

Berkswich CE Primary School			
Reference Number C7	Shared with Staff October 2021	Ratified by Governing Board October 2021	Review Date July 2023
Policy Title	Design and Technology Policy		

Legal framework

This policy has due regard to statutory guidance, including, but not limited to, the following:

- DfE (2013) 'Design and Technology programmes of study: key stages 1 and 2' (please see The National Curriculum page found via the Learning tab on the school website (www.berkswichceprimary.co.uk))
- DfE (2017) 'Statutory framework for the early years foundation stage' (please see Early Years area found via the Learning tab on the school website (www.berkswichceprimary.co.uk))

The intent of the design and technology curriculum

Our Berkswich CE design and technology is shaped by our whole school vision and curriculum intent, which aims to enable all children, regardless of background, ability or additional needs, to flourish and excel - to reach their potential.

At Berkswich CE, we value design and technology because it is an inspiring, rigorous and practical subject. Our ambitious curriculum gives children the procedural and technical knowledge to engage positively with the designed and made world - to harness the benefits of tackling problems, both as individuals and as effective members of a team.

As children progress, our intent is that the systematically designed curriculum enables children to accumulate and retain essential subject knowledge and skills. We draw from the proficiency of experts, from the Design and Technology Association, the Chris Quigley curriculum resources and from those in industry, to ensure that our offer is relevant and future-thinking. We acknowledged that Design and Technology is interconnected within many curriculum areas and so draw on disciplines such as mathematics, science, engineering, computing and art.

Through the evaluation of technology, design and designers through history, children develop a critical understanding of the impact of innovation on their own daily lives and the wider world. Their direct, personal contribution to our community is built into the curriculum. Our offer allows the children to leave Berkswich recognising that they are able to understand and impact the world around them. In this way, our curriculum high-quality curriculum enables children to actively contribute to the creativity, culture, wealth and well-being of themselves, their communities and the wider world.

Every unit contains focused opportunities for children to use creativity and imagination: pupils design, innovate and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs. Units encourage analytical thinking and reasoning – evaluation is woven into the whole process of design and rich opportunities to respond critically and actively are a particular strength of the curriculum.

The implementation of the design and technology curriculum

➤ Meeting the aims of the national curriculum

Berkswich CE delivers a rich, broad and balanced design and technology curriculum, in line with national requirements, which aims to enable pupils to:

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

➤ Key concepts

Planning in school is structured systematically and this ensures that units are in line with our school approach of a concept-driven curriculum.

Although a unit may have a particular focus, the learning progress is within the context of all the inter-related areas: design process, technical knowledge, practical knowledge, design inspiration and meaningful vocabulary. The design process has a great emphasis on 'break' – an understanding that failure and challenge is an integral part of the process. Finding solutions to design faults means that evaluation is an inextricable part of the whole design process.

We recognise the interconnected nature of the elements of design and technology and the way in which these interweave throughout the units. Our whole school additional structure units allow opportunities for children to see these applies beyond their year group and to be inspired by others in school, creating a whole-school expectation of high engagement and ambition.

The fabric units are driven by the concept of resilience and competency. These units are a vehicle for the children to further explore their own self-belief, and are intended as a way for them to learn that they can be competent future citizens who do not shy away from tasks - fully able to sew on a button, retry a recipe which has not worked out as planned, change a bike inner tube - to fearlessly seek out the safety, technical and practical knowledge needed to be a capable individual throughout life.

➤ Design and technology in the Early Years (EYFS)

Design and technology is not taught as a standalone subject in Early Years but does form part of the Expressive Arts and Design area of the curriculum. All design and technology objectives within the EYFS are underpinned by the objectives of the early learning goals (ELGs).

Expressive Arts and Design – Development Matters band '3-4 years'

- Take part in simple pretend play, using an object to represent something else even though they are not similar.
- Begin to develop complex stories using small world equipment like animal sets, dolls and dolls houses etc.
- Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.
- Explore different materials freely, in order to develop their ideas about how to use them and what to make.

- Develop their own ideas and then decide which materials to use to express them.
- Join different materials and explore different textures.
- Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
- Draw with increasing complexity and detail, such as representing a face with a circle and including details.

Expressive Arts & Design - Development matters band 'Reception'

- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively sharing ideas, resources and skills.

