

Bowlee Park Community Primary School

Design and Technology Policy

Our School Motto; Knowledge...your passport to the world!

Bowlee Values – Respect, Kindness, Ambition, Resilience, Cooperation, Responsibility

British Values – Democracy, Rule of Law, Individual Liberty, Tolerance and Respect

Rights Respecting Schools – Article 28; 'Every child has the right to an education'

Bowlee Behaviour Principles – Be Ready, Be Respectful and Be Safe

1. CURRICULUM INTENT

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.

National Curriculum, 2014

A Curriculum for Our Pupils

Design and Technology is a practical and valuable subject. It enables children and young people to actively contribute to the creativity, culture, wealth and well-being of themselves, their community and their nation. It teaches how to take risks and so become more resourceful, innovative, enterprising and capable. Our design and technology curriculum is created to improve pupils' life opportunities. It provides rich, memorable learning experiences for our pupils, many of whom come from a disadvantaged background. The ambition of our curriculum is to ensure high achievement for all pupils, including disadvantaged pupils and those with SEND.

A Curriculum of Breadth and Wider Opportunity

Our curriculum ensures that all pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They are exposed to building and applying a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. Through our curriculum children develop a confident, logical and resilient approach when working through the design process. We also enable pupils to understand and apply the principles of nutrition and the importance of a balanced healthy diet. We ensure pupils are able to critique, evaluate and test their ideas and products and communicate and work cooperatively. These are essential life skills.

Progressive, Well-sequenced Learning that Embeds Knowledge

Our design and technology curriculum delivers progressive and cumulative knowledge acquisition. There are well-sequenced long term, medium term and short term plans to ensure the logical teaching of knowledge and skills through each key stage, year group and in units of work. Knowledge, together with skills and opportunities to apply learning, leads to strong progress in Design and Technology.

A Curriculum where Reading is a Priority

Reading has a high priority in our school and in our design and technology curriculum. Our design and technology curriculum provides children with opportunities to apply reading skills taught in English lessons. Pupils need to research products through different media and read design briefs and instructions.

A Curriculum that Develops Core Values

Our design and technology curriculum helps pupils to develop into confident learners. They become more resilient as they develop skills through practical opportunities and through refining their initial designs. Our curriculum empowers pupils to embed the school values of honesty, respect and kindness, as pupils are encouraged to work co-operatively with others, help each other and support their peers when they are facing difficulties and critique. It also provides children with the knowledge and cultural capital to become well-informed citizens, able to appreciate human creativity and achievement while able to contribute towards building a better world.

Aims in the Teaching of Design and Technology

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

Design and Technology Curriculum Planning

Our Design and Technology curriculum teaches all aspects of the subject as set out in the National Curriculum. We have chosen to use the Kapow scheme of work as the basis for our planning in design and technology. Where necessary we have adapted these plans to ensure they are tailored to the needs of our pupils.

Our long-term plan maps out the themes covered in each term during each key stage, from the Early Years through to Year 6.

The medium-term plans 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. The subject leader is responsible for reviewing these plans.

The individual lesson plans list the specific learning objectives and expected outcomes, and give details of how to teach the lessons and how success will be measured. The class teacher annotates these individual plans to review and adapt any future planning together with the subject leader.

The activities in design and technology build on the pupils' prior learning. They are progressive, ensuring pupils' skills, knowledge and understanding increase as they move through the school. Opportunities to revisit prior learning are integral to the curriculum and often skills from one unit of work are reinforced by subsequent units.

The Early Years Foundation Stage

Learning about design and technology begins in the Early Years. In the Early Years Foundation Stage, design and technology forms part of the learning children acquire under the 'Knowledge and Understanding of the World' branch of the Foundation Stage curriculum. Children learn through first-hand experiences. They are encouraged to explore, observe, solve problems, think critically, make decisions and to talk about why they have made their decisions. Learning experiences include: construction, structures and joins, using a range of tools, cooking techniques, exploration (incl. disassembly) and discussion.

The Contribution of Design and Technology across the Curriculum

Design and technology contributes to speaking and listening. Children ask and answer questions about their work. They are given opportunities to compare ideas, methods and approaches in their own work and that of others, and to say what they think and feel about them.

Mathematical understanding is reinforced through the design and technology curriculum. For example, there are opportunities to develop children's understanding of shape and space as they construct and build models in two and three dimensions. Measuring and weighing materials and ingredients is an integral part of the making process.

Design and technology contributes to scientific understanding through opportunities to utilise electricity, materials and food nutrition as part of their project.

IT enhances our teaching of design and technology. Pupils use software to develop design skills. They use computer-aided design and apply their understanding of computing to program, monitor and control their products.

Ambition and Access for all to the Design and Technology Curriculum

We follow the principles of the National Curriculum to meet the needs of all children in design and technology. We have ensured that the programme of study is well sequenced and delivered in small steps. In lessons, content is repeated and revisited to enable children to retrieve prior learning and develop fluency. We regularly plan opportunities for spaced practice to ensure knowledge is retained and children make progress.

In design and technology we use two approaches to ensure we meet the needs of all pupils: adaptive teaching and differentiation.

The majority of children access age appropriate objectives through adaptive teaching. For all pupils (including those with SEND), teaching is adapted through a range of strategies including: breaking down learning into smaller chunks; adult support; reframing of questions; use of concrete and visual resources. Higher attainers are challenged through more demanding problems, which deepen their knowledge of the same content before acceleration onto new content. Children's difficulties and misconceptions are identified through immediate formative assessment and addressed with rapid intervention – commonly through individual or small group coaching.

