



Design and Technology Policy

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The importance of Design and Technology

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)

Intent: what is our curriculum aspiring to achieve?

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.

(National Curriculum 2014)

Design and Technology inspires children to think imaginatively and creatively and to become more autonomous and effective problem solvers, both as individuals and as part of a team. At Walkley Primary we aim for children to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We encourage pupils to become innovators and risk-takers. Where appropriate, we link work to other disciplines such as mathematics, science, engineering, computing and art. The children are also given opportunities to reflect upon and evaluate Design and Technology, its uses and its effectiveness.

- All design, make and evaluate assignments provide learning opportunities for developing creativity through designing skills such as generating, exploring, modifying ideas through drawing, modelling with materials and problem solving.

- All projects are planned to include the three types of activity:
 - Investigative and Evaluative Activities (IEAs) where children learn from a range of existing products and find out about D&T in the wider world;
 - Focused tasks (FTs) where they are taught specific technical knowledge, designing skills and making skills;
 - Design, make and evaluate Assignments (DMEA) where children create functional products with users and purposes in mind.

Implementation: what do we do to deliver our intent?

The DT Association's Projects on a Page scheme of work provides the framework for learning and teaching in Design and Technology. Key skills and knowledge for Design and Technology are mapped across the school to ensure progression between year groups. The areas of learning are mapped out on a whole school overview to ensure there is the right coverage and that progression is planned within and across year groups.

- One project is undertaken each term.
- Teachers use the scheme project planners imaginatively to devise medium term planning, whilst ensuring the learning objectives remain the same in order to ensure progression.

When designing and making, the children are taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes, pattern pieces and computer-aided design.

Make

- select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing, as well as chopping and slicing) accurately.
- select from and use a wider range of materials, ingredients and components, including construction materials, textiles and ingredients, according to their functional properties, aesthetic qualities and, where appropriate, taste.

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 shape the world.

Develop, Use and Apply Technical Knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- understand and use mechanical systems in their products.
- understand and use electrical systems in their products.
- apply their understanding of computing to program, monitor and control their products
- understand some of the ways that food can be processed and the effect of different cooking practices (including baking).

DT in the Early Years curriculum

Design & Technology is not a discrete subject in the EYFS, it forms part of *Expressive Arts & Design*, one of the 7 areas of learning. DT skills are also included in the 'fine motor skills' aspect of the prime area of *Physical Development*. We use our curriculum themes to plan introductions to many of the skills necessary for children to access the National Curriculum in DT in Y1.

Resources

We have a wide range of resources to support the teaching of Design & Technology across school. The Creative Zone is a dedicated space that can be booked out for practical lessons and is ideal for Design and Technology projects.

Impact: how do we ensure that children are learning?

- We assess children's work in Design and Technology while observing them working during lessons. The development of ideas in books provides insight into the skill processes as taught by the curriculum and should be considered alongside end pieces in making any judgments.
- 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.
- Design and Technology is assessed in accordance with the school's assessment policy. It is captured on the PiTA grids using the school's assessment framework. This enables teachers to make regular termly assessment of progress for each child and we pass this information on to the next teacher at the end of each year.
- Teachers observe, question, listen, intervene and modify tasks in order to support the learning needs of all children. Design and Technology is assessed against the learning objectives and success criteria (remember tos) outlined in the planning. Children are encouraged to take an active role in the assessment process by stating their opinions, discussing their work and identifying what has gone well and what needs further development against the success criteria outlined to them.
- In key stage 1 and 2 this may be RAG rated as in other subject areas. Assessments will be made on learning processes and skill development as well as final outcomes. Children's progress in Design and Technology is reported to parents through the pupil annual report and parental consultation meetings.
- The Design and Technology Subject Leaders monitor the subject by carrying out work and planning scrutinies, lesson observations and focussed discussions with teachers and pupils. This enables the monitoring of consistent high standards in Design and Technology teaching and learning across the school.

Responsibilities

- Teaching staff have a responsibility to ensure Design and Technology sessions are planned, delivered and assessed as outlined in the policy.
- Teaching assistants have a responsibility to support the delivery of planned sessions and provide feedback to teaching staff regarding the progress, engagement, misconceptions and achievements of the children
- Supply teachers have a responsibility to ensure Design and Technology are planned, delivered and assessed as instructed by teachers in line with the Design and Technology policy.
- Subject leaders and SLT have a responsibility to monitor the whole school application of the Design and Technology policy by all staff and ensure observed practice is effective. They will also deliver CPD when necessary.

Health and safety

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 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.

Risk assessments are carried out by the class teacher for activities where a risk assessment is deemed appropriate. Generic Risk assessments have been completed, by the subject leader, for food Hygiene, the use of Glue Guns, and the use of cutting tools.

When undertaking a class activity involving these areas, it is the class teacher's responsibility to use a copy of the relevant assessment(s) to amend to reflect their specific need and then process for signatures. The list of generic risk assessment and their contents may be subject to change at any time, as determined by the subject leader, and should be checked every time an activity is planned.

Monitoring and Review

The Design and Technology subject leaders are responsible for monitoring and evaluating the standards of teaching, learning, assessment and achievement across the school. The leaders are responsible for supporting colleagues in the teaching of Design and Technology, for being informed about current developments in the subject, and for providing a strategic lead and direction in the subject throughout the school. The subject leaders follow standard school procedures to evaluate the strengths and weaknesses in the subject and are responsible for highlighting areas for improvement. The subject leaders monitor the standards of children's work by reviewing samples of children's work and use these to feed back to staff and the SLT in terms of achievements, progression and areas for development throughout the school in this subject.

Policy to be reviewed September 2023.