



Design and Technology



Intent

At Harbinger Primary School, we aim to develop the children's love of design and curiosity about how things work. In order to do this, we follow the Kapow scheme of work. Our teaching inspires pupils to be innovative and creative thinkers who have an appreciation for the design cycle through ideation, creation and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling and testing. Furthermore, to be reflective learners who evaluate their work and the work of others.

Through this scheme of work, we aim to build an awareness of the impact of Design and Technology on our lives and encourage pupils to be resourceful, enterprising citizens who will have the skills to contribute to further design enhancements. Kapow's Design and Technology scheme of work enables pupils to meet the end of key stage attainment targets in the National Curriculum and the aims also align with the National Curriculum.



SEND Provision

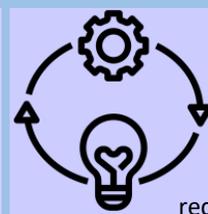
An inclusive environment in Design and Technology is vital for all children. When Design and Technology units are planned and chosen, consideration is taken to minimise any potential barriers so that all pupils can fully take part. To overcome any barriers in participating and learning, some modifications or adjustments will be made to include everyone. Support is provided in line with our whole school commitment to inclusion.

Differentiation through adult support, task or resources will be available when necessary. Where appropriate, children may be pre-taught vocabulary for a specific topic/lesson so that the child/children can focus on the design skill. Children that are not secure can then be given additional activities to provide them with further opportunities to show that they are secure, possibly gathering evidence in a different way, for example verbally in a small group context. If children are still not secure in the knowledge and skills, further opportunities will be provided, later in the year, for them to revisit them.



Enrichment

We enhance the Design and Technology curriculum with professionals from the world of STEM. We intend on gathering some contacts and, in the future, have opportunities for all children to work with a range of people involved in STEM. This ensures every child can be inspired to pursue further careers in Design and Technology. We aim to start a STEM Ambassadors club as a part of our school provision.



Implementation

The National Curriculum outlines the three main stages of the design process: design, make and evaluate. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical and technical understanding required for each strand. Cooking and nutrition has a separate section which had a focus on specific principles, skills and techniques in food, where food come from, diet and seasonality.

The National Curriculum organises the Design and Technology attainment targets under five sub-headings:

- Design
- Make
- Evaluate
- Technical Knowledge
- Cooking and Nutrition

Pupils taught at Harbinger Primary School will develop their skills in six key areas:

- Mechanisms
- Structures
- Textiles
- Cooking and Nutrition
- Electrical Systems (KS2)
- Digital World (KS2)

Each key area will follow the design process (design, make and evaluate) and has a particular theme and focus. We are following a spiral curriculum with key areas revisited again and again with increasing complexity, allowing pupils to revisit and build on their previous learning.

Design and Technology lessons will occur weekly, a topic once a term. Lessons will incorporate a range of different teaching strategies from independent tasks, paired and groupwork including practical hands-on, computer based and inventive tasks. Knowledge Organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of facts and vocabulary.

Strong subject knowledge is vital for staff to deliver a highly effect and robust Design and Technology curriculum. Each unit of lessons includes multiple teacher's videos to develop subject knowledge and support ongoing continuing professional development.

Assessment

Kapow's Design and Technology scheme of work has a clear progression of the knowledge and skills in each of these strands. Our curriculum overview clearly shows the units that will be covered in each year ensuring that all the different Design and Technology strands are covered across each Key Stage. At the beginning of each half-term unit, children will participate in an informal assessment about the next half-term's learning. At the end of each unit, we will repeat the assessment to see if the learning has been embedded.



Impact

At Harbinger Primary School, the impact of our teaching and learning is constantly beign monitored in both formative and summative assessment. Each unit has a knowledge organiser and a quiz that will be used at both the start and upon completion of every unit. Upon completion of their time in our primary school, our children will be able to:

- Understand the functional and the asthetic properties of a range of materials
- Understand how to use and combine tools for a variety of different processess
- Build and apply a knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes and CAD
- Understand the key priniciples of healthy eating including processes, food groups and cooking equipment
- Have an appreciation for invention and inventors that have had a positive impact on the world
- Understand how our decision can impact upon the wider world
- Self-evaluate and reflect on learning at different stages and identify areas to improve
- Meet or exceed the end of stage expectations from the National Curriculum in Design and Technology

Our pupils will leave primary school equipped with a range of skills to enable them to succeed in secondary school and throughout their lives as innovative and resourceful members of society.

Monitoring

The Art and DT Leader, SLT and the Local Authority will monitor the teaching and learning of Design and Technology in line with the school development plan and the expectations of our curriculum intent. Monitoring will take place in the following ways, including work scrutinies, planning scrutinies, lesson observations & pupil conferencing.

CPD

The Art and DT Lead will lead on the dissemination of good practice in the subject through leading INSET, staff meetings and team-teaching lessons to support teacher's subject knowledge. The school's monitoring, evaluation and development schedule provides an overview of the Art and DT-related staff meetings, which develop teachers' professional subject knowledge.