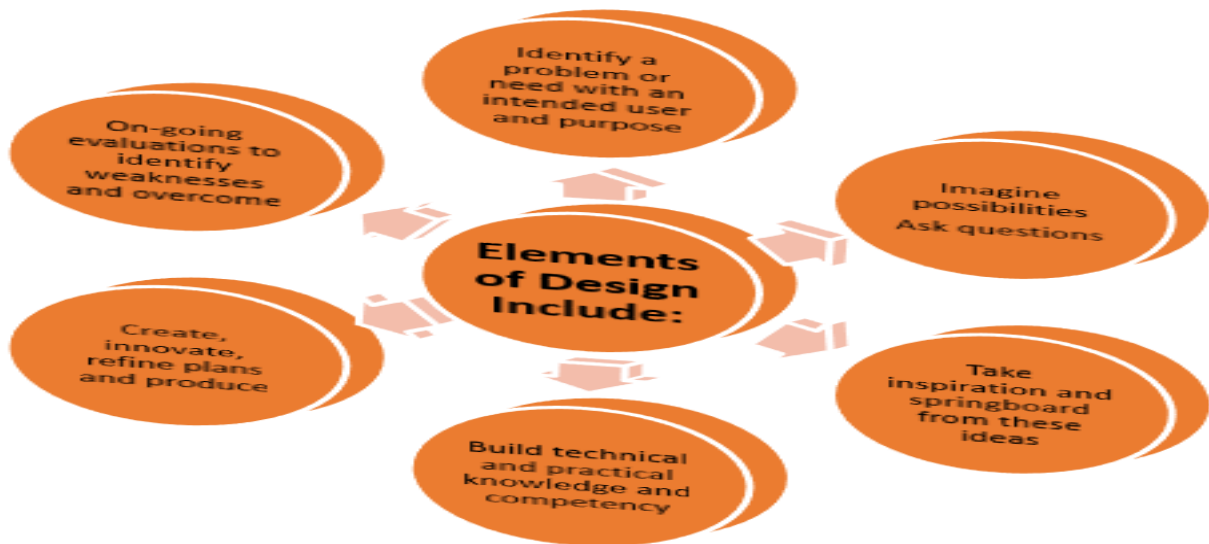
Early Learning Goals

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.
- Make use of props and materials when role playing characters in narratives and stories.

At Berkswich CE our children are given the chance to develop these skills through planned and purposeful adult-led activities and through child-initiated learning opportunities in our continuous provision.

➤ A summary of design at Berkswich CE for Year One to Year Six

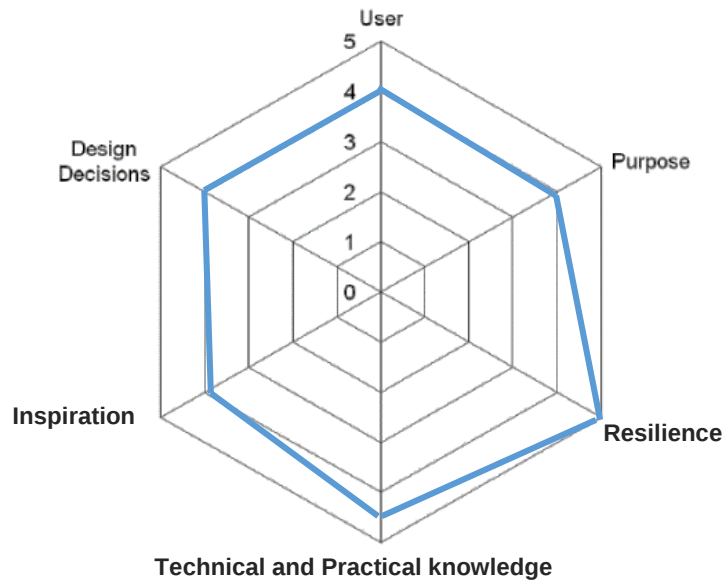


Our curriculum fulfils the requirements of the National Curriculum but is also tailored to the needs of our children. Please the [school's website for each year group's objectives.](#)

➤ Teacher subject knowledge

To ensure that the learning genuinely provides opportunities for children to think throughout the design process, teachers complete a web to ensure that the correct balance of opportunities is provided over the year.

An example from an electrical unit:



➤ Teacher subject knowledge

The unit themes are evaluated regularly to ensure they remain stimulating and current. Evaluation is especially important in Design and Technology as advancements in industry are continuous and we feel that it is important for the children to be aware of up-to-date changes. This is reinforced by our links with local industry and surrounding businesses. As the children progress through the school, the complexity of the Design and Technology tasks increases. The units of work range from practical skills such as embroidery and cookery to design using ICT and researching industry.

