

The Asfordby Hill School



Design and Technology POLICY

This Policy Links With: Health and Safety Teaching and learning	
Recommended:	Y
Statutory:	N
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Committee Responsible for Review:	QEHS
Signature of the Chair of Governors:	

“Design is a funny word. Some people think design means how it looks.
But of course, if you dig deeper, it’s really how it works.”

- Steve Jobs

Rationale

This policy outlines the teaching, organisation and management of the art and design taught and learnt at Asfordby Hill Primary School.

The school’s policy for design and technology is based on the document ‘2014 National Curriculum’. Throughout their time at Asfordby Hill pupils will continually build on previously acquired knowledge and skills to deepen their understanding and strengthen their abilities. Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

This policy has been the full agreement of the Governing Body. The implementation of this policy is the responsibility of all the teaching staff.

Intent

In design and technology, we intend:

- 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.
- To develop children’s knowledge and appreciation of a range of designers while developing an understanding of what a designer is.

Implementation (*What you will see in our classrooms*):

At Asfordby Hill, our pupils are provided with a variety of opportunities to develop, extend and build upon their skills, understanding and creativity. Below, we outline how we implement our curriculum intentions.

A. Teaching using a Metacognitive Approach

Effective teaching intertwines cognition, metacognition and self-regulated learning. In design and technology, we ensure that all three of these aspects are developed by our learners. At the heart of this approach is working memory. In order to be able to apply knowledge and skills, our children need to first acquire and then remember knowledge and skills. Our progressive curriculum enables our children to revise and revisit learning units regularly in

order to enable them to transfer knowledge to their long-term memory. Not only do children revisit learning within a unit, each lesson building on from the last, but they also revisit the same units in every year groups. Our design and technology curriculum contains 3 key strands/projects that children revisit and build upon every year (see point B). Within each strand the children repeat the same cycle of learning (see point C). A cycle that aligns very closely to the metacognitive cycle below. Children first evaluate existing products and their skills, before planning and adapting their designs based on their own monitoring and reflections. They are then expected to evaluate how successful they have been and reflect on how this may impact them in the future.



B. Projects / units of Learning

Every year each year group (1-6) is expected to complete 3 design and technology projects/ units. These projects will link to class topics where possible and build on skills, knowledge and understanding from previous years.

Project 1 should be a building / construction based project, looking at creating strong structures and joins. This could be done using materials such as paper, card, fabric, wood and construction kits. Textiles falls under this heading. Looking at creating products by building up layers of fabric or joining them in different ways.

Project 2 should be a project with moving parts or an interactive / mechanical component. UKS2 should begin to look at using electrical components to create the mechanisms/ interactive elements.

Project 3 should be a food technology project. Learning about technical skills, safety measures, health and food hygiene.

C. Teaching cycle

Within each project teachers will ensure that children have the opportunity to develop their skills and understanding in the four sections of the design cycle. Each project will contain elements of each section and support children in developing skills learnt in the previous project/year.



D. EYFS (Expressive Arts and Design/ Understanding of the World)

“Children do not make a distinction between ‘play’ and ‘work’ and neither should practitioners.”- Principles of Early Years Education. We encourage the development of skills, knowledge and understanding that help EYFS children make sense of their world through play. Design and Technology in the Early Years Foundation Stage relates to the development of the children’s Knowledge and Understanding of the World and expressive arts and design. Objectives for these areas are set out in the Early Learning Goals. Learning in these 2 areas form 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. At Asfordby Hill our EYFS provides **opportunities** for children to engage in creative activities planned by adults and also those that they plan and initiate themselves. This is why in our EYFS we ensure that children are provided with high quality equipment and materials linked to the Early Learning Goals and our KS1/2 project areas (construction, food and interactive).

E. Accurate recording and effective use of assessment

It is essential that the type of recording be matched to the type of Design and Technology activity as well as to the needs and abilities of the child. A variety of recording methods are therefore used. These include pictures, structured worksheets, sketches, diagrams, flow charts, model making, written explanations, photographs, school displays and the occasional video recording.

