Design and Technology

Intent, Implementation and Impact

We always try to be that little bit better

Introduction

At Seaburn Dene, we believe our design and technology curriculum prepares our children to deal with tomorrow's rapidly changing world. Inspired by our school's drivers, we encourage children to become **aspirational**, independent, creative problem solvers and thinkers, both as individuals and part of a team, supporting. Through the study of high-quality design and technology, our children combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industry. This allows them to reflect on, and evaluate, past and present technology, its uses and impacts.

Intent

We have planned our curriculum so that as our children progress year on year, they are continually revising and practising skills as well as acquiring new ones. We want our children to be able to think critically and develop a more rigorous understanding of design and technology. In order to help us achieve this, we have invested in the nationally recognised Kapow Design & Technology Scheme. The units have been carefully selected to ensure gradual progression towards the National Curriculum end of key stage attainment targets and to cover all of the five strands shown below in enough detail.

Design **Make** **Evaluate** **Technical Knowledge** **Cooking and Nutrition**

Some key areas appear less frequently than others, for example Textiles, and this is deliberate. The National Curriculum states that working with textiles is only a small element of the Make strand and many of the making techniques covered in our Textiles units are also covered with a range of materials in other units, such as the use of templates, modelling, measuring and marking out, cutting, shaping and joining. Similarly in Year 2, the coverage of key areas is deliberately imbalanced as there are two Mechanisms units. This is because there is strong progression between the Y1 Structures: Constructing a windmill and the Y2 Mechanisms: Fairground wheel and then again with the Y2 Mechanisms: Making a moving monster. To omit one of these units would negatively impact on the progression.

We develop children with the following essential characteristics to help them become effective designers and technicians:

- To develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- To 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.
- To critique, evaluate and test their ideas and products and the work of others.
- To understand and apply the principles of nutrition and learn how to cook.

Over the last two years, our teaching and learning procedures have been updated and improved; the focus with our very youngest children is to embed solid key skills, for example: learning how to cut safely using scissors, explore a range of joining adhesives and plan what they'd like to make before they start. As children progress through school, their skills become more sophisticated through a series of projects either linked to a topic they are studying, such as: *windmills* in Year 1 to support our local area topic or as a standalone project, such as: making *waistcoats* in Year 6 kits.

Each lesson is designed to give children an opportunity to gain a solid understanding of what DT is through examining and exploring existing products, practising new skills, applying these skills, improving skills previously learnt, evaluating, analysing our finished products and considering possible improvements.

SEND children in our school are supported in their learning across the curriculum: 1:1 and small-group support is given when needed. Lessons are also adapted for those children who are working at greater depth in DT.

Implementation

The teaching and implementation of the design and technology curriculum at Seaburn Dene Primary School is based on the National Curriculum and supported by *Kapows Design Technology Combined Long Term* documents.

Planning

1. Long term: Our long-term overview is designed so that children encounter a balanced 'diet' of the different areas of the design and technology curriculum as they progress through Seaburn Dene: mechanics, structures, food, textiles and electronics. These are scheduled to complement other areas of the curriculum as appropriate.

2. Medium term: Design and technology units are 'blocked' to ensure projects are able to be seen through to a suitable conclusion. These take place each term and planning is provided from the *Kapow Design Technology Combined Long Term* documents, which outline the knowledge and skills covered.

3. Short term: Teachers follow the individual lessons taught over a half term using a range of videos for staff and students to ensure work is taught to the highest standard possible.

Teaching

Our pupils design and make products that solve real and relevant problems within a variety of contexts. We look for cross-curricular links that enable children to access subject knowledge and skills within mathematics, science, history, computing and art.

Children design products with a purpose in mind and an intended user of the products. Food technology is implemented across the school with children developing an understanding of where food comes from, the importance of a varied and healthy diet and how to prepare this.

Children learn to take risks, be reflective, innovative, enterprising and resilient. Through the evaluation of past and present technology, they can reflect upon the impact of DT on everyday life and the wider world.

Visits and visitors will allow children to apply their skills and build upon the appreciation of DT in its wider context (e.g. computer-aided design - Nissan; textiles - Cuthbertson Court Community Quilt Project; cooking and nutrition - Change for Life 'Roots and Shoots' project, working on healthy diet and nutrition).

Learning Environment

All DT lessons take place in our classrooms or the computer suite and we are working with our feeder secondary school (Monkwearmouth Academy) to use their kitchen/workshops to support our DT curriculum.

Impact

We measure the impact of our curriculum through the following methods:

- A reflection on standards achieved against the planned outcomes (referring to the National Curriculum).
- Annual teacher assessments.
- Pupil voice.
- Internally moderating our books and practical work.
- Parent feedback.
- Flashback 4 - revisiting, and assessing, previous learning.
- Flashforward 4 - identifying careers, vocabulary and aspirational links from the topic to the real world.

Summative Assessment

From EYFS to Year 6, children will be assessed at set points during the academic year. An assessment judgement will be reached using a combination of the *Kapow* Assessment Framework (which outlines key knowledge for each unit) and the Seaburn Dene knowledge and skills progression document along with the new EYFS framework. Evidence will be gathered in DT lessons rather than through a written test.