THE HERMITAGE SCHOOLS

Inspire, Learn, Achieve

Design & Technology Policy

Person responsible: Design & Technology Subject Leaders
Date adopted: Summer Term 2023
Date of last review: Summer Term 2026
Date of next review: Summer Term 2029

At The Hermitage Schools, we aim to use Design and Technology to develop the children's knowledge, skills, creativity and imagination. and use these skills and understanding to perform with increasing competence and confidence in a range of activities. These skills may also be useful in the home. We achieve these aims through a variety of means such as: sewing, cookery, using electricity, making motors, leadership opportunities, residential visits and Forest Schools. Through these means, our children develop an understanding of how to improve in different Design and Technology activities and learn how to evaluate and recognise their own success.

Aims

Pupils at The Hermitage Schools are taught to:

- 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 healthy dishes.

Curriculum content

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an interactive process of designing and making. They will work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

The Hermitage Schools

Teachers plan units of work using the school's progression of skills document, which outlines the expected progression children will undertake as they move through KS2. This progression of skills covers all key areas of the Design and Technology Curriculum and is aligned with the National Curriculum.
When designing and making, pupils will be 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 and exploded 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], accurately.
- Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

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.

Technical knowledge

- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].
- Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].
- Apply their understanding of computing to program, monitor and control their products.

Cooking

As part of our work with food at our school, pupils are taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. We are fortunate to have a dedicated STEM room with a fully equipped kitchen for pupils to cook hygienically in.

Pupils are taught to:

- Understand and apply the principles of a healthy and varied diet.
- Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Teaching design and technology to children with special needs

We teach Design and Technology to all children, so children within the Orchard Centre will actively undertake Design and Technology activities. It 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 learning difficulties.

The Infant School

How teaching is organised:

In the Early Years, Design and Technology is taught through the areas ‘Exploring mixed media and materials’ and ‘Being imaginative.’ DT is taught using a cross curricular approach to link it in with our termly topics set out in the Cornerstones scheme of work. The class teacher also provides the children with access to different resources for them to explore during their Green Go, child-initiated learning. The children are encouraged to design a plan before diving into the making process, giving them time to talk through their ideas and edit as necessary. This is modelled

beforehand by the teacher, who also facilitates and extends the learning as required. The teacher can extend the learning by using communication between peers and adults in the environment, using effective questioning. This can be by asking leading or open ended questions about how things work, talking about what they are doing and what they have discovered.

In Years 1 and 2, Design and Technology is taught through the termly topics set out in the Cornerstones scheme of work. DT lessons are taught using a cross curricular approach as either whole class or in smaller groups as necessary. During these times the children are encouraged to use a variety of different resources, including toys, joining materials, levers/gear toys, junk modelling and other art resources to develop their creative and critical thinking skills.

Design and Technology Curriculum planning:

We aim to cover the objectives in the Design and Technology National Curriculum (2013) and the Early Years Foundation Stage curriculum. Across the Foundation Stage and Key Stage 1, DT is planned according to the termly topics set out in the Cornerstones scheme of work. The DT Long Term Progression Plans show progression that should be made across the school and the Medium-Term Plan breaks this down into weekly lessons. Computing is also used to enhance the teaching and learning whenever appropriate; for example: using websites to look at pictures of objects, for recording work using digital cameras or IPads. DT is often also taught alongside Art and Design as the subjects can complement each other e.g. Christmas craft day.

Equal Opportunities:

