

John Ruskin Primary School and Language Classes

Design and Technology Policy

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“Be responsible, be fair, stay positive and care”



The Nature of Design Technology

Technology plays a fundamental role in the lives of all people. An understanding of technology empowers children to act effectively in tomorrow's rapidly changing technological world. Children learn to think and intervene creatively to improve quality of life. The subject calls for pupils to become autonomous and creative problem solvers, as individuals and members of a team. They must look for needs, wants and opportunities and respond to them by developing a range of ideas and making products and systems. They combine practical skills with an understanding of aesthetics, social and environmental issues, functions and industrial practice. As they do so, they reflect on and evaluate present and past design and technology, its uses and effects. Through design and technology, all pupils can become discriminating and informed users of products, and become innovators.

This policy reflects our school values and philosophy in relation to the teaching and learning of design and technology. It sets out a framework within which teaching and non teaching staff can operate effectively, giving guidance on planning, teaching and assessment.

Aims and Objectives of Design and Technology

The aims of teaching and learning of design and technology at John Ruskin incorporate these important ideas for every child:

- To give every child equal and appropriate opportunities to be successful and make good progress in the skills, knowledge, concepts and understanding of design and technology and to reach their full potential
- To develop an awareness of the potential dangers involved with design and technology and learn how to take risks, together with an understanding of the need for safety and willingness to follow rules
- To develop a confident and positive attitude towards design and technology and to enjoy and gain pleasure from learning.
- To develop an awareness and appreciation of the man-made world around them and become resourceful, innovative and enterprising
- To develop their observational skills to help them generate ideas to use in their work
- To develop their skills to solve real and relevant problems in a range of contexts, considering own and others needs in a practical and imaginative and creative way
- To evaluate past and present design and technology and develop a critical understanding of its impact on daily life/wider world
- To develop the skills to communicate effectively using specialised vocabulary relevant to design and technology
- To recognise the importance of Design and Technology as a vehicle for using skills which have been learnt in other areas of the curriculum e.g art, maths and computing
- To develop an appreciation of the variety and nature of materials and the ways in which they may be used to create products
- To develop economic awareness and good organisational skills when using materials
- To use materials creatively, developing initiative and practical problem skills
- To develop high expectations of themselves and to appreciate it in others

To promote achievement in Technology, we aim to provide good quality learning experiences for pupils. This includes:

- The provision of a range of stimulating, structured and differentiated activities which incorporate a range of learning styles and where possible relate to the interests, cultures and everyday life of our children
- The provision of appropriate resources including ICT
- The encouragement of pupils to be independent in their learning
- The teaching of a range of skills
- The opportunities for children to work as individuals as well as cooperating in small groups and teams
- The opportunity for them to critically evaluate their own and others work and suggest ways to improve

- Involvement in cross curricular design and make projects/workshops
- The provision of extra curricular clubs relating to design technology
- The celebration of achievement whilst maintaining the highest possible expectations

Curriculum/Planning/Teaching and Learning

Design Technology is a foundation subject in the National Curriculum. At John Ruskin, Design Technology is organised into schemes of work based on National Curriculum programmes of study. Many of our schemes of work have been adapted for the children in our school.

There are three phases of curriculum planning in Design and Technology. The long-term plan maps out the units covered in each term during the key stage. It ensures continuity and progression. Medium term plans give details of each unit of work for each term. They identify objectives and outcomes.

Class teachers produce short term plans for each Design and Technology lesson. They include objectives (WALT) and success criteria (WILF), details of the lesson, differentiation, questions for higher order thinking and assessment for learning.

Units of work link together three main types of activity:

- Investigate and evaluate
- Focused practical tasks
- Design and make assignments

EYFS

In the foundation stage, Design and Technology skills are addressed throughout the seven areas of the framework. Children are encouraged to explore activities based on first hand experience that encourage exploration, observation, problem solving, prediction, critical thinking, decision and discussion. Children work in an environment with a wide range of activities indoors and outdoors that stimulate their interest and curiosity. They work with a range of tools and materials in their design work.

