Design and Technology Policy

At Arnside National C of E School we believe that Design and Technology teaches pupils how the world works and how things are made. It encourages them to think differently and be creative. Design and technology lessons give the pupils opportunities to explore ideas and to design and make things that solve problems. They need to learn to use tools and equipment to create their designs and also how to use a range of materials.

We aim to give pupils the tools, knowledge and experiences to turn their ideas into reality. Instead of saying why? We want them to say why not? We want our young designers, engineers and technologists to constantly ask that question, to think differently and to find solutions to problems. Through our curriculum, we aim to inspire pupils and spark their imagination. This may lead some children to pursue a career in the creative, engineering and manufacturing sectors. Whilst not all children will follow a career path into these sectors, design and technology equips all children with important life skills and personal qualities, such as, teamwork, resourcefulness and risk taking.

"Design and Technology in primary schools develops young children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials, including food. Design and Technology encourages children's creativity and encourages them to think about important issues".
Design and Technology Association

Aims and objectives

Design and technology is about designing and making products that people want and that work well.

The aims of design and technology are:

- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making;
- to enable children to talk about how things work, and to draw and model their ideas;
- to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures;
- to explore attitudes towards the made world and how we live and work within it;
- to develop an understanding of technological processes, products, and their manufacture, and their contribution to our society;
- to foster enjoyment, satisfaction and purpose in designing and making.

Teaching and learning style

Arnside National School uses a variety of teaching and learning styles in design and technology lessons. 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 ICT.

In all classes there are children of differing ability. 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. We achieve this through a range of strategies:

- setting common tasks that are open-ended and can have a variety of results;
- setting tasks of increasing difficulty where not all children complete all tasks;
- grouping children by ability and setting different tasks for each group;
- providing a range of challenges through the provision of different resources;
- using additional adults to support the work of individual children or small groups.

Design and technology curriculum planning

Design and technology is a foundation subject in the National Curriculum. Our school uses the National Curriculum and some of the Design and Technology Association's 'Projects on a Page' to work with as the basis for its curriculum planning in design and technology. We have adapted these projects to the local circumstances of our school in that we use the local environment as the starting point for aspects of our work.

Our planning, give details of each unit of work for each term. These plans define what we will teach and ensure an appropriate balance and distribution of work across each term.

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.

Early Years Foundation Stage

We encourage the development of skills, knowledge and understanding that help reception children make sense of their world as an integral part of the school's work. As the reception class is part of the Foundation Stage of the National Curriculum, we relate the development of the children's knowledge and skills in Design and Technology to; Communication and Language, Personal, Social and Emotional Development, Physical Development, Literacy, Mathematics, Understanding the World and Expressive Arts and Design.

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 and using 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 exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

Contribution of design and technology to teaching in other curriculum areas

Our design and technology curriculum provides lots of opportunities for literacy, art and design, numeracy, computing skills and scientific knowledge to be practically applied.

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 co-operative 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.

Teaching design and technology to children with special educational needs

At Arnside National 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 expected levels.

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style, differentiation – so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs. Intervention will lead to the creation of an Individual Education Plan (IEP) for children with special

educational needs. The IEP may include, as appropriate, specific targets relating to design and technology.

We enable pupils to have access to the full range of activities involved in learning design and technology. Where children are to participate in activities outside the classroom, for example, a museum or factory trip, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

Assessment and recording

In design and technology teachers will be involved in assessing two aspects:

- The child's overall capability in designing and making. This is the child's ability to combine designing and making skills with knowledge and understanding to design and make products.
- The child's repertoire of knowledge, understanding, skills and techniques needed to design and make quality products

Teachers record the progress made by children against the knowledge and skills indicators on the subject assessment grids. The teacher makes a half termly assessment of progress for each child, and reports to parents their overall attainment as part of the child's annual report.

Resources

Arnside National 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 tools and equipment being kept in the library.

Health and safety

The general teaching requirement for health and safety applies in this subject. We teach children how to follow proper procedures for food safety and hygiene.
We encourage the children to develop a sense of responsibility in following safe procedures when making things.

Monitoring and review

The head teacher is responsible for the standard of children's work and for the quality of teaching in design and technology. The work of the subject leader 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.