The support materials that have been chosen ensure that teachers have full access to expertise when planning; these can maintain the integrity of the design technology curriculum whereby the children's increasing ingenuity and resourcefulness is a core strength of all planning.

Membership to the DT Association also provides teachers with a wealth of background information.

Through CPD provided by the design and technology lead, support from members of the design and technology department at Walton High School and self-learning, teachers are equipped with the necessary subject knowledge.

➤ Learning sequence and repetition

Teachers know their children's prior learning, and are mindful of their own end points in relation to the expectations contained in subsequent years. Please see the school website to view our whole school overviews.

To ensure that pupils embed key concepts in the long-term memory, these are repeated within each year and throughout every year group. This repetitive approach means that children have opportunities to revisit, apply and extend what they have already covered to ensure that learning is both cumulative and permanent. We believe that this is the best way for children to develop the

knowledge and skills needed for mastery of a subject. The children will develop increasing accuracy through the key stages.

Teaching usually takes place within the normal classroom. Design and Technology is taught as separate lessons and is allotted specific times on the timetable. Additional whole school units, such as Structures, ensure that learning is repetitive, cumulative and progressive.

➤ The language of design and technology

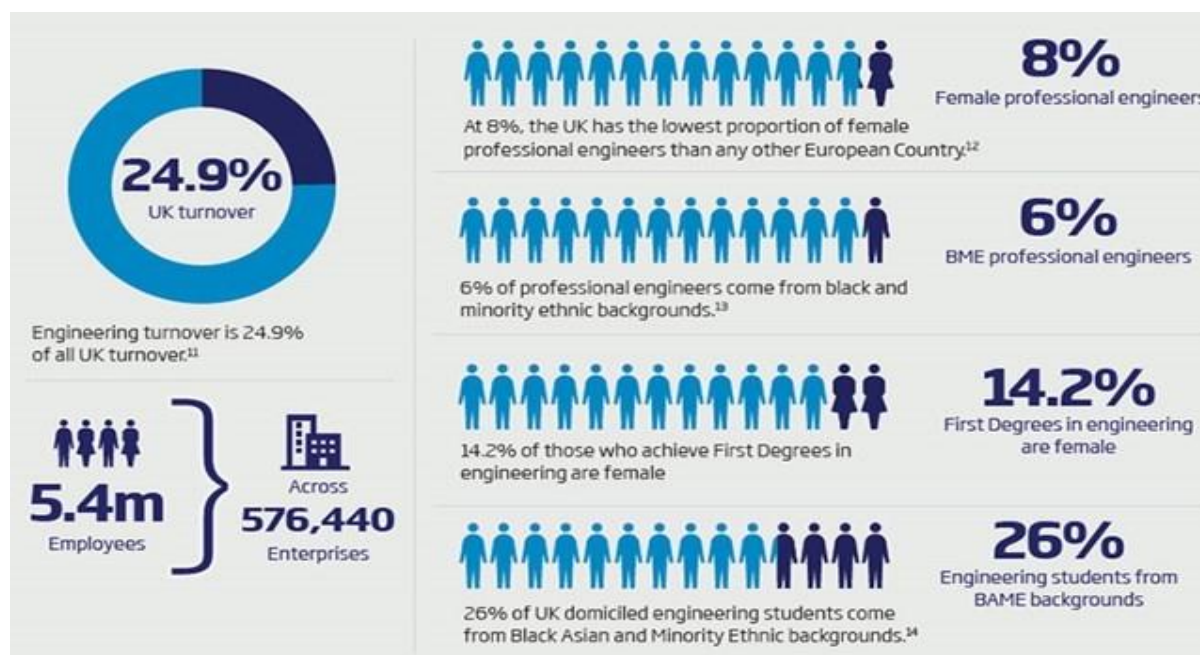
Teachers have high expectations of children to use discussion to further learning. Children are increasingly expected to give precise explanations, using technical and specialist terminology appropriately. Teachers model this practice, using the correct language within all learning. The teaching staff use and encourage the children to understand age-appropriate vocabulary for design and technology from the beginning of Nursery.

➤ Health and safety in design and technology

Certain health and safety concerns are inherent with design and technology, including the storage of materials and tools and the use of equipment within lessons. Children are instructed in the correct use of equipment and tools and the specific dangers of using heated or sharp resources. Children are supervised at all times during activities. The [DT risk assessment is held on the school website](#) and contains sections where there are measures beyond the usual, which need putting into place; for example, there is a section to control risks when using a cool glue gun. School has a subscription to CLEAPSS (<http://primary.cleapss.org.uk/>) which is used to ensure that teachers have access to the most up-to-date and relevant advice and information needed to ensure safety at all times.

