and encourages collaboration.

POLICY REVIEW

This policy will be reviewed at the end of a two year period in consultation with the Headteacher and teaching staff.

Teachers will make provision for varying learning styles to be utilised.

Planning for design and technology is provided for in Unit and long-term plans.

ASSESSMENT AND RECORDING

Teacher assessment in design and technology can measure many different aspects within the design process. Teachers will assess pupils':

- Knowledge of tools, materials and equipment.
- Ability to record and communicate their design ideas using an appropriate method and level of communication.
- Personal qualities and attitudes towards their work. Pupils should be encouraged to take pride in their achievements and share one another's success.
- Ability to explain what they have created and how, where appropriate.
- Ability to use tools and materials safely and effectively, with an appropriate level of support.
- Ability to reflect on both their own work and the work of others, using simple evaluation tools.

The majority of assessments conducted will be through observation and discussion. Assessments will be recorded in the year end reports to parents.

A selection of work may be retained as evidence or photographed for this purpose.

THE SUBJECT LEADER

The school's appointed subject leader will oversee the continuity of the subject and the progression of teaching and learning within annual and medium-term plans.

They will monitor the quality of teaching and the standard of work produced.

Evidence will be kept from year to year.

The subject leader will offer support to colleagues and share their expertise and experience.

They will encourage staff and pupils to be creative and advise teachers on teaching methods they may wish to explore.

RESOURCES

Each classroom has basic design and technology resources maintained by the individual teachers.

Learning resources, such as books and videos, to aid teaching are held in the resource room.

Food technology resources are kept in the children's kitchen.

Money for subject development is allocated or a bid can be made based on needs identified.

HEALTH AND SAFETY

Certain health and safety concerns are inherent with design and technology, including the storage of materials and tools and the use of equipment within lessons.

Children are instructed in the correct use of equipment and tools and the specific dangers of using heated or sharp resources

Appendix 1

THE NATIONAL CURRICULUM KEY STAGE 1

The National Curriculum prescribes that at **Key Stage 1** pupils should be taught:

The knowledge, understanding and skills needed to engage in an iterative process of designing and making, and work in a range of relevant contexts.

Design

Design purposeful, functional and appealing products for themselves and other users based on design criteria.

Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

Make

Select from and use a range of tools and equipment to perform practical tasks accurately.

Select from and use a range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

Evaluate

Explore and evaluate a range of existing products.

Evaluate their ideas and products against design criteria.

Technical knowledge

Build structures, exploring how they can be made stronger, stiffer and more stable.

Explore and use mechanisms, such as levers, sliders, wheels and axles, in their products.

Cooking and nutrition

Use the basic principles of a healthy and varied diet to prepare dishes.

Understand where food comes from.

THE NATIONAL CURRICULUM KEY STAGE 2

The National Curriculum prescribes that at **Key Stage 2** pupils should be taught:

The knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts.

Design

To use research and identify criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at particular individuals or groups.

To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross –sectional and exploded

diagrams, prototypes, pattern pieces and computer aided design (CAD).

Make

Select from and use a wider range of tools and equipment to perform practical tasks accurately.

Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

Evaluate

Investigate and analyse a range of existing products.

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

Understand how key events and individuals in design and technology have helped to shape the world.

Technical knowledge

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

Understand and use mechanical systems, such as gears, pulleys, cams, levers and linkages, in their products.

Understand and use electrical systems, such as series circuits incorporating switches, bulbs, buzzers and motors, in their products.

Cooking and nutrition

Understand and apply the principles of a healthy and varied diet.

Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.

Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.