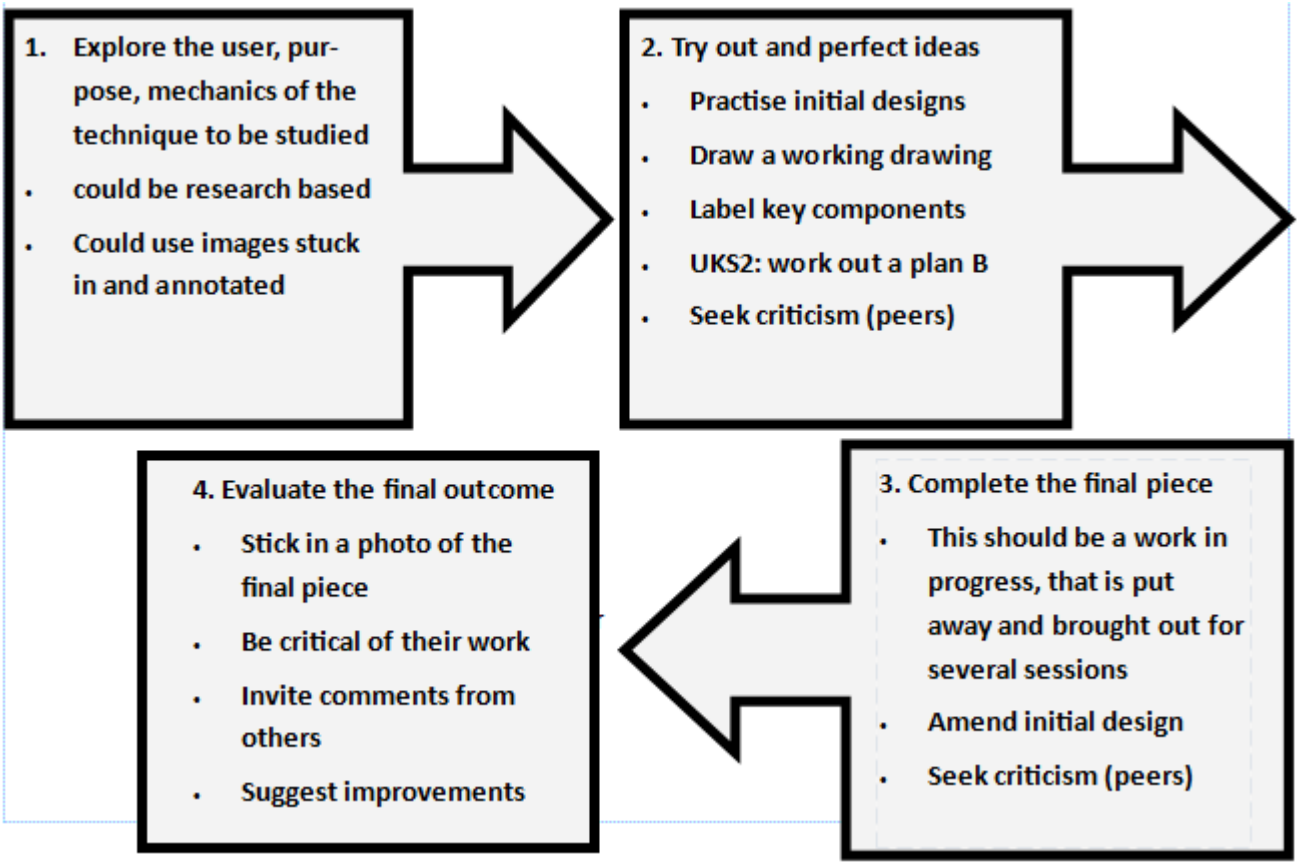
We are committed to offer a Design and Technology curriculum to all pupils regardless of ability, cultural diversity, disability or gender.

Assessment and recording

The Hermitage Schools

Work in Design and Technology throughout pupil's time at The Hermitage School will be recorded in their individual sketchbooks. The whole unit of work is displayed in the sketch books, mapping a child's design process from the initial ideas stage up until the evaluation stage. This recording process allows staff members to see the progress of their pupils in Design and Technology and accurately assess them at the end of the year in the annual reports to parents.

All units of work follow this flowchart, which should be evident in pupils' work in sketchbooks:



Teachers assess children's work in Design and Technology by making assessments as they observe them working during lessons. At the end of a unit of work, teachers make a judgement against the school's progression of skills, which is aligned with the National Curriculum levels of attainment. Teachers then use the levels that they record to plan the future work of each child and to make an annual assessment of progress for each child, as part of the annual report to parents.

Pupils' work is regularly photographed and uploaded onto Seesaw to share with parents and to create a digital record for monitoring of Design and Technology by the subject leader.

Assessment is undertaken to provide the most effective next steps for the child. These steps then help to plan further learning and development opportunities. During the lesson the teacher provides verbal feedback and includes mini plenaries within the lesson to praise good technique and effort. Annual reports are used to record children's attainment against National Curriculum objectives. Parents are informed of children's attainment and progress through parent consultations and in the summer term in their annual report. This is shared with the next teacher to ensure that progression in skills occurs.

Resources

The Junior School

Our 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 equipment being kept in the STEM room. Potentially dangerous tools (such as knives for cooking and saws) are kept securely in a cupboard.

The Infant School

Resources are ordered termly and distributed to the year groups to store inside the classrooms. Termly the Design and Technology lead will email out to see if any resources are needed for any specific lessons or topics. More specialised resources are purchased as necessary for Christmas Craft Day, as well as any other cross-curricular lessons or topics. The use of Junior STEM room is also available.

Monitoring and review

The Junior School

The monitoring of the standards of children's work and of the quality of teaching in Design and Technology is the responsibility of the Design and Technology subject leader. The work of the subject leader also 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.

The Infant School

The DT subject leader is responsible for monitoring children's work, progression and teaching in DT; this is reported to the headteacher. The subject leader is also responsible for supporting colleagues in the teaching of DT, for being informed about current developments, resourcing the subject in the school. The DT subject leader is given allocated time for fulfilling vital tasks such as reviewing children's work and visiting classes to observe teaching. The subject leader writes a monitoring report, a copy of which is given to the headteacher and the governors, monitoring feedback is discussed with the teachers in staff meetings.

Health and safety

The general teaching requirement for health and safety applies in this subject. We teach children how to follow proper procedures for safety and hygiene. Cool melt glue guns, cooking knives and saws are used under direct supervision, with a health and safety briefing given to children prior to use. These tools are kept securely in a cupboard.