



# Design and Technology

## Intent of the Design Technology Curriculum

### AFJS aims

We aim to inspire creativity and imagination whereby pupils design and make products that solve real and relevant problems within a variety of contexts.

At Abbots Farm Junior School, we aspire to give the children the opportunity to:

- Acquire a broad range of subject knowledge and draw on other subjects such as Mathematics, Science, Computing and Art
- Take risks, becoming resourceful, innovative, enterprising and capable
- Evaluate past and present design and technology and develop a critical understanding of its impact on daily life and the wider world

### National Curriculum

Our school aims are closely linked to the National Curriculum for design and technology which are to ensure that all pupils:

- Develop the creativity, technical and practical expertise needed to perform every day 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

### Roles and responsibilities

**The design and technology leader** is responsible for providing access to Plan Bee planning for all staff to use. The design and technology leader also ensures that the resources are kept well-stocked and are relevant to the planning and units being taught. They are also responsible for providing relevant training and guidance for all staff. They review design and technology provision, its strengths and the next steps for development as part of the monitoring and action plan cycle.

**Year group teams** are responsible for ensuring that the design and technology units are taught in the order set out on the long term plan and that they use a wide range of materials and resources, including ICT to enable children to progress within the key elements of design and technology (see progression of key skills grid). The teams ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and are given the opportunity to evaluate them. Children should be given the opportunity

both to work independently and to collaborate with others, listening to other children's ideas and treating these with respect. The teams are responsible for giving children the opportunity to critically evaluate existing products, their own work and that of others.

**The governors** are responsible for discussing design and technology provision with the Curriculum Lead as part of the wider curriculum and to allocate governors to monitor the provision, its strengths and areas for development when required and for reporting those to the wider governing body.

## **Implementation of the Design and Technology Curriculum**

### **Planning**

At Abbots Farm Junior School we use the Plan Bee scheme of work for Design and Technology. The units we have chosen develop and progress the necessary skills required to fulfil the national curriculum. Each year group will teach three units per year covering a range of different skills and materials across the whole of KS2 with each skill set being revisited and built upon as the children progress through.

### **Progression**

The progression grid document is used as a reference for the practical skills, knowledge and vocabulary children should know by the end of each year group. The units chosen ensure progression in the knowledge and understanding of a range of different DT disciplines throughout KS2. Progression in DT is about using the design, make and evaluate process with increasing confidence over time and being able to apply it to their own independent and group work.

### **Teaching and Learning**

Children will be taught the skills and knowledge needed to successfully design and make and evaluate their work.

- Evaluate:
  - To evaluate existing products, their own work and the work of others in order to improve their design.
  - To have an understanding of how designers and their products have helped to shape the world.
- Design:
  - To carry out research of existing products.
  - To develop design criteria in order to produce a product which is fit for purpose and aimed at a specific group of people.
- Make:
  - To select and use a range of tools and materials, taking into account their product's functional and aesthetic qualities.
- Technical Knowledge:
  - To apply 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,

- Apply their understanding of computing to program, monitor and control their products.
- Cooking and nutrition:
  - To have an understanding of the seasonal nature of foods, and where and how it is produced.
  - To understand what it means to have a healthy diet.
  - To cook and prepare a range of predominantly savoury foods using a range of techniques.

## **Cross-curricular links**

### **English**

Discussion is a way for the children to develop an understanding that people have different views about design and technology. Through discussion children learn how to justify their own views and clarify their design ideas.

The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. Children are also given the opportunity to write about their own ideas and clarify how the making process will occur.

Reading is encouraged when looking at recipes and looking at the lives of some of the pioneers in different areas of design technology.

### **ICT**

ICT is used to support and enhance the Design and technology curriculum where appropriate. Children may use software to enhance their skills in designing and making and use a variety of programs to model and develop ideas.

### **Science**

Children may use the knowledge gained during Science lessons and develop those ideas in a design technology project. Several units have a direct reference to the children's scientific knowledge and continue to build on prior learning.

### **PSHE**

Children are encouraged to develop a sense of responsibility in following safe procedures when conducting practical activities. They learn about health and healthy diets and through their understanding of personal hygiene how to prevent disease from spreading when working with food.

## **Wider Opportunities/Enrichment Opportunities**

### **Visitors and Educational Visits**

Where opportunities arise, we plan educational visits and visitors that will enhance the curriculum provision offer for Design and Technology.

We offer extra-curricular cookery clubs on a half termly basis, and are looking at delivering other opportunities for extra-curricular clubs in the future.

## **Local links**

One of our whole school curriculum aims is to ensure that children engage with and learn about their local community and how different subjects are represented amongst our local community. We are currently exploring ways in which this can be promoted within our new DT curriculum.

## **Impact of the DT Curriculum**

### **Assessment and Recording**

Children's work is recorded in a book which will move up with them annually to the next year group and may be used as evidence of their progress. Assessment of children's learning is closely linked to the principles of our Assessment and Feedback policy and has strong formative assessment in the classroom at its heart. Teachers constantly assess children's progress throughout lessons and intervene with appropriate feedback at the point of learning wherever possible to ensure the child can

### **Monitoring and Review**

The DT subject leader creates is responsible for the monitoring and evaluation of DT planning and teaching, and standards of works throughout the school. They also regularly review this policy and produce an annual action plan for the development of the subject. Regular monitoring includes: pupil interviews to determine knowledge acquisition and the development of skills and work/planning sampling and scrutiny to ensure coverage and progressions throughout the school as well as conducting lesson drop-ins when necessary. The DT Subject Leader feeds back findings from monitoring to staff and advises them on good practice/areas for development and also reports back to Governors as required.

## **Health and Safety**

Because children may be using tools and materials that could possibly present a hazard if used incorrectly, children will be taught to use the correct methods for using specific equipment and the risks involved will be discussed. Teachers will promote these in order to ensure the health and safety of their pupils. Children will also be taught the necessity of looking after equipment by using it correctly and keeping it clean.

**Reviewed and updated: June 2023 by L. Solomon**

**Next review: June 2025 by L Solomon**