Assessing a child’s performance is a continuous process carried out over the full seven years of Primary school. Teachers assess children’s work and reflections in Design and Technology by making assessments as they observe them working during lessons. Our assessing methods include the following as appropriate:-

1. Looking at a child’s recorded work i.e. model, photographs, written work.

2. Individual discussion.
3. Listening to the children's ideas as they discuss between themselves.
4. Group discussions in both planning and reporting back sessions.
5. Observing the children's skills in Design and Technology.
6. Record the progress that children make by assessing the children's work against the learning objectives for their lessons.

At the end of a unit of work, teachers make a judgement against the Key Learning Skills. In KS1 teachers collect examples of the children's work from each project in a shared book or folder. In KS2 children collate evidence of their own interactions, reflections and achievements in design and technology in a way appropriate for the year group and topic.

F. Provision for SEN and High Attaining Pupils

We teach Design and Technology to all children, with due regard to their ability. Design and Technology also forms part of our school curriculum policy to provide a broad and balanced education to all children. Teachers provide learning opportunities that are matched to the needs of children with. Work in design and technology takes into account the targets set for individual children in their Individual Education Plans (IEPs) where appropriate. All children will be supported through differentiation, adaptation or adult support, based on their individual needs.

G. Curriculum enhancements

- Outdoor learning linked to construction. Activities including den building, knot tying and tool making.
- After school computing/programming clubs.
- Visiting local designers.
- Healthy food/cooking clubs.
- Cooking based around celebrations and memorable dates. Christmas, Chinese New Year, Shrove Tuesday.

Impact

The impact of our implemented curriculum has provided the following for our children:

- The design and technology curriculum at Asfordby Hill contributes to children's personal development in creativity, independence, judgement and self-reflection.
- The design and technology curriculum supports the development of our children's Rainbow Skills (character skills). Inc curiosity, enthusiasm, understanding others and optimism.
- Children develop creative designing skills alongside metacognition skills, including generating and developing ideas, clarifying tasks, communicating ideas, planning, problem solving and evaluating.

Equal Opportunities

Design Technology plays an important part in the life of our school. It is available to every child and all children take part in creative activities, making a positive contribution to the life of the school and local community. Children will study and experience a range of designers, mathematicians and visionaries such as Katherine Johnson, Bertha Benz and Mary Berry. People and cultures that reflect the diversity of our school, locality and wider communities will be used to inspire and contextualise our projects.

Role of the Subject Leader

The design and technology lead will monitor the teaching and learning of design and technology across the school, to support and guide the practice of teachers, ensuring a high quality, broad and stimulating curriculum. They will monitor and evaluate the effectiveness of art teaching and learning, and liaise and consult with external agencies where appropriate. A range of good-quality design materials will be maintained in school and supplemented when needed for workshops or cross-curricular projects. This will enable teachers to resource and teach effectively and maintain a meaningful and engaging art curriculum.

Health and safety

Health and safety is important, particularly when working with tools, equipment and resources. Children should be given suitable instruction on the operation of all equipment before being allowed to work with it. Children need to be taught how to:

- use tools and equipment correctly.
- recognise hazards and risk control.

Children should be:

- strictly supervised in their use of equipment at all times.
- taught to respect the equipment they are using and to keep it stored safely while not in use.
- taught to recognise and consider hazards and risks and to take action to control these risks, having followed simple instructions.

Food Hygiene

- Pupils and staff will take care to undertake appropriate hand washing and other hygiene related activities prior to preparing food.
- Pupils and staff working with food must wear aprons designated for cooking.
- All jewellery should be removed and hair tied back.

Glue Guns

- Key Stage 2 children should use low temperature glue guns under supervision in a designated work area, wearing safety goggles.

Craft Knives

- Key Stage 2 children may use cutting equipment under supervision, using a cutting mat and wearing safety goggles.

Sawing

- Bench hooks and clamps must be used when sawing any material.
- Safety goggles must be worn, and any loose items of clothing/hair must be tucked in.

Generic Risk assessments have been completed, by the subject leader, for food Hygiene, the use of Glue Guns, and the use of cutting tools. These are stored under DT subject leader folder. When undertaking a class activity involving these areas, it is the class teacher's responsibility to use a copy of the relevant risk assessments.