Differentiation is implemented through the support and intervention provided to different children. For some children (particularly those with the highest level of SEND), further differentiation is needed through the adaptation of learning objectives, teaching materials and strategies in order to access learning. If a child's needs are best met by following an alternative plan, then this will be planned by the class teacher, with the support of the SENCO. Teachers take into account the specific needs and targets set for pupils with Special Educational Needs and Disabilities (SEND) and children whose first language is not English, when planning and implementing the design and technology curriculum. Specific arrangements for the provision of children with SEND will be communicated to parents and carers during SEND reviews.

Equality for All

At Bowlee Park Primary School we are committed to promoting equality of opportunity, eliminating discrimination and harassment, valuing diversity and promoting positive relationships. We meet the requirements of the Equality Act 2010 and provide an inclusive education to enable all pupils to develop their full potential.

Our school delivers a broad and balanced curriculum for all pupils and we address individual needs irrespective of gender, ability, religion or ethnic origin. The curriculum avoids

stereotypes and provides good role models for all pupils. We ensure the curriculum is not delivered in a discriminatory way.

2. IMPLEMENTATION

Teaching and Learning of Design and Technology

Children are taught through whole-class interactive teaching, where the focus is on all children working together on the same lesson content, whilst at the same time challenging and supporting pupils to gain depth of knowledge, skills and understanding.

Teachers design lessons so that there is a carefully sequenced journey through the concept being taught, identifying difficult points and possible misconceptions. Children are challenged through careful questioning and supported through use of concrete materials and visual representations to develop deep, conceptual understanding. Knowledge and skills are revisited to ensure pupils know more and remember more.

As pupils learn new skills, they need to practice and master these skills through applying them in a variety of contexts. Our curriculum highlights these key skills and provides opportunities for their application. The skills are revisited in subsequent year groups and further developed. The teaching of academic and subject specific language is embedded within each lesson.

In each unit pupils complete a process booklet. This takes them through the whole process including: the design brief, disassembly, developing their own ideas and designs, planning, practicing new skills, making their product and finally evaluating the finished product.

Teachers use a range of teaching strategies and ensure progress is made by all children within a class. Typical features include:

- lessons designed to build knowledge and skills in small progressive steps;
- lessons that encourage thinking, use precise vocabulary and allow children to deepen their understanding of the design task;
- a balance of interactive whole-class teaching, guided group/paired work and individual pupil work, including reflection;
- developing ideas, planning and making products, and evaluating them.
- the use of disassembly and teacher modelling to aid understanding;
- differentiation mainly through questioning, support, tools and materials, challenge and outcome.
- working on their own, collaborating with others, listening to each other's ideas and treating them with respect.
- critically evaluating existing products, their own work and that of others.

Resources

We have a wide range of resources to support the teaching of design and technology across the school. All our classrooms have a range of basic resources, whilst more specialised equipment is available from the DT store. This room is accessible to adults only. Pupils have the opportunity to use a wide range of age appropriate resources under the supervision of adults.

Health and Safety in Design and Technology

Health and safety is of paramount importance in Design and Technology. It is the teacher's responsibility to be aware of safety issues in all Design and Technology activities including:

- Providing a safe working area (furniture, materials storage, tool maintenance)
- Teaching and implementing safety rules and good practice, including hygiene
- Ensuring the safe and correct use of tools and materials

- Ensuring working areas are kept clean and tidy
- Considering storage of partially completed work
- Ensuring the correct disposal of waste

The teacher is responsible for ensuring that children are adequately supervised when using tools and that other adults working in the classroom understand safety rules and maintain safety standards. Further support and guidance is available from the subject leader or a member of SLT.

3. IMPACT

Assessment in Design and Technology

Teachers assess children's work in design and technology using formative and summative assessment methods. Teachers integrate the use of formative assessment strategies such as effective questioning, clear learning objectives and effective feedback and response into their teaching.

Each pupil completes a design and technology process book for each unit taught. Pupils also complete an end of unit quiz, so that key learning can be assessed.

Pupils in the Foundation Stage are assessed through observations during self-chosen activities and during adult led activities. Pupils are encouraged to assess and evaluate both their own work and that of other pupils. This helps them to appreciate how they can improve their performance, and what their targets should be for the future.

At the end of each term design and technology is assessed by the class teachers as on track, below or above age related standard. Children's results are collated to allow whole cohort and individual progress to be monitored. Results are analysed by the subject leader to identify areas to focus teaching.

Monitoring and Review

The quality of teaching and learning in design and technology is monitored and evaluated by the head teacher, senior leaders and the design and technology team as part of the school's agreed cycle of monitoring. This cycle includes:

- planning scrutiny
- work scrutiny – process booklets, photographs of different stages of the DT project and finished pieces
- lesson observations
- interviews with teachers
- discussion with pupils
- action planning to develop the DT curriculum development and teaching and learning based on the outcomes of monitoring.

The Role of the Subject Leader/Design and Technology Team

- Ensure teachers understand the requirements of the National Curriculum and teaching and learning is in line with this document.
- Prepare a subject action plan and meets regularly with the designated senior leader and the design and technology link governor to discuss progress and outcomes.
- Monitor and evaluate design and technology provision in the school by conducting regular planning scrutiny, work scrutiny, lesson observations, interviews with teachers, discussion with pupils and assessment data analysis.
- Organise and lead CPD and joint professional development.
- Observe colleagues with a view to identifying the support they need.
- Attend appropriate CPD.
- Raise the profile of design and technology across the school

- Audit and order resources.

This policy will be reviewed at least every two years

Next review Date: March 2026