

Design and Technology Curriculum Policy

At Baguley Hall Primary School we believe Design and Technology prepares children to take part in the development of today's rapidly changing world. Through the study of design and technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. We live in a technological age, surrounded by artefacts and systems which have been produced, designed and made for us by other humans working together in a complex range of activities. Through reflecting and evaluating past and present design and technology, our children will develop a critical understanding of its impact on daily life and the wider world.

"High- quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation". (The National Curriculum 2014).

Intent

Design Technology is an inspiring, rigorous and practical subject. At Baguley Hall Primary School we aim to engage, challenge and inspire the children through our Design Technology Curriculum. Our DT curriculum evokes creative thinking, develops knowledge and understanding of what is required through the design process, and teaches the new skills the children will need when making their design for the first time. Design Technology projects are often made cross curricular - linking to other subjects taught. At Baguley Hall Primary, we want to allow children to aspire to be more through creating opportunities for them in the wider world. Through the DT curriculum, children should be inspired by engineers, designers, chefs and architects to enable them to create a range of structures, mechanisms, textiles, electrical systems and food products with a real life purpose.

Implementation

DT is taught each term throughout the year, on a two-year cycle, so that children achieve depth in their learning. Children are taught DT in key stages: KS1, LKS2 and UKS2. This ensures that all children receive a quality and focussed DT curriculum. Teachers identify the key knowledge and skills of each topic and consideration has been given to ensure progression across topics throughout each year group across the school.

Topic Cycles

Phase	Cycle 1	Aut	Spr	Sum	Cycle 2	Aut	Spr	Sum
KS1		Structure: Freestanding Structures	Mechanisms: Wheels and Axels	Textiles: Templates and joining techniques (puppets)			Mechanisms: Sliders and Leavers	Food: Preparing Fruit and Vegetables
LKS2		Electrical systems: Simple circuits and switches	Mechanical Systems: Pneumatics	Food: Healthy and Varied Diet (bread)		Mechanical Systems: Levers and Linkage	Structures: Shell strutures using CAD	Textiles: 2D shape to 3D product
UKS2		Electrical Systems: More Complex Switches and circuits		Mechanical Systems: CAMS (Moving toy) & Mechanical Systems: Pulley and gears		Textiles- combining different fabric shapes (sewing/ River Collage)	Structure: Frames and Structures (Anderson Shelter)	Food- celebrating culture and seasonality (Chocolate related/ tortillas)

Planning is informed by and aligned with the national curriculum. Consideration is given to how greater depth will be taught, learnt and demonstrated within each lesson, as well as how learners will be supported in line with the school's commitment to inclusion. DT is focused primarily around a skill based knowledge. Outcomes of work are regularly monitored to ensure that they reflect the knowledge taught and offer a sound representation of the key skills required for each specific topic.



Design and Technology Curriculum Policy

Throughout the teaching of DT at Baguley Hall, all pupils should be given the opportunity to be confident when using a wide range of tools/equipment and develop their practical knowledge and skills and understanding of how to use equipment/tools safely and effectively. All teaching of DT should follow the investigate, design, make and evaluate cycle. Each stage should be rooted in technical knowledge and vocabulary. Children should initially be given an opportunity to investigate examples of existing products, exploring an array of imagery and practical resources in order for the children to gain an understanding of what the expectation is for their own end product. The design process should be rooted in real life, relevant contexts to give meaning to the learning. While making, children should be given choice and a range of tools to choose from. When evaluating, children should evaluate their own products against the design criteria. Each stage should be given equal weight. There should be evidence of all these stages in the DT books, which should also develop to show progression across the key stages as they are passed up through each year group.

The Early Years Foundation Stage (EYFS) is comprised of 17 areas of learning, many of which lend themselves well with the designing, creating and making elements of DT. The 'Development Matters in the EYFS' guidance aims for all children to 'Explore and use Media and Materials', 'Be imaginative' in addition to having an 'Understanding of the World and Technology' by the end of the academic year.

Impact

Outcomes for DT will be found in DT books, as well as the products created, demonstrating the children's acquisition of identified key skills and knowledge. Children review and evaluate learning objectives at the end of every lesson and are actively encouraged to identify their own target areas, with support from their teachers.

Emphasis is placed on creative thinking and skill based teaching and learning. Through DT children will learn to explore a range of what has been designed and created in the past and present and develop a skill set that allows them to develop design ideas and implement using technical skills they have learnt.

EYFS

Early Years targets specific areas of learning to develop and establish the skills children require to make, create and construct. Some examples of how the EYFS Framework focuses on introducing the core skills required within DT are ; Using simple tools to effect change, constructs with a purpose in mind and selecting appropriate resources, adapting work where necessary. Within the Early Years Foundation Stage (EYFS) we allow guided and independent opportunities for children to learn, play and apply skills they have been taught within the classroom environment using a range of accessible resources. They are assessed according to the Development Matters Attainment targets.

Key Stage 1

During Key Stage 1, DT is taught as part of the topic based curriculum, with links to other subjects. Children will build on, and develop the skills from their prior learning and experiences developed within the Early Years. We provide opportunities for each child, in each topic, to investigate (existing products), design, make and evaluate their own final product. Design Technology also includes the designing, making and evaluating of different foods.

Children begin to design functional and attractive products for a specific purpose. These products should appeal not only to themselves, but also to other identified users. They make products, selecting and using a range of tools and materials for their chosen design, using the key skills of cutting, shaping, joining, and finishing (with support and independently). Children will explore and evaluate a range of existing products in addition to evaluating their own designs against a given criteria.

