

Design and Technology

Intent

Pupils at Creeping St Mary CofE School will experience a high quality Design and Technology education to enable them to make an essential contribution to the creativity, culture, wealth and well-being of the nation. They will learn how to become resourceful, innovative, enterprising capable citizens. They will be able to draw on disciplines such as mathematics, science, engineering, computing and art to design and make products to solve real and relevant problems in a variety of contexts. Pupils will develop a critical understanding of the impact of design and technology on daily life and the wider world through the evaluation of past and present innovations.

When designing and making, pupils will be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Implementation

Our whole curriculum is shaped by our school vision which aims to enable all children, regardless of background, ability, additional needs, to flourish to become the very best version of themselves they can possibly be. We teach the National Curriculum, supported by a clear skills and knowledge progression. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children. All teaching of DT should follow the design, make and evaluate cycle. Each stage should be rooted in

technical knowledge. The design process should be rooted in real life, relevant contexts to give meaning to learning. While making, children should be given choice and a range of tools to choose freely from. To evaluate, children should be able to evaluate their own products against a set design criterion. Each of these steps should be rooted in technical knowledge and vocabulary. DT should be taught to a high standard, where each of the stages should be given equal weight.

The key skills we teach the children are:

- ❖ sewing and textiles
- ❖ cooking and nutrition
- ❖ electrical and mechanical components
- ❖ Joining materials to make structures

All children will:

- ❖ Develop the expertise needed to perform everyday tasks confidently and participate 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 based on design criteria.
- ❖ Critique, evaluate and test their ideas and products and then work of others.
- ❖ Learn how to cook and understand and apply the principles of nutrition.

Pupils take part in a DT focused day each term as well as learning and applying DT skills in a variety of cross-curricular activities throughout the year.

Impact

Pupils will be able to design and make products to solve real life problems using a range of skills drawn from across the curriculum. They will have the expertise to cope in an increasingly technological world. Pupils will recognise the impact of design and technology on our lives as a result of studying past and present innovations. Our pupils will leave Creeping St Mary CEVAP School with...

- An excellent attitude to learning and independent working.
- The ability to use time efficiently and work constructively and productively with others.
- The ability to carry out thorough research, show initiative and ask questions to develop an exceptionally detailed knowledge of users' needs.
- The ability to act as responsible designers and makers, working ethically, using finite materials carefully and working safely.
- A thorough knowledge of which tools, equipment and materials to use to make their products.
- The ability to apply mathematical knowledge and skills accurately.
- The ability to manage risks exceptionally well to manufacture products safely and hygienically.
- A passion for the subject.