➤ Diversity

We recognise that there is a lack of diversity in certain fields associated with DT – see recent data below according to the Profile of UK Engineering Sector and Engineering Workforce (Royal Academy of Engineering, UK 2021). In each unit, when teachers and children draw inspiration from what has gone before, teachers are always mindful of representing as many groups as possible to ensure that all children, no matter what background or gender, have equal aspirations.



➤ **Cultural capital, character-building and community links**

At Berkswich CE, we believe that design and technology promotes curiosity, confidence, health, well-being and growth. It is character-building and helps to prepare pupils for the fast-developing world. It encourages pupils to become creative and resilient problem-solvers, both as individuals and part of a team. Through the study of design and technology, they combine practical skills with an understanding of aesthetic, social, belief, and environmental concerns. Design and technology helps all children to appreciate what has come before and become informed and evaluative consumers and innovators of the future. Opportunities to learn about potential careers in this area are sought and links with industry, such as Dyson, enrich the curriculum offer. Please see the overview on our website which contains a sample of opportunities in each unit for every year group: [Berkswich CE DT Examples of Character-building, Cultural Capital and Community Links](#).

➤ **SEND**

Berkswich CE is ambitious for every SEND child. Planning explicitly offers support where needed without over-scaffolding. Further support is sought from the SENDCo if necessary to ensure that every child has equal access to all learning.

➤ **Greater Depth**

Berkswich CE is ambitious for all pupils; challenge is a part of every child's learning. Through thoughtful and rigorous planning, we provide Greater Depth pupils with the opportunity to extend their design and technology thinking through planned opportunities to broaden and apply their learning within contexts of increasing complexity. Greater Depth pupils also benefit from providing peer support and having to adapt their problem-solving approach; they articulate their own understanding in order to encourage learning in others.

Greater depth pupils demonstrate a highly creative and technically adept response to problems. Pupils think deeply and critically about products in order to create, develop and evaluate their own creations.

Roles and responsibilities

➤ **The headteacher**

The Headteacher is responsible for:

- overall responsibility for monitoring the teaching of D&T throughout the school.
- supporting the lead with making decisions on:
 - how design and technology should support, enrich and extend the curriculum.
 - the provision and allocation of resources.
 - the ways in which design and technology can benefit the aims and objectives of the school.

➤ **The design and technology lead**

The subject leader is responsible for:

- preparing and reviewing policy documents, curriculum overviews and progressions for the subject which support the challenging demands of the national curriculum, the school's curriculum intent and drivers, as well as the Berkswich CE Charter.
- ensuring the continuity and progression from year group to year group and that learning is cumulative and ambitious.

- keeping abreast of current thinking, research and policy changes which impact design and technology in school and helping to develop colleagues' expertise in the subject by leading staff training and providing staff members with the appropriate professional development
- liaising with the high school design and technology lead to ensure that provision is also tailored to the children's needs when they move to their next school setting.
- liaising with the named governor to report on progress and attainment in design and technology.
- monitoring the learning and teaching of design and technology, providing timely support for staff where necessary and ensuring that learning time is maximised.
- carrying out audits of all design and technology-related resources and organising their effective deployment and the purchase of additional resources as necessary.
- advising on the contribution of design and technology to other curriculum areas, including cross-curricular and extra-curricular activities.
- ensuring common standards are met for assessing children's attainment and progress.
- collating assessment data and setting new priorities for the development of design and technology in subsequent years.

➤ **Responsibilities of the teacher**

The classroom teacher, in collaboration with the subject leader, will ensure that the needs of all children are met by:

- acting in accordance with this policy.
- instilling a love of the subject and the confidence in each child as a designer.
- being ambitious for every learner, including SEND and other vulnerable groups.
- aiming to develop technical proficiency and conceptual understanding in parallel.
- increasing confidence, sensitivity and creativity in pupils' design and technology-making.
- taking responsibility to strengthen subject knowledge and seek support as necessary.
- having a working understanding of the prior learning of children and the needs of subsequent years.
- writing and constantly reviewing short-term plans, taking into account pupils' needs and outcomes.
- ensuring that planning is progressive and cumulative over the year and that it meets the wider curriculum intent for Berkswich CE.
- focusing on the key concepts (elements) in design and technology to enable the development of a deep structural knowledge and the ability to make meaningful connections.
- providing opportunities for repetition to build long-term knowledge and skills.
- guiding teaching assistants to ensure that pupils are effectively supported.
- monitoring the progress of pupils in their class and reporting this on an annual basis to parents.
- reporting any concerns regarding the teaching of the subject to the subject leader or a member of the senior leadership team.
- ensuring that the guidelines and guidance set out in the schools' Health and Safety policy are known and adhered to.

