# Gillespie Primary School

# Curriculum Intent, Implementation & Impact

# Design & Technology

## Intent

At Gillespie, we share the ambition of the national curriculum to provide a high quality Design and Technology (D.T.) education which enables our pupils to use their creativity to design and make functional products which solve problems with a practical purpose. Children learn to apply cross-curricular skills and knowledge from maths, science, engineering, computing and art. The process of designing, making, evaluating, is fundamental to our D.T education enabling children to develop ideas, test them out, critique their work and when necessary change and adapt or go back to the drawing board to improve outcomes. Children learn technical knowledge and skills related to:

- exploring and building strong structures,
- using and constructing mechanisms
- the principles of nutrition and basic cooking skills

The D.T curriculum allows our children to be creative, take risks, have fun and learn how design and technology makes a contribution to a thriving society.

## Implementation

## EYFS

Our D.T. curriculum is carefully designed to build on the educational programmes set out in the Statutory Framework for the Early Years Foundation Stage and delivered in the early years to teach our nursery and reception pupils the *Expressive Arts and Design* areas of learning .D.T also makes a contribution to children's learning across all the areas of learning .Pupils in our EYFS setting have varied experiences including:

.>exploring the designed and made world through the outdoor and indoor environments through role play

>designing, drawing, making various products and saying who/what they are for

>exploring and using a range of construction kits

> asking questions about a range of existing products and learning new technical vocabulary

>making new products

> developing knowledge, understanding and practical skills in relation to mechanisms, structures, food and textiles

**KS1 and KS2**

The school has adopted *Projects on a Page: A national scheme of work for design and technology at Key stages 1&2* created by experts who contribute to *The Design and Technology Association.* The scheme has been carefully designed to support our school to cover the national curriculum requirements and to ensure that high quality D.T. fits in a creative way with our broad and balanced curriculum. The Scheme of work enables the school and children to plan, design and make products for their intended purpose in a range of contexts. Across the school we link our D.T focus to other curriculum areas including History and Science.

All teachers use the Projects on a page Project planners which provide the guidance of essential 'building blocks' to achieve good practice in D&T. The building blocks set out a logical procedure which enables teachers to develop and adapt planning to suit the purpose of their project and provides detailed technical CPD guidance to support with knowledge and skills related to the technical knowledge required to teach to the children.

All year groups study two design and technology projects in each school year

*Topic coverage in KS1 and KS2*

| Year group | Focus | Focus |
|---|---|---|
| Y1 | Mechanisms-slides and levers<br><br>Design Moving parts for books | Food technology – salad dish |
| Y2 | Mechanisms-Wheels and axles<br>Design a fire engine | Food technology –Ghanaian dish |
| Y3 | Textiles from 2D to 3D<br><br>Design an explorers pouch to use in a rainforest | Food Technology- Healthy Packed lunch |
| Y4 | Simple circuits and switches<br><br>Design an alarm system for a specific purpose | Food Technology –Coronation Chicken |
| Y5 | Frames and Structures/slides and levers<br><br>Design a space rocket based on the Apollo Series with detachable body sections | Food Technology- Savoury dish for a celebration |
| Y6 | Mechanical systems-Pulleys and gears<br><br>Simple circuits and switches<br><br>Design fairground rides | Food Technology – Fairtrade cake |

Please see our *progression map here.* This provides support for teachers to help ensure curriculum planning meets the age related expectations for KS1 and KS2 so that children progressively build D.T. Knowledge, skills and understanding as they move through the school.

Please read overview document Projects *on a Page –A national scheme of work for design and technology at Key stages 1&2 here*

**Impact**

By the end of their schooling with us children have developed a love for learning about design and Technology. They have gained a coherent body of technical knowledge and skills related to:

- exploring and building strong structures,
- using and constructing mechanisms
- The principles of nutrition and basic cooking skills.

Children can confidently design, making, evaluate and test products to produce authentic outcomes which demonstrate their individual creativity. Pupils have developed the skills, knowledge, understanding and the motivation to prepare them to successfully engage with design and Technology at Secondary school.

Measuring Impact of D.T. learning and engagement

- *Feedback in lessons*

Through careful questioning and assessment for learning strategies, teachers monitor pupils' understanding. Children receive instant feedback through individual, group or whole class feedback throughout lessons from teachers. Teachers use their assessments within lessons to help gauge the pace of the lesson, and if they need to provide any additional scaffolding or guidance. After the lesson, the teacher uses the outcomes of their instant feedback and assessment to help plan next steps in the teaching sequence over a unit of D.T.

Teachers use the D.T Association progression framework to support assessment .It is a tool for both assessment for learning (formative assessment) and summative assessment. This supports a cumulative approach to ensuring progression where learning from KS1 is revisited at a higher level in KS2. The process of learning including the product outcomes is recorded in pupil workbooks so that the stages of learning from design to final outcomes are evidenced, including evaluation and adaptations.

- *Monitoring of teaching and learning and work surveys by subject leaders and senior leaders*

>Termly detailed surveys of outcomes in pupil workbooks provides information about the progress and understanding of individual pupils and enables leaders to give quality feedback to teachers on the impact of their sequence of lessons and to plan INSET to secure whole school improvement .

Staff regularly moderate by sharing work in books focusing on outcomes and progression between year groups and within a year.

> Lesson observations provide insight into how effectively D.T. Knowledge, skills and concepts are taught to ensure all pupils are able to make progress. Individual feedback is given to support professional development and a summary of all lessons observed enables the staff team to share strengths and areas for development to secure improvement in the teaching and learning of design and Technology