BIDSTON AVENUE PRIMARY SCHOOL

DESIGN AND TECHNOLOGY SUBJECT POLICY
September 2022

Approved by the Governing Body of Bidston Avenue Primary School

Autumn 2022

Signed: _____

Cllr George Davies (Chair of Governors)

Intent

Purpose

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 make an essential contribution to the creativity, culture, wealth and well-being of the nation.

Aims

- All pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- All pupils 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
- All pupils critique, evaluate and test their ideas and products and the work of others
- All pupils understand and apply the principles of nutrition and learn how to cook.

Supporting our Vision

'We are born makers, we move what we learn from our heads to our hearts through our hands'- Brene Brown

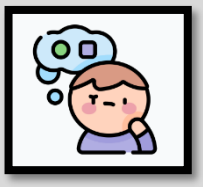
We believe that Design &Technology contributes to the school curriculum in many ways. It prepares young children to cope in a rapidly changing technological world and helps them to understand how to think and intervene creatively to improve that world. Our curriculum is designed to help them to become discriminating users of products, to contribute to their home life, community, and in due course, it broadens their understanding of industrial production, as they develop systems and make products, which enhance the quality of life.

At Bidston Avenue Primary School, we aim to provide the pupils with opportunities to work with a range of materials including food, textiles, wood, construction kits, computer systems, electrical, mechanical and reclaimed materials within the six strands on the curriculum. They will develop, plan and communicate their

idea. We provide meaningful opportunities for the pupils to design and make quality products that meet a range of design criteria. We aim to provide the pupils with the skills that they need to critically evaluate the design processes and the products that they make.

The main emphasis in all units of work will be to develop the skills outlined in the National Curriculum. We also aim to teach our pupils to apply skills from across the curriculum within their design & technology lessons. At the same time, we teach pupils about the impact their designs and the designs of others can have on the health, community and environment around us.

'The future will be different and exciting. New products to solve problems that don't yet exist'

The drivers that shape our curriculum	
 **Reader**	All children at Bidston Avenue need an understanding of Design and Technology terms and the specific vocabulary within it. Pupils must read, understand and use a growing range of technical words within their own designs and the designs of others. Children further develop their reading skills when following given written instructions such as recipes and when creating their own designs. Pupils research a range of past and present products and inventions as part of the curriculum. They read about the life and work of famous inventors and pioneers.
 **Thinker**	Design and Technology is a creative and practical subject. Through the D&T curriculum at Bidston Avenue, we teach the children to think critically about the impact of past and present products on daily life. Children think both logically and creatively to design, make and evaluate their own products to solve real life design problems in a variety of contexts. The children at Bidston Avenue may well become the designers and inventors of the future. Pupils are given the opportunity to work collaboratively in pairs and small groups to reason and make decisions about their work. They 'think' their way through challenges and analyse how effective they have been.
 **Resilience**	At Bidston Avenue, we understand that the design process, from start to finish, requires resilience. Pupils are required to look at problems and identify possible solutions. They develop their mental resilience when adapting and changing their ideas to meet the needs of a design brief in a range of contexts. Pupils are taught to show flexibility so that they can adapt and change their designs as necessary. When things don't go to plan, pupils are given the support and tools to deal with these setbacks. Pupils can learn and build social resilience when required to connect with others and work as a team. They may not always agree with others on how best to move forward and are guided to solve problems together.

<u>Supporting our Values</u>

In all we do, we promote the following values

- **Respect**
- Friendship
- Determination
- Excellence
- Courage
- Inspiration
- Equality

Opportunities for promoting acquisition of Cultural Capital

We understand that for pupils to be successful they need to be given rich and sustained opportunities to enhance their cultural capital. Our Design & Technology curriculum teaches about past designers and inventors that have shaped the culture of Britain and the wider world. The pupils are encouraged to see the career opportunities available in the field of Design & Technology through the Wirral Young Chamber of Commerce project.
We aim to develop links with local businesses and organisations to give pupils 'real world' experiences within the field of Design & Technology.
Through our Design & Technology curriculum we promote RRSA Article 29: Your education should help you use and develop your talents and abilities. It should also help you learn to live peacefully, protect the environment and respect other people.

Implementation

Bidston Avenue Primary School delivers a world class curriculum. It is accessible, inspiring and ambitious, so that every child is equipped to make a positive contribution.
In ensuring high standards of teaching and learning in D&T, we implement a curriculum that is progressive throughout the whole school.
Planning for D&T is a process in which all teachers are involved to ensure that the school gives full coverage of, 'The National Curriculum programmes of study for D&T 2014' and, D&T in the Early Years Foundation Stage (Expressive Arts and Design: Creating with materials).
Teachers plan the learning journey together to ensure full coverage and progression of the D&T curriculum is achieved.

Planning
We follow the PlanBee Design & Technology whole school scheme of work. Each year group from Year One to Year 6 will teach one unit per term. (Three units per year) following our Whole school curriculum map.
Each D&T unit includes 5-6 lesson plans with slides, activities and printable resources. (Including worksheets, challenge cards, information about working safely with tools and materials, or instructions for designing and making.)
Each unit/lesson includes possible differentiation activities and can be taught in either year group within a phase e.g. Years 1/2, Years 3/4 or Years 5/6.
Planning includes creative D&T project ideas, and the scheme is designed to ensure full coverage of the new National Curriculum Design and Technology objectives.

In EYFS teachers plan a range of activities so that children, by the end of Foundation 2, meet the following Design & Technology Early Learning Goals.
Physical Development: Fine Motor Skills - Use a range of small tools, including scissors, paintbrushes and cutlery.
Expressive Arts and Design: Creating with Materials - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used.

Teaching and Learning
A typical D&T lesson will include:

- Lesson introduction – with links to prior learning (previous lesson and/or similar topic)
- Teaching input – explaining what children will be learning today.
- Main activity – children given a range of opportunities to complete design, make and evaluate tasks. (Differentiated if necessary.)
- Plenary – a chance to reflect on the learning. Teachers will also use this opportunity for informal assessment of the learning and to plan for next steps.

Subject specific SEND Scaffolding

Pupils with SEND are supported to achieve the Design & Technology objectives and engage fully in all lessons within the curriculum in a variety of ways.
Writing frames, word banks, simplified vocabulary and picture prompts are used to support pupils with a variety of cognition difficulties.
Small group work, paired activities and 1:1 support from a teacher or TA are used if required.
Teachers can act as a scribe for the pupils who need support to communicate their ideas.
Appropriate resources and tools are provided.
Extra reading support is provided as necessary.
The design & technology curriculum is designed to be inclusive for all pupils and our staff will provide the necessary scaffolding to allow all pupils, regardless of their special education need, to succeed.

Links to other subjects/curriculum areas:

English – Opportunities for reading texts in context linked to Design & Technology strands. Writing at all stages (investigate, design, make and evaluation) of the process.
Mathematics – Opportunities to develop mathematical skills such as data handling, length, mass, capacity, calculating costs.
Science – Healthy eating, electricity and electrical circuits, forces involved in movement.
Computing – Exploring computers and using computer-controlled systems to program algorithms and debug.
History – Exploring the history of Chinese and British inventions.
Geography – Understanding the seasonality of foods including how and where it is produced.
PSHE & citizenship – Safe and independent use of equipment. Healthy eating. Opportunities for collaborative work.
Religious Education – Exploring foods from different religions, cultures and festivals.
Art & Design – Particularly when considering the finish, choice of materials and product appearance.

Experiences every child should have:

- All pupils should have the opportunity to design and make a range of products of which they are proud.
- The pupils should be able to use the products that they make to see that their work is purposeful and practical.
- They should gain an understanding of the importance and need for inventors and designers across all aspects of their lives. They should understand how designers of the past have shaped the way that we live.
- All pupils should have the opportunity to use a wide range of tools and equipment independently and safely.
- They should have examples of their work displayed and celebrated by others.
- They should have a chance to take part in a design project with an external 'real life' provider.