➤ **Responsibilities of The Special Educational Needs and Disabilities Coordinator (SENDCo)**

The SENDCo is responsible for:

- advising staff how best to support pupils' needs.
- organising and providing any necessary training for staff regarding the design and technology curriculum for pupils with special educational needs and disabilities (SEND).

- advising staff on the inclusion of design and technology objectives in pupils' individual education plans as necessary.
- advising staff on the use of teaching assistants in order to meet pupils' needs.
- Advising staff of specific tools necessary for pupils with special educational needs and disabilities (SEND).

➤ **Design and technology across the curriculum**

Children acquire a broad range of subject knowledge within their design and technology learning and draw on disciplines such as mathematics, science, engineering, computing and art; teachers plan for children to practise and apply their acquired skills, knowledge and understanding to these disciplines where relevant.

The impact of our design and technology curriculum

➤ **Assessment**

Throughout the year, teachers will plan on-going assessment opportunities in order to gauge whether pupils have achieved the key learning objectives. Teachers constantly assess the children's understanding, correcting misunderstandings. Teachers are responsive and alter planning accordingly to help children embed and use knowledge fluently and develop interconnected understanding rather than memorise isolated facts within a unit. Formative assessment, which is carried out throughout the year, enables teachers to identify pupils' understanding of subjects and inform their immediate lesson planning. Summative assessments may also be used at the end of a unit. Teachers will make a judgement about the learning of each pupil in relation to each of the curriculum objectives – the outcomes of which will be recorded using OTrack (used by school to analyse and act on attainment and progress) and used to inform future planning.

The progress and development of pupils within the EYFS is assessed against the early learning goals outlined in the 'Statutory framework for the early years foundation stage'. For further information about assessment in EYFS, please visit our Early Years area found via the Learning tab on our school website (www.berkswichceprimary.co.uk).

Assessment will be undertaken in various forms, including the following:

- Talking to pupils and asking questions
- Discussing pupils' work with them
- Assessing children's written outcomes against the learning objectives
- Pupils' self-evaluation of their work
- Analysis of recordings
- End of unit assessments

Parents will be informed about their child's attainment in design and technology during the Summer term every year. This will include information on pupils' attitudes towards the subject. Verbal reports can be provided during informal meetings with parents throughout the year. The progress of pupils with SEND will be monitored by the SENDCo.

➤ **Where are we headed?**

By the time children leave our school, they will have a wide range of developed skills to equip them for their future. They will be equipped to tackle design and technology at high school and beyond with confidence and resilience.

This will be evident in our children through:

- a growing awareness and evaluation of design and technology in the world around us.
- the ability to talk confidently about how and why things work.
- a passion for, and a commitment to complete tasks.
- an excitement and satisfaction in designing and making.
- an understanding of the breakthroughs through history and the impact on society.
- the ability to give precise explanations, using technical and specialist terminology effectively, accurately and appropriately.
- a view of themselves as a designer, valuing its role within their lives and the world in which they live.
- having learnt to design a variety of products with a high, or rapidly developing, levels of technical expertise.

➤ **Spiritual, moral, social and cultural development**

- Pupils learn to work effectively with their peers and others, and build positive relationships.
- Pupils learn to build their self-confidence through design and technology and participating in discussions about their products.
- Pupils learn to reflect on technology in the world.
- Pupils develop an understanding of other cultures and social injustices in the world.

➤ **Equal opportunities**

All pupils will have equal access to the design and technology curriculum. Gender, learning ability, physical ability, ethnicity, linguistic ability and/or cultural circumstances will not impede pupils from accessing design and technology lessons. All efforts will be made to ensure that cultural and gender differences are positively reflected in lessons and the teaching materials used.

Policy Review

The design and technology policy is reviewed bi-annually or sooner if required. A named member of the governing body is briefed to oversee the teaching of design and technology, and meets with the subject leader to review progress. Any changes made to this policy will be communicated to all teaching staff.