

Clockhouse Primary School

The Clockhouse Curriculum



Our Design Technology Curriculum Rationale

What do we want for our children and how will we work together to achieve this?

The Design and Technology curriculum develops children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials including food. The aim for the Design and Technology curriculum is to build an understanding of how something is made, why it is made and the purposes that it serves. Children explore a variety of materials, skills, and engineering styles to help develop their own designs and products, which will have a clear purpose. During Design and Technology lessons at Clockhouse, children are provided with knowledge and taught skills in order to design and make effective products successfully. Children identify and investigate current products on the market which helps them to develop an understanding of a product in order to design and make high quality prototypes and products for an intended audience. A knowledge is built by allowing the children to understand the types of products already available, and how these products were designed and produced. In addition, Cooking and Nutrition helps to develop a passion for healthy and nutritious food, with a depth of understanding of the importance of a balanced diet and how this can be achieved. It also helps children understand where our food comes from and how to prepare food hygienically. It also allows for the children to explore and experiment with a range of different recipes. The skills that are developed through the Design and Technology curriculum enable the children to meet objectives in areas such as cooking and nutrition, textiles, carpentry and engineering through a clear, guided process. Where appropriate cross-curricular links are made to other subjects, including science, art and mathematics. Our Design and Technology curriculum has been designed to reflect the families who attend Clockhouse Primary school and the local environment the children live in.

What are we trying to achieve through the Clockhouse Design and Technology Curriculum? (*Intent*)

At Clockhouse Primary School, all we do is underpinned by our values. These values support our 'Key Curriculum Drivers'. Our drivers are used to ensure all stakeholders know what we want for our children – our intent:

- **Challenge** – Children are challenged to think for themselves. They are challenged to think about how products already in existence are designed and made, and how they could be improved upon. Children are taught to investigate and follow a design brief to meet the needs of the consumer. New skills that are unique to Design and Technology provide opportunities to stimulate the children's own abilities, which will then become transferable skills for future learning.
- **Global Citizenship** – Design and Technology encourages the children to think about products used in the wider environment. Children are given examples of how materials differ in different countries, and how to design a product fit for a global audience. This ensures learning is relatable to real life experiences and develops skills that they may use in adulthood. This allows the children to consider the needs of others within the wider community and whether or not a product is good for the environment. This promotes the importance of caring for the world around us.
- **Creativity** – The Design and Technology curriculum fosters the children's sense of creativity and allows them to explore a range of their own ideas. Each unit provides the children with a design brief, which allows them to design and create innovative products. Children can use a range of materials and skills to help meet their design needs. Through cross-curricular links children can incorporate skills learnt in art, science and maths to create detailed, well produced designs. This set of skills allows the children to understand the application of a variety of subjects learnt.
- **Aspiration** – By looking at current products and how they came to be, children are able to develop their aspiration. By considering how life would be without key products that have been designed and created and understanding that if you work hard enough you can make that dream come true, children at Clockhouse aspire to be more. The children have the opportunity to learn about inspirational inventors and how they have helped to improve the lives of the children and others across the world. The beauty of the Design and Technology curriculum is that all abilities can access it. It allows collaboration with others through the design, making and evaluation process. Children are encouraged to try out their ideas,

test their products and reflect on their successes. This demonstrates to the children that there are no limits and that they do not need to feel restricted. It builds resilience and a want to achieve.

- **Well-being** – In Design and Technology, it is our purpose to ensure that children of all abilities can succeed and excel. We build the children's ability to problem solve, reflect and evaluate their own work along with products that are currently being used around the world. We provide the children with the opportunity to explore their own ideas develop their creative ability and use Design and Technology as an outlet to promote well-being and positive mental health. Through this, we aim to produce thoughtful, inquisitive, analytical and investigative minds that long to help develop the technological world for the better.
- **Cultural Capital** –Through the Design and Technology curriculum, we are preparing the children for a successful life beyond Clockhouse Primary School. The curriculum enhances the children's creative thinking and teaches them to think outside the box allowing them to be innovative with their designs. The curriculum provides exposure and understanding to the children of both the everyday products, they encounter as well as great feats of engineering in the wider world they may otherwise not have. The accumulation of skills, knowledge, competence and awareness prepares them to be successful adults in modern Britain.

How is the Clockhouse Design and Technology Curriculum delivered? (*Implementation*)

- The Design and Technology curriculum follows the National Curriculum and has been sequenced by the leader and adapted to meet the needs of the children within the school.
- All teachers and year group leaders are responsible for the medium-term planning which is cross-referenced with assessment documents and the long-term planning to ensure a broad coverage. Planning links to progression, age and phase.
- Lessons are differentiated and scaffolded to meet the needs of all learners, ensuring that there is challenge for all.
- The subject leader carries out regular monitoring to ensure National Curriculum expectations are met, but also ensures that the children are developing a love for learning in Design and Technology through fun, memorable and engaging lessons.
- Where possible and appropriate, the Design and Technology curriculum links to the school's golden threads weaved throughout the program of study. This is evident in Year 2 when the children explore healthy lifestyles and are tasked to design, make and evaluate a healthy pizza.
- The Design and Technology curriculum builds upon children's prior knowledge and skills learnt in previous years in order to ensure that the children are successful in their learning. The links to prior learning are made explicit within each lesson and are built upon. Every area of the Design and Technology curriculum has a set of skills that are taught through focused tasks and lessons. Prior knowledge is drawn upon to help cement the foundations for the future learning.
- Children are given sufficient time and targeted teaching to develop the skills required to be successful in each unit, this then allows the children to be ambitious in their designing and more confident and independent in the making phase. Additionally, this then allows the children to create a product that is unique to them.
- Good quality materials, clear planning and a range of knowledge and skills of the Design and Technology lead ensures teaching staff have the confidence and equipment to design and create usable products.
- Teachers are encouraged to work with the Design and Technology lead to help develop their planning and understanding of the bespoke overviews to produce learning which meets the needs of all children. The bespoke curriculum promotes the development of the skills needed before introducing the product to be designed and made.
- Through the planning process, children build up their knowledge of products already available and consider the adaptability of these products to meet a new audience.
- Children use a variety of subject specific tools, such as needles and thread, woodworking tools, computer-aided design software, and kitchen implements, which they may not be exposed to in their home lives.
- The curriculum allows the children to make adaptations to their designs allowing the children to become reflective learners, being able to identify key areas of development, and assess their product's purpose.
- Children then evaluate their product, identifying strengths and improvements that they would make based on how well the product works. Focused practical tasks are planned to develop and practise particular skills and acquire knowledge.

- Pupils evaluate their products based on the purpose and function, a process to encourage critical-thinking, problem solving and strategic thinking.

What difference is the Clockhouse Design and Technology Curriculum making? (*Impact*)

- From their different starting points, all children will make at least good progress and achieve their potential academically, emotionally, creatively, socially and physically. Knowledge, understanding and skills will be secured and embedded so that children attain highly.
- The children enjoy their Design and Technology lessons and show an interest in how products that we use everyday are made.
- Through the skills that are learnt during focused tasks, the children are able to build upon their prior learning and really embed their abilities.
- Cross-curricular links provide a deeper understanding of the importance of products and how skills from other subjects are used collaboratively.
- Children are able to show resilience through the design and make process, being able to improve their product based on their own evaluations.
- Understand and apply the principles of healthy eating, diets and recipes, including key processes, food groups and cooking equipment.
- Children will have the confidence to explore the possibilities and design and make a product that is unique, which will enable the children to believe in their own ability to achieve and realise that with hard work, resilience and the skills and knowledge they are taught, the possibilities can be truly endless.