Throughout Key stage 1 children develop their technical Knowledge. When building freestanding structures, they will explore how they can be made stronger, stiffer and more stable. They will explore and use simple mechanisms in their products such as levers, sliders, wheels and axles, in their products. Within DT, children will begin to learn and understand where food comes from and the basic principles of a healthy and varied diet. They will design and prepare dishes based on this knowledge.



Design and Technology Curriculum Policy

Key Stage 2

It is intended that work of Key Stage 2 will build on, and develop the skills learned in Key Stage 1. Children will be taught the skills and knowledge needed to successfully design and make and evaluate their work.

Within the Design stage children will carry out research of existing products. They will develop design criteria in order to produce a product which is fit for purpose and aimed at a specific group of people. When making their product children will select and use a range of tools and materials, taking into account their product's functional and aesthetic qualities.

Children will develop an understanding of how designers and their products have helped to shape the world. They will explore, investigate and evaluate existing products, their own work and the work of others in order to improve their design.

Children will continue to develop their technical knowledge, applying their understanding of how to strengthen, stiffen and reinforce more complex structures, understand and use mechanical systems in their products, understand and use electrical systems in their products and apply their understanding of computing to program, monitor and control their products.

Through cooking and discussions on nutrition children will establish an understanding of the seasonal nature of foods, and where and how it is produced. They will understand what it means to have a healthy diet, and will cook and prepare a range of predominantly savoury foods using a range of techniques

Recording, Monitoring and Assessment

Achievement, success and progression should be experienced by all children when learning and being taught Design and Technology. The teacher needs to be aware of the progress being made, difficulties being experienced, misconceptions addressed and expectations being met. Throughout school children should be supported at each stage of the Design and Technology curriculum in areas of: designing, making, evaluating and developing technical knowledge.

Throughout the school work is planned and delivered within each specific year group and tailored to meet the needs of that particular cohort. Progression is monitored and evaluated within the year groups and throughout the key stages by individual teachers and the Design and Technology Coordinator.

Assessment for learning is continuous throughout the planning, teaching and learning cycle. Each topic is planned with a focus on learning and applying key skills. Assessment is supported by use of the following strategies:

- Observing children at work, individually, in pairs, in a group and in a class during whole class teaching.
- Using differentiated and open ended questions that require children to explain and unpick their understanding.
- Marking designs through book moderation
- Marking the aesthetic quality and functionality of the end product evidenced through photographic images of children completing their product (during and/or the end product).
- Evidence of idea development, finding evidence of creativity and problem solving.
- The monitoring of outcomes of work, to evaluate the range and balance of work and to ensure that task meet the needs of different learners, with the acquisition of the pre-identified key knowledge and skills of each topic being evidenced through the outcomes.
- The use of Key Vocabulary mats available and used in lessons, so that children can guide their own learning as well as understand key vocabulary for each topic that they study.
- Providing effective feedback, to engage children with their own learning and to provide opportunities for self-assessment, consolidation, depth and target setting. Teachers will encourage and support children to continuously refer back to the design criteria required within each specific topic.
- Use of what skills I have already, what skills I need to improve or gain and what skills I have learnt (SWL) strategy throughout a unit, alongside specific and measurable learning objectives (WALT) for each lesson with child and teacher review of the agreed success criteria. These WALTs will be linked to a specific skill in the DT curriculum.

At the end of the academic year, the children will be assessed against the Baguley Hall Primary attainment framework, in accordance with the school's assessment policy: '**B**' – Below; '**WT**' – Working towards; '**AT**'- At National '**GD**'- Greater Depth



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Health and Safety

Safety is of paramount importance in Design and Technology. It is the teacher's responsibility to be aware of safety issues in all Design and Technology activities by:

- * Providing a safe working area (furniture, materials storage, tool maintenance)
- * Teaching and implementing safety rules and good practice, including hygiene
- * Ensuring the safe and correct usage of tools and materials
- * Ensuring working areas are kept clean and tidy
- * Considering storage of partially completed work
- * Ensuring the correct disposal of waste

The teacher is responsible for ensuring that children are adequately supervised when using tools and that other adults working in the classroom understand safety rules and maintain rigorous safety standards.

Safety rules and safety issues should be taught to *all children* within each Design and Technology unit of work.

Equal Opportunities and Inclusion

At Baguley Hall Primary school 'Putting children first,' is our motto and we are committed to providing a teaching environment which ensures all children are provided with the same learning opportunities regardless of social class, gender, culture, race, special educational need or disability. Teachers use a range of strategies to ensure inclusion and also to maintain a positive ethos where children demonstrate positive attitudes towards others. Peace Mala and RRS is reflected in all that we do, not just in learning but in the way that we act every day. Support for specific individuals is well considered and planned for, with consideration given to how greater depth and further challenge can be provided for and demonstrated by children who require further challenge. All pupils are entitled to access the art curriculum at a level appropriate to their needs.

To ensure inclusion, teachers use a range of strategies in line with the school's inclusion planning key. Independent tasks, as well as teaching, are also well-adapted to ensure full accessibility and reasonable adjustments are made when needed, as well as to provide appropriate challenge to different groups of learners. The school makes full use of additional adults who are deployed effectively to ensure that identified children are able to make progress in each curriculum area, according to their full potential. Through the use of SWL, teaching takes account of children's own interests to ensure topic relevance to all individual learners.

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