

Design Technology Policy

Intent Statement

At John Hampden Primary School we are committed to providing all children with learning opportunities to engage in design technology. Our planning and practice is based on the National Curriculum for Design Technology.

Value of Design and Technology

We believe design and technology is about designing and making products for a specific user and purpose. It involves children in learning about the world we live in and developing a wide range of knowledge and skills through designing and making. It helps children to think through problems creatively, about how to organise themselves and how to use knowledge and skills to bring about change and to shape the environment. Through design and technology children become discriminating and informed users of products and become innovators.

Aims of Design and Technology

We believe Design and Technology offers opportunities for children to:

- Develop their capability to create high quality products through combining their designing and making skills with knowledge and understanding;
- Develop a sense of enjoyment and pride in their ability to make;
- Nurture creativity and innovation through designing and making;
- Develop an interest and understanding of the ways in which people from the past and present have used design to meet their needs.

In the Early Years Foundation Stage we provide opportunities for children to:

- Develop a curiosity and interest in the designed and made world through investigating, talking and asking questions about familiar products;
- Develop confidence and enthusiasm through frequent exploration of construction kits to build and construct objects, and activities for exploring joining, assembling and shaping materials to make products;
- Extend their vocabulary through talking and explaining about their designing and making activities.

Implementation Statement

Design and technology will be taught for 8-12 hours each long term, depending on the project being undertaken.

Each design and technology project will be taught weekly, in half term blocks or during Design and Technology mornings/ afternoons/ days, dependant on the needs of the project being worked on.

Planning

The D&T Association's Projects on a Page scheme of work provides the framework for learning and teaching in design and technology. (See table at the bottom of the Progression Map).

- One project is planned and undertaken each long term (alternating with Art).
- Colleagues should use the project planners in the scheme imaginatively, whilst ensuring the learning objectives remain the same in order to ensure progression.
- In the EYFS, daily design and technology activities are planned; some initiated by the children and some led by adults.
- Children in their designing and making will apply knowledge and skills of: textiles, food, mechanisms, mechanical systems and structures. Electrical systems are taught in KS2.
- Every year group to do a food project per year.
- 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 should 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.

Links with other subjects and key competencies

- We believe design and technology provides a natural opportunity for children to practice and improve basic skills such as spoken language, English and mathematics.
- In our design, make and evaluate assignments we aim to provide learning opportunities for developing key competencies such as problem-solving, teamwork, negotiation, consumer awareness and organisation.
- One project each year will have an opportunity to engage in team or group work in Key Stage 2.
- Through evaluating the process and their final products children will be encouraged to improve their own in Key Stage 2.
- Children develop and apply knowledge and skills from art and design, science, computing and English in design and technology. Teachers will make links wherever possible to help raise standards in other subjects and enhance children's learning.
- Design and technology is used to raise children's appreciation of British Values.

Computing

- Programming and control is used in electrical systems projects in Y4 and Y6 to operate children's products.
- Paint software is used for finishing techniques and simple paper pattern making in textile projects.

- Our computer-aided design (CAD) software is used when children are designing the net for packaging.

Extending the curriculum

- Children should develop an understanding of the design and made world through first-hand experience.
- We have some school trips which link to D&T including Year 4 visiting Cadbury's World and Year 3 visiting Hill End to practise woodcraft and forest school type activities
- Wherever possible children will be given opportunities to visit local museums, shops and restaurants and meet with designers, engineers, chefs, architects and students from college or secondary schools.

Organisation

All class teachers will have responsibility for planning and teaching D&T to their classes.

Inclusion

- A wide range of cultural images and contexts will be used in design and technology, and we will use these opportunities to challenge stereotypes.
- When thinking of existing designers/engineers/chefs who have made a huge contribution to their area of work we are careful to include a diverse range of role models.
- For all children to produce their best, we plan differentiated resources and tasks through:
 - adapted written work i.e. with prompts, writing frames and wordbanks;
 - changing the demands of a task;
 - more limited choices;
 - greater teacher intervention, small group work and teaching assistant support;
 - ensuring manipulative skills needed are manageable;
 - selecting appropriate tools and equipment.
- Talented or able children are challenged through more demanding tasks such as more open-ended design briefs, rigorous testing of their products, carrying out independent research, giving additional responsibilities such as leading a team.

The learning environment

- We aim to provide a learning environment where children feel secure and creative risk-taking and problem solving is encouraged and children's design ideas and suggestions are valued.

Assessment, recording and reporting

- The design and technology subject leader will collect selected examples of children's work from the projects in our scheme of work Project on a page. The examples will be used for identifying progression and expectations.

- Children in Key Stages 1 and 2 will keep sketches, plan drawings, paper mock-ups, notes and evaluations to reflect upon. These can be used for assessment purposes and for monitoring progression.
- Teachers make notes at the end of projects on children who were significant above or below expectations set out in the project planners; this will inform future planning.
- Children are encouraged to make personal assessments of their own work through evaluating activities and identifying what they need to do to improve.

Health and safety

- Risk assessments will be carried out prior to design and technology projects.
- Teachers will always teach the safe use of tools and equipment and insist on good practice.
- Children will be taught how to take steps to control risks.
- Glue guns will be used by Key Stage 2 children under supervision, only when there is no other appropriate joining technique.

Food – hygiene and safety

- Prior to beginning a cooking lesson staff will consult with the DT Co-ordinator who holds a Level 2 Food Hygiene certificate and is fully trained. Adults will ensure all equipment is clean and in working order. Plastic aprons will be worn by adults and children working with food. The importance of thorough hand washing will be explained to children.
- Prior to food activities, children who are not permitted to taste or handle food products or ingredients will be identified.

Impact Statement

Through our balanced and varied Design and Technology curriculum, pupils will develop the expertise needed to perform everyday tasks confidently and participate successfully in an increasingly technological world. They will develop their problem solving abilities, knowledge, and learn the techniques and skills needed to design and make high-quality prototypes and products. Children will learn how to critique, evaluate and test their ideas and products, as well as the work of others. It is vitally important for their future health and wellbeing that children understand and apply the principles of nutrition and learn how to prepare and cook food.

Role of the design and technology subject leader

The subject leader will:

- Inspire learning through bringing design and technology alive for our children;
- Monitor and evaluate the learning and teaching of design and technology within the school;
- Devise an action plan to show future developments and review progress;

- Provide specialist support and guidance to colleagues on teaching projects and planning;
- Purchase and organise resources and maintain equipment to make them easily accessible for colleagues;
- Attend courses and cluster meetings for CPD and report back to staff;
- Explore ways to raise the profile of design and technology within school and make links with local businesses;
- Strengthen links with Lord Williams's Lower School to help inform D&T teachers.
- Encourage parents to be involved in their children's learning in design and technology.

Equal Opportunities and Special Educational Needs

At John Hampden Primary School, we teach D&T to all children, whatever their ability. D&T forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our D&T teaching, we provide learning opportunities that enable all pupils to make progress by setting suitable learning challenges and responding to every child's needs.

In accordance with the Special Needs Policy, we are a fully inclusive school and children with special educational needs are included in all lessons. It is the responsibility of our teaching staff to ensure that any additional equipment or support is available to suit the needs of all children and these needs may be noted on some children's individual learning plans.

Rachel Butler (June 2021)

D&T Co-ordinator