

Subject on a page: Design & Technology

At Ibstone CE Primary School, we want our pupils to develop their practical skills in DT and become confident and proficient when using different tools. We understand that the ability to plan, create and evaluate their work is something they will use in many aspects of their lives, and aim to give them the chance to explore this.



Intent - We aim to...

Enable pupils to be confident, courageous and resilient designers and innovators

Deliver a purposeful and engaging curriculum which allows pupils to feel they can contribute ideas to an ever-evolving world of invention

Provide pupils with key knowledge and explicitly teach practical skills and vocabulary so they can design, create and discuss their work confidently and apply their skills at home and in the wider world

Encourage pupils to become independent, creative problem-solvers, identifying needs and developing ideas for products that are fit for purpose and the end user

Enable pupils to become more confident and skilled in using the range of tools and materials available to them.



Implementation – How we achieve this...

Information about our curriculum

In line with the National Curriculum, we aim to provide opportunities for our children to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We aim for them to acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Through the evaluation of past and present design and technology, we aim to develop a critical understanding of how high-quality design and technology makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Curriculum Design

We believe that a design and technology curriculum should provide mirrors for pupils in which they can see themselves reflected, and windows, through which they can look into the lives and stories of people who are different. Using this approach, we select subject content from the National Curriculum document and build schemes of work within design and technology that represent the unique community that we serve. Design and Technology is taught as a unique subject discipline as part of our other projects. This is to ensure that learning has real contexts.

To supplement our Design and Technology projects, focused practical tasks are planned in each cycle to enable pupils to develop specific skills with a range of techniques, processes and equipment.

A wider range of tool skills are developed in Forest School sessions.

Procedural, Disciplinary and Substantive Knowledge

Our design and technology curriculum comprises of three interrelated strands of knowledge:

Procedural knowledge represents the skills of a designer. For example, pupils are taught how to analyse existing designs and products. This is taught in every curriculum cycle. As pupils move through school, they are presented with an increasing range of designs and products and are taught how to analyse them in increasingly complex ways.

Disciplinary knowledge in design and technology is the process of enabling pupils to use their substantive knowledge of products and materials around them to make links between and across different areas of the curriculum. Knowledge in design and technology will equip pupils with the opportunity to explain how and why products have changed over time and how they might be further improved in the future. They can use their knowledge and understanding to suggest how existing products may be improved with the advances in modern technology.

Substantive knowledge represents the technical content and vocabulary that is taught in each year group – in planning, this knowledge is presented as specific 'learning outcomes' – the content we want our pupils to know and remember.

Implementation – continued

Sketch Books

As in Art and Design, sketchbooks are used for focused practice and redrafting in order to develop designs and embed specific skills during the course of the project. Teachers never mark or give written feedback in sketchbooks but use discussion and feedback to deliver praise or share good examples.

Vocabulary

We recognise the importance of vocabulary progression across all subject areas. Giving pupils the opportunity to develop their Design Technology vocabulary enables them to communicate about their own and others' works. Vocabulary is planned meticulously from EYFS to Year 6 and teachers refer back to previous vocabulary to ensure it is embedded and part of long term memory.

Assessment

We believe that Design and Technology is more than just knowing designers, products, or materials. We assess pupils ability to apply their knowledge with a final assessment piece at the end of each project. This provides information on the children's ability to use a combination of substantive, disciplinary and procedural knowledge. The end of unit assessment comprises of an unseen design or product that is related to the area of design that has been studied. Pupils analyse the piece, using the knowledge and skills they have developed during the project. This is used by teachers, alongside the pupils own designs or product, to provide information on how well the pupils are learning the curriculum.

Revisiting & Retrieving

Our Design and technology curriculum is built upon high levels of repetition to ensure that our children can do more and remember more as they progress through school. The two strands of Procedural knowledge and Disciplinary knowledge are revisited and developed in every class from year one to year six. This repetition ensures that our children reach the end of Key Stage Two with the ability to apply the skills and conceptual frameworks of designers with high levels of independence. During the course of their Design and technology project, we share significant amounts of substantive and disciplinary knowledge with our children. In planning, our specific learning outcomes detail exactly the knowledge that we want the children to know, remember and apply.

Key Areas of Design Technology

- Design
- Make
- Evaluate
- Technical knowledge

Delivered through:

- Cooking & Nutrition
- Mechanisms/ Mechanical systems
- Structures
- Textiles
- KS2 only – Electrical systems
- KS2 only – Digital world (coding)

Impact

Pupils show an enjoyment & curiosity for Design Technology

Pupils are able to generate ideas and plan based on processes they have already used with enthusiasm. They can talk effectively about what they plan to do or what they have already done while using technical language

Pupils produce high-quality work that offers a solution to a problem or a contribution to the world of design, and these products are fit for purposes and users

Pupils are able to apply transferable skills to other subjects, such as thinking of a purpose for their work, ways in which to make it successful and what they could improve on if something did not go the way they expected

Pupils talk with increasing confidence about their learning in DT using appropriate vocabulary

Pupils know more and remember more about DT and this is demonstrated through the work they produce and in discussion about their work