Organisation

The PlanBee Design and Technology scheme is taught half-termly. D&T is integrated where appropriate into existing topics but is mostly taught as a discreet subject.
Teachers have a specific number of units of work to cover yearly. Each unit will have specific aims and objectives. Each unit will allow for the investigation of products, focused practical tasks, design and making, allowing inventiveness, problem solving, and hands on experience.
The PlanBee scheme of work for D&T is being used to ensure appropriate skills are taught in relevant year groups.

Aims of the scheme

- To develop an awareness of the environment and appreciate that we can affect and control it.
- To develop the child's ability to communicate effectively, verbally, numerically and visually.
- To appreciate the variety and nature of materials and the way they are used.
- To develop initiative and problem-solving skills.
- To foster the ability to recognize a need or opportunity
- To develop manipulative skills
- To ensure progression
- To encourage inventiveness, resourcefulness and imagination
- To develop tolerance and consideration for others and the ability to work as a team.

Parent Partnership

Parents are encouraged to play an active part in classroom activities when their experiences can be used to give children further understanding of Design and Technology. The school has extended these links to local industry and the community to enable the children to experience real life situations through visits, visitors and speakers. E.g. Eureka Mersey Discovery Centre & Wirral Young Chamber of Commerce.
Parents are welcome to support practical activities within the classroom. They must be trained in the safe and correct use of tools by either the class teacher or the Subject Leader.

Roles and Responsibilities

The Design and Technology lead will:

- Ensure continuity and progression.
- Establish a framework for assessment and recording.
- Encourage and support staff, provide advice and arrange in-service support.
- Organise and maintain resources.
- Advise on health and safety.
- Develop a school policy.
- Provide information and opportunities for governors, parents, and other interested parties to begin to understand the nature of this curriculum area.
- Liaise with the Local Education Authority regarding INSET.
- Keep abreast of developments in Design & Technology.
- Develop a whole school portfolio of D&T work.

Impact

Every child will leave as a **reader** who **thinks** critically and has the **resilience** for the world's challenges.
The impact and measure of this is to ensure children not only acquire the appropriate age-related knowledge linked to the D&T curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.

Assessment

Most activities in Design and Technology have the potential to provide evidence of attainment identified within each unit of the scheme of work. Class teachers will assess individual pupils a minimum of twice per year. Recording of the assessment and other relevant information will be kept on the D&T assessment record or in foundation stage, within the Wirral Foundation Stage Profile, in accordance with the Assessment, Recording and Reporting Policy Document.

Pupils should be given clear indications of the quality of their work, particularly finished products.

At the end of each academic year teachers should review the evidence of pupils' work and their own records to help them to form a report for parents on the child's progress and achievement in this area.
Each child has a Design and Technology workbook from which the class teacher should examine the evidence using their professional judgment to assess attainment levels within the National Curriculum. Each teacher should ensure they take photographs to evidence various areas of D&T and the skills they use.

Monitoring

The D&T subject lead is responsible for monitoring the standards of children's work and the quality of teaching. The lead supports colleagues in the teaching of D&T by addressing CPD needs and by giving them information about current developments in the subject, and by providing a strategic lead and direction for the subject in the school.
The subject lead is also responsible for reviewing developments for D&T identified on the School Improvement Plan, evaluating strengths and weaknesses in the subject, and indicating areas for further improvement.

Monitoring and Review

The D&T subject lead is primarily responsible for monitoring the implementation of this policy.
This will be through ongoing discussion with the Senior Leadership Team and consideration of the evidence gathered in the subject file. The subject lead will report on this to the governor's curriculum committee.
The work of the subject leader is also subject to review by the head teacher as part of our performance management arrangements.

Governor Approval and Review Dates

The policy is to be reviewed annually.