Design and Technology Policy September 2023

Policy for Design and Technology

This policy reflects the school values and philosophy in relation to the teaching and learning of Design and Technology at Baines Endowed Primary School. It sets out a framework within which teaching and non-teaching staff can operate and gives guidance on planning, teaching and assessment.

This document is intended for all teaching staff, school governors and parents.

Aims of the subject:

"Design and Technology prepares pupils to participate in tomorrow's rapidly changing technologies. They 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, function and industrial practices. As they do so, they reflect on and evaluate present and past design technology, its uses and effects. Through design and technology, all pupils can become discriminating and informed users of products, and become innovators."

Aims of our school:

Design and Technology is a foundation subject within the National Curriculum. The aims of Design and Technology at Baines Endowed are to:

1. Develop individual skills and knowledge when designing, making and modifying.
2. Use a range of tools, equipment and materials including card, textiles, construction materials, food and ICT in Design and Technology to make quality products.
3. Develop and combine practical skills with an understanding of aesthetic, social and/or environmental issues in the design and make process.
4. Solve problems creatively in Design and Technology by working independently and in groups.
5. Provide opportunities to explore the uses and effects of Design and Technology in everyday living.
6. Evaluate the processes and products according to the design criteria and seek improvements.
7. Learn how to design and make safely.

These aims are consistent with our school philosophy and take account of the LEA Curriculum Policy and the 2014 National Curriculum Guidance.

Curriculum and School Organisation

In order to achieve these aims, Design and Technology is organised progressively through the Creative Curriculum into Units of Work by following the scheme Kapow. Kapow ensures that the Knowledge and Skills to be covered in each class (See Curriculum Overview for current Creative Curriculum topics covered) progress and add value at each year group. Opportunities are provided for the development of skills, knowledge and integration with other subjects by incorporating aspects of ICT (especially Control and CAD), Maths, English (especially Speaking and Listening), Science, Art and PHSE into Design and Technology as appropriate. Learning activities are sequenced to ensure progression and taught usually through direct skills teaching and practical activities for pupils. Educational visits, the use of published resources for teacher planning and the use of video clips, construction materials/kits and ICT is encouraged to aid the teaching and learning of Design Technology at Baines Endowed.

Subject planning and evaluation: At Key Stage 1 and 2 the aims and objectives of the policy are taught as a skills based topic, suited to each year group's creative curriculum. Each of these skills based topic can be found y using the curriculum map for Kapow.

Three DT units of Work are planned for in each class, to be completed over the academic year. Each Unit of Work is usually taught in a half term block per term as per the Kapow curriculum map.
DT in the Reception Class is planned for based on the requirements of the Early Years Foundation Stage. It is planned as part of a creative curriculum based on half termly topics and on the interests and needs of the individual children and again follows the Kapow scheme of work.

Class teachers take responsibility for the planning and teaching of Design and Technology for their own class by accessing Kapow.

The subject co-ordinator monitors Design and Technology plans each term to ensure progression and continuity.

Throughout Key Stage 1 all children will have experience of working on a design and make project at least once within the material areas of: textiles, food, sheet materials and construction kits/reclaimed materials.

Throughout Key Stage 2 all children will have experience of working on a design and make project at least twice within the material areas of: textiles, food, stiff and flexible sheet materials and construction kits/mechanisms.

Following the guidance from the NC, Upper KS2 children are required to apply their understanding of computing to programme, monitor and control their products and to use Computer Aided Design (CAD).

The Units of Work in Key Stage 2 will be planned within 2 cycles of Lower Key Stage 2 and Upper Key Stage 2 to ensure progression.

Time allocation

Subject teaching is planned so that: annually 36 hours at Key Stage 1 and Key Stage 2 is recommended in order to address the Programmes of Study. The duration of the design and make activities will vary: focused practical tasks, design and make assignments, investigative and evaluative activities and specific skills teaching will make up the time allocation. The Design and Technology co-ordinator monitors time allocation to this subject to ensure coverage. As Design and Technology is usually taught in half termly blocks, the amount of time devoted to this subject may vary and cross-curricular activities which incorporate aspects of Design and Technology are actively encouraged, teaching DT as part of a skills based curriculum topic.

