



Dishforth Airfield Primary School

Design and Technology: Intent, Implementation and Impact.

Intent

At Dishforth Airfield Primary School, all children receive a Design and Technology curriculum which allows them to use their creativity and imagination in order to design and make products which have a defined purpose and tangible outcome. Through the use of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in the process of design and making of a plan and product. Progression of skills is carefully mapped so that all children are able to learn, practise and build on previously learned skills as they progress through the school. Children are able to apply knowledge and skills learned in other subjects, particularly Maths, Science and Art. Children's interests are captured, ensuring that links are made in a cross curricular way, giving children motivation and meaning for their learning. Children develop the key skill of Evaluation. They understand that evaluation is integral to the design process and are able to evaluate existing products as well evaluate their own plans and products. Children understand the principles of nutrition and learn how to cook.

Our school curriculum is underpinned by our school vision, which encourages all pupils to achieve their full potential and develop a life- long passion for learning, whilst developing their personal values of respect, compassion, trust and perseverance.

We teach the National Curriculum Design and Technology Programme of Study through the use of the Design and Technology Association (DATA) "Projects on a Page" scheme, which is supported by clear skills and knowledge progression. This ensures that skills and knowledge are built on, year by year, and sequenced appropriately, in order to maximise learning for all children.

The key skills we teach are

- Sewing and textiles
- Structures
- Mechanical systems
- Electrical systems
- Computer systems to programme, monitor and control products
- Cooking and Nutrition

All teaching of Design and Technology should follow the Design, Make and Evaluate cycle. Each of these areas should be given equal weighting and should be rooