

# *Design and Technology Policy*

## *Welsh House Farm Community School and Resource Base*



***“Inspired to grow and flourish”***

**Approved by:**                      Governors

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**November 2022**

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## DESIGN AND TECHNOLOGY POLICY

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation. (National Curriculum 2014)

### Vision Statement

*To inspire children to develop their design and technology skills and knowledge to become innovative and creative problem solvers.*

### Intent

The Design and Technology curriculum encourages pupils to develop their design and technology skills and knowledge to become innovative and creative problem-solvers. The curriculum includes the following:

- It enables pupils to be motivated and engaged by designing and making exciting working products with a clear purpose linked to the needs, wants and values of the user.
- Pupils design, make and evaluate products that solve real and relevant problems within a variety of contexts, including the local community and businesses.
- Pupils have opportunities to investigate and evaluate existing products and learn how past and present design and technology impacts upon daily life and the wider world.
- Deep and meaningful connections are made between science, maths, computing and art and the skills developed from previous projects.
- Pupils develop communication and team-work skills as well as confidence and independence to allow them to become successful learners.

- Pupils learn how to take risks, becoming resourceful, enterprising and capable citizens now and in the future.

### Implementation

Design and Technology is taught in a 'block' unit over the course of a week. There are three 'blocks' during the year. Every class builds on prior learning and the skills taught in other subjects as they complete three design technology projects a year.

At the end of each project there is a design and technology exhibition to allow each class to present their final product to the school. Each class visits the exhibition to enable pupils to investigate and evaluate the products. The exhibition is a celebration of the pupils' work and an opportunity to present information displaying the process they followed to complete their finished product. In the Summer term, the food project is presented at "The Great Welsh House Farm Bake off." All pupils have an opportunity to taste the food and as part of their evaluation, vote for their favourite.

### Impact

We strive for all of our children to be successful in design and technology and the impact will be evident through the children. Children will:

- ✓ bring a wide range of previous skills to the beginning of a new project, demonstrating a clear progression of skills is built on and developed throughout the year groups
- ✓ have developed a wealth of design technology knowledge and skills
- ✓ be proud of the high-quality products they have made
- ✓ use and demonstrate the skills they have learnt and developed in design and technology across other subjects

### KS1

#### *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.*

### KS2

#### *Technical knowledge*

- *apply their understanding of how to strengthen, stiffen and reinforce more complex **structures***
- *understand and use **mechanical systems** in their products [for example, gears, pulleys, cams, levers and linkages]*
- *understand and use **electrical systems** in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]*
- *apply their understanding of **computing to program**, monitor and control their products and use CAD*

### Foundation Stage

Design and Technology in the Foundation Stage is introduced indirectly through activities that encourage children to explore, observe, think, problem solve, predict, make decisions and talk about the world around them. In 'Knowledge and understanding of the world' children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. In 'Exploring and using media and materials' children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

### Cooking and nutrition

Pupils are taught how to cook and apply the principles of nutrition and healthy eating. A seasonal food project is completed by each class in the summer term. Each project includes seasonal fruit and vegetables from the Learning Garden.

### Design and Technology Portfolio

Each class has a Design and technology portfolio. Evidence of the work and skills developed from each project are displayed in this portfolio.

### **Assessment**

Teaching, learning and evidence is monitored throughout the year to ensure all aspects of the Design and Technology curriculum are covered, and that there is a clear progression of skills from one key stage to the next.

Children receive verbal feedback on a continuous basis. Skills linked to designing, making, evaluating and technical knowledge are assessed termly using an electronic spreadsheet. Teachers assess each pupil as target met, working towards or target not met.

In the Foundation Stage children work towards achieving the Early Learning Goal for 'Knowledge and Understanding of the World' from the Development Matters Document. At the end of Reception, children are assessed to establish if they are working at the expected level and have achieved this ELG.

## **Resources**

A wide range of resources are used to teach the Design and Technology curriculum. The equipment is kept in the Art and DT cupboards. Cooking equipment is kept in the kitchen.

## **Equal Opportunities**

Each class is diverse. Therefore, consideration should be given to their needs. Teachers must ensure that tasks are differentiated appropriately so that the Design and Technology curriculum is accessible by all regardless of gender, cultural background or any additional educational need.

All children should have the opportunity to:

- participate in practical sessions
- work individually and in small groups to design, make and evaluate
- develop technical knowledge linked to mechanical and electrical systems, computer programming, how to strengthen and reinforce complex structures and a range of cooking techniques
- use a range of tools and equipment safely and with increasing accuracy
- ask questions to evaluate a range of products and promote their thoughts to inform future sessions

## **Health and Safety**

Safety of children in all lessons should be of paramount importance and all staff should be aware of these issues. Risk assessments should be carried out before practical sessions. During the lesson, children should be actively involved in assessing risks.

Children are not permitted to enter the Design and Technology cupboard. Teachers should remove the resources they need for a specific lesson and return resources afterwards. Staff should report any damages or missing equipment to the subject lead as soon as possible. Damaged, depleted, missing or broken items must also be recorded so that resources can be replenished. The school's Health and Safety Policy should be consulted for details regarding scissors, craft tools, electrical equipment, wet areas, heavy equipment and use of other tools. Any concerns should be discussed with the Health and Safety officer.

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