KS1/KS2

At each key stage, each class undertakes at least one design and technology project per term linked to topic work wherever possible.

At KS1, pupils are provided with opportunities for:

- making simple design drawings with some detail and labelling
- communicating orally what they plan to do, are doing and have done
- identifying, naming and using common tools and materials
- physically modelling materials and components
- exploring and evaluating a range of existing products
- building structures and exploring and using mechanisms

At KS2, pupils will:

- communicate their ideas effectively expressing the purpose of their product through discussion and annotated sketches, cross-sectional/exploded diagrams, prototypes and computer aided design
- develop and adapt their own design criteria considering the views of others
- combine and shape a wider range of tools and materials to create products which meet their criteria
- build and use more complex structures and mechanical systems, use electrical systems and apply their understanding of computing to program, monitor and control their products
- understand how key events and individuals in design and technology have helped shape the world

Information and Communication Technology enhances the teaching of design and technology. Where appropriate, children can use software to enhance their skills in designing and making things. Younger children can publish designs on drawing programmes. Older children can also use computer aided design as well as using computing to program, monitor and control their products. All children can use ICT to research and collect and present information.

Time Allocation

In KS1 and KS2, 45 minutes - 1 hour is allocated per week (10 - 12 hours per term). It is normally done in 1.5 - 2 hour lessons over 1 half term. Teachers may use this flexibly if necessary and may block units of work where this works best.

Assessment for Learning

At John Ruskin, assessment is a continuous process, integral to teaching and learning. It is used to inform future planning and provide information about individuals throughout their time at John Ruskin.

Formative assessment techniques ensure that teachers assess the ongoing design process and not just the finished product. Class teachers make assessments of their pupils gathering evidence through discussion and observation of the pupils during lessons and by the child's recording of the activities, e.g. planning, designing, photographing practical activities and the children's own evaluations of their learning. Teachers make written assessments of DT lessons on their daily planning sheets. Children 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. DT work in topic books is monitored in book scrutinies by SLT team. At the end of each year, teachers make a judgement for each child against the National Curriculum programmes of study. A level (W/M/E) is recorded for each child and levels across the school are monitored by the subject coordinator. Progress over the past school year for design technology is also reported in the end of year report to parents.

Inclusion

At John Ruskin, we are committed to ensuring equality of opportunity. It is the responsibility of all teachers to ensure that all pupils, irrespective of gender, ability, ethnicity and social circumstance have access to the curriculum and make the greatest progress possible. Class teachers provide differentiated learning opportunities to meet the needs of all pupils. Design Technology, in particular provides the opportunity for pupils to achieve in a practical subject as they are encouraged to communicate in non written ways. Class teachers also identify pupils who excel in design technology. When possible, these pupils are provided with opportunities for further challenge.

Subject Coordinators Role

The Design Technology subject coordinator is responsible for the leadership of design and technology throughout the school. This includes:

- Ensuring continuity and progression across the school
- Preparing a policy
- Developing a scheme of work
- Writing a subject coordinator plan and submitting a budget bid each year
- Advising and supporting colleagues
- Ordering and maintaining availability of resources
- Monitoring teaching and learning in Design and Technology including monitoring planning and assessment, monitoring children's work and observing lessons

Resources

Resources are ordered and maintained by the coordinator.

Design Technology resources are mainly located in DT room. This is also available for teaching lessons. (See timetable) All classes have basic equipment, card, scissors, glue etc. There is a collection of books for children and teachers in the school library. In both key stages, children use green topic books to record their work. These are available in the stock room.

Staff Training and Development

Training is available to all staff to support their personal professional development and/or school development priorities. These opportunities will be identified in leadership/performance management meetings.

Cooking and Nutrition

In all years, children should work with food and be taught how to cook and apply the principles of nutrition and healthy eating. We work to instil a love of cooking with our pupils. 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.

Each year group has at least 1 food and cooking unit. Where possible, this has been planned to link with gardening activities so the children are cooking with the food that they have grown. There are also often additional cooking sessions throughout the year run by our PDC coordinator and outside agencies such as “School Food Matters”. Cooking sessions can be run in the classroom or in the cooking space.

At KS1, children are taught the basic principles of a healthy and varied diet to prepare dishes and to understand where food comes from.

At KS2, children apply the principles of a healthy and varied diet, prepare and cook a variety of predominately savoury dishes using a range of cooking dishes, understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

Health and Safety

In this subject, the general teaching requirement for health and safety applies. It is the teacher’s responsibility to ensure a safe working environment. Safety of teaching equipment should be regularly reviewed. Electrical equipments such as ovens and glue guns and other equipment such as knives, saws, drills, hammers and needles should be used under close supervision from the teacher or responsible adult. Tools and equipment should be locked away in the DT room when not in use. When working with tools and equipment, pupils should be taught about hazards and risks. Children are also taught how to follow proper procedures for food safety and hygiene. They should be taught about risk control and how to manage their environment to ensure the health and safety of themselves and others. See attached guidelines for food and cooking sessions.

Evaluation

The Design and Technology subject coordinator, in consultation with the head teacher and leadership team, will be responsible for monitoring and implementing the policy.

This policy will be reviewed regularly by the subject coordinator, governing body and the rest of the staff.

Intent

It is the intent at John Ruskin Primary School for Design Technology to be taught effectively in all year groups through at least one topic per term. Design Technology projects are often made cross curricular - linking to other subjects taught. Through the study of Design and Technology, it is our intention that the children learn to combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industry. This allows them to reflect on and evaluate past and present technology, its uses and impacts.

Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. We encourage children to use their creativity and imagination, 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 aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art. The children are also given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness and are encouraged to become innovators and risk-takers.

Implementation

At John Ruskin Primary school, we believe that Design and Technology is an enjoyable and valuable part of school life and learning. For this reason, we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum.

Through a variety of creative and practical DT projects that solve real and relevant problems, we teach the knowledge, understanding and skills needed to engage in the process of designing and making. Planning was initially guided by the DT Association 'Projects on a Page' schemes of work. The DT projects were then adapted to be linked, where possible to topics and the particular needs and requirements of our children ensuring the National Curriculum was followed. There are strong cross curricular links with other subjects, such as Mathematics, Science, Computing, and Art.

Key skills and knowledge for DT have been mapped out across the school which allows for clear progression across year groups in all areas of DT (textiles, mechanisms, structures, food and electrical systems). Key concepts and technical vocabulary are also included in planning which follows an overall design, make, evaluate structure. Encouraging the use of technical vocabulary during discussion opportunities links directly into our whole school focus on improving oracy skills.

Each year group, has three DT projects throughout the year that are linked to topics. Teachers are given flexibility when planning for DT; often teaching DT lessons as a block of lessons (a DT day) to allow the time needed for the children to be critical, inventive and reflective on their work. Well planned and resourced projects provide children with a hands-on and enriching experience where a range of skills are taught

ensuring the children are aware of health and safety issues related to the tasks undertaken. Pupils are introduced to specific designers, chefs, nutritionists, etc and we want them to be inspired by their achievements.

Units on nutrition are also taught ensuring that children have a growing understanding of where food comes from, its seasonality and the need for a healthy and varied diet. Where possible, the children are encouraged to grow their own produce to cook with.

As a school, we promote Design and Technology in the wider school, through an after-school cooking club and a weekly gardening club. Where the children learn about where our food comes from by growing their own, and the importance of a balanced, healthy and varied diet and how to prepare this. Each year group, has a gardening plot and are in charge of their own patch, to grow and harvest food. We have also integrated food and cooking into our annual Health and Wellbeing Week. We have enhanced the Y6 curriculum with an extra full day STEM workshop.

During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities.

They have the opportunities to learn to:

- Use different media and materials to construct a variety of things, expressing their own ideas
- Make plans and construct with a purpose in mind using a variety of resources
- Develop skills to use simple tools and techniques appropriately, effectively and safely
- Select appropriate resources for a product and adapt their work where necessary
- Cook and prepare food adhering to good health and hygiene routines

Impact

The intended impact of our DT curriculum is that the majority of children in each year group are working at or above the expected level for their age. In addition to this, we want the children (and teachers) to be inspired by the DT curriculum and want to learn more, show progression in their skills, knowledge and understanding, to be able to discuss their learning and remember what they have learnt.

The impact of the teaching of Design and Technology is assessed in a number of ways. The children's skills and knowledge are assessed regularly by the class teacher, throughout lessons, peer and self-assessments and a teacher assessment against the National curriculum standards is completed yearly. The pupils' progress and attainment tells us whether each individual child is below expected, at expected or above expected attainment for their age. This, alongside the curriculum monitoring, (as part of the monitoring timetable) ensures high standards in DT and informs the Design and Technology coordinator of any further areas for curriculum development, pupil support and/or training requirements for staff. The marking of children's work is used alongside more informal child interviews and photographic

evidence. Careful questioning and planning for child led discussions are some of the other methods of measuring impact. Curriculum in Action pages are shared with parents/carers to share the impact of learning in DT with them.



Guidelines for Use of the Ovens

- When not in use, ovens are kept locked in the cupboard.
- Ovens only be used in the allocated area on the cooking trolleys. They are not to be used on tables.
- There should always be two adults when cooking with the ovens.
- Children must be supervised by an adult at all times when using the oven.
- Lifting lids off pans and kettles, moving hot tins, dishes and hot liquids should be restricted to adults only.



Food Safety & Kitchen Hygiene

Kitchen and food safety is about managing everything that happens in the food area to reduce the risk of burns, falls, food poisoning and food allergy/intolerance. Those in charge of food activities must think about, carry out and manage food safety procedures.

Sharp Equipment

- Knives should always be kept locked away and stored separately.
- Children should be taught correct techniques for using knives and knives should always be used under supervision.
- Knives should be kept sharp.
- Wash knives separately and do not leave in sink.

Slippery Floors

- Ensure there are no obstacles in walkways and floors are clean and without defects. Ensure that any spills/food debris are cleared up immediately.

Personal Hygiene

- Ensure children are taught the need for personal hygiene. Staff and children to wash their hands before handling food/when moving from handling different foods and after visits to the toilet.
- Ensure that warm water, soap and disposable towels are available.
- Ensure cuts etc are covered with waterproof adhesive dressings.
- Tie back long hair, remove jewellery, roll up long sleeves and wear clean aprons. Always use clean spoons for tasting.
- Children should not be preparing food if they are/have been sick – vomiting/diarrhoea.

Food Storage

- Food should not be stored in the cooking room.
- Food should be appropriately covered/wrapped prior to pupils taking home. Children to be provided with instruction on safe storage/consumption.

Food Handling/Cooking

- Keep high risk/raw foods apart at all time.
- Use separate chopping boards/utensils for raw and cooked food.
- Only use cooking equipment for food preparation.
- Never serve food that isn't cooked properly, especially chicken. Check meat is cooked by inserting a skewer into the thickest part.
- Serve cooked food immediately. Do not reheat foods.
- Ensure that any foods that are to be used in sessions that need to be chilled are kept in the fridge. Do not keep and chill food that the children have made.

Cleaning

- Clean all work surfaces to be used with a multipurpose cleaner prior to food preparation. Please only use agreed GOSHH products. They are in the locked cupboard and must be locked away after use and used only by an adult. Please see Oliver if they need replenishing.
- All equipment to be cleaned prior to use with hot water and detergent.
- Ensure that all equipment is thoroughly dried before putting away.
- Chopping boards need special attention. Scrub them on both sides, rinse and air dry before putting away.
- Ensure that all aprons are cleaned and dried and that cloths and tea towels are washed and dried before putting away.
- Ensure that all waste food is thrown away and that Oliver is informed that there is rubbish to be emptied.

Food Allergies

- All staff including volunteers should be made aware of pupils who have food allergies. These are displayed in the cooking room.
- Check all ingredients for food allergens.

Let's get
COOKing