Planning

Medium term plans (using Kapow) for each Unit of Work are completed by class teachers, as part of the skills based creative curriculum plan. These contain the lesson objective, skills, activity and differentiation, where appropriate. Medium term plans are monitored each term by the Design and Technology co-ordinator.

Class Organisation and Teaching Style

Within classes pupils can be taught individually, in groups or as a class to promote co-operation, effective learning and understanding. The subject requires the provision of a range of materials and equipment to enable children to work in a variety of material areas. The appropriate resources are made accessible to the children in the classroom for each Unit of Work to encourage the children to make choices for themselves. The curriculum will need to be delivered and differentiated in order to meet the needs of individual pupils according to their age and ability. Teachers will select suitable learning challenges, where appropriate as part of the skills based creative curriculum, then teach the knowledge, skills and understanding that match differing pupil abilities from the most appropriate Key Stage. In their planning, teachers will set high expectations in Design and Technology and provide equal opportunities for all pupils. Support will be provided, where necessary to enable individuals or groups to participate more effectively in Design and Technology activities.

Assessment

Assessment is used to inform future planning and to provide information about individuals throughout their time in this school. At Baines Endowed the assessment of primary design and technology is an ongoing process so class teachers will use a variety of assessment techniques to monitor progress through each Unit of Work in Design and Technology. Assessment data will then be recorded using the assessment grids provided by Kapow.

These techniques should include:-

- teachers' observation of pupils
- teacher – pupil discussion and teacher questioning
- pupils' drawings, notes, research, design plans, evaluation, models, comments and written work
- artefacts made by pupils
- pupils' on-going analysis of their achievements
- photographs/video records of children engaged in the design process
- use of ICT as appropriate

Assessment must match statutory requirements for the subject, teacher assessment is statutory.

When reviewing the children's progress in Design and Technology, teachers must consider children's:

- knowledge and understanding of materials and components
- understanding of mechanisms and ICT control
- ability to use materials and equipment safely
- ability to develop, plan and communicate design ideas
- interest and motivation in designing and making
- ability to appreciate and produce items of quality that meet its intended purpose
- ability to evaluate product.

Record Keeping and Reporting

Records of pupils' achievements are kept to:

- plan pupils' future learning
- report progress to parents
- maintain a written record of pupils' learning
- provide a curricular record for each pupil
- fulfil legal requirements

An annual written report to parents by the class teacher will contain information regarding the level of skill, knowledge and understanding that the child has acquired in Design and Technology.

Co-ordinator Role

The teacher responsible for co-ordinating Design and Technology is Nicola Holland and her role is described in her job description. This may include the following:

- plan work with teachers

- review and contribute to teacher planning
- prepare policy
- develop policy with staff
- liaise with school staff
- prepare a subject improvement plan
- lead staff meetings
- plan and lead inset activities
- provide consultancy, advice, skills
- in-class teaching support
- specifying and ordering resources in consultation with staff
- monitoring and maintaining condition and availability of resources
- monitoring teaching and learning in Design and Technology

Resources and Accommodation

Design and Technology resources and food equipment are stored in the main corridor store cupboards and are accessible to all teaching staff. The Design and Technology co-ordinator is responsible for managing the Design and Technology budget and for purchasing and replacing resources. If a specific resource is required, staff must provide the co-ordinator with at least a half terms notice so that it can be available in good time.

Inset Provision

Inset needs are identified through the School Development Plan and by consulting with the whole staff and sometimes children.

Inclusion

Effective learning opportunities are provided for all pupils at Baines Endowed.

- Teachers will select suitable learning challenges then teach the knowledge, skills and understanding that match pupils' differing abilities from the most appropriate key stage.
- In their planning, teachers will set high expectations in Design and Technology and provide equal opportunities for all pupils in response to their diverse learning needs.
- Support for individuals or groups of pupils will be provided, where necessary, and differentiation of tasks and materials will enable all pupils to participate effectively and overcome potential barriers to learning and assessment.

Equal Opportunities

It is the responsibility of all teachers to ensure that all pupils, irrespective of gender, ability (including gifted pupils), ethnicity and social circumstance, have access to the curriculum, make the greatest progress possible and are provided with effective learning opportunities.

Special Educational Needs

All pupils will have access to a broad, balanced curriculum, which includes Design and Technology, and have the opportunity to make the greatest progress possible. In particular Design and Technology offers the opportunity for children to achieve in a practical subject, as they are encouraged to communicate in different ways. Resources and tasks will be appropriately differentiated to challenge gifted children in Design and Technology and provide extra support where it is needed.

British Values

Class Teachers should provide opportunities for pupils to engage in DT and at the same time reinforcing the fundamental British values of democracy, the rule of law, individual liberty, and mutual respect and tolerance of those with different faiths and beliefs in an exciting and visual way. Schools can develop further work around British values using these DT sessions as a springboard. Displaying the work is a powerful way to reinforce the values.

Blended Learning

By developing a blend of in-school and distance learning, teachers can support students and help to individualise learning, increase learners' autonomy, motivation and agency and improve learning skills towards becoming self-directed learners.

To do this in DT, teachers will set and respond to tasks using online platforms such as Purple Mash, Class Dojo etc. These will be used as homework or work to be completed in school.

These will highlight learning from previous year groups (where applicable) and the skills that children will have used before and are to build upon. Key vocabulary to be used in the forthcoming unit and skills to be developed will also be introduced.

Online learning

Due to the increase in use of internet connected devices and more work being completed online, online safety is an essential part of all curriculum areas.
In DT the children may be expected to complete work online in school or at home. Online safety is taught as a discrete part of the computing curriculum and reinforced through regular, safeguarding assemblies. Nevertheless, when the internet is used for DT, children are reminded of the golden rules of online safety:
Don't share personal information
Be polite, kind and respectful
Tell a trusted adult if you come across something that makes you feel uncomfortable or unhappy

Evaluation

This policy for Design and Technology will be reviewed in **September 2024**.

Evaluation should take into account:

- pupils' achievements
- coverage of skills progressions in planning for the creative curriculum
- analysis of teacher planning
- staff development
- classroom observation
- external inspection/advice

S Andrew.

Appendix 2

Design and Technology Resources

4 tool boxes (2 for each key stage) to provide a resource of essential tools/equipment for a teacher-led small group.

Textiles

coloured thread
pins binka
coloured material
coloured fur
fabric glue
glitter glue
zips press studs
velcro
vivelle
needles
coloured felt
wool
fabric pens
buttons
cotton filling

Food

2 electric frying pans for group cookery.

rolling pins
mixing bowls
cutting knives
aprons
cutlery set
biscuit/pastry cutters
tin opener
tin foil
chopping boards
storage containers
plastic table cloths
Portable cooker
plates / dishes / bowls /cups
sieve
plastic food bags
cling film

kitchen scissors
pans weighing scales
measuring jugs
baking trays
measuring spoons/cups
mixing spoons / spatulas
teatowels
oven gloves
greaseproof paper
vegetable peelers
cooling trays
colander
whisks
dishcloth/ sponges
pastry brush
cheese grater
spatulas

Sheet Materials / Mechanisms

wooddrills
saws nails
screws
card pipe cleaners
lolly sticks
axles
craft knives
wire bulbs / holders
battery holders
plastic syringes
dowel
split pins
glue Guns
gears
cutting boards
corruflute
balloons
plastic tubing
paper drills

Construction Kits

KS1

Kid K'Nex Vehicles
Cleversticks
Lego Town Developers set
Mobilo giant class set
Junior Meccano

KS1/2

Brio Discovery Builder set
K'Nex Design & Create
Lego bulk set with special bricks, doors, windows, roof tiles & wheels.

KS2

Brio Knowledge builder set
Lego large topic set
K'Nex classroom super set (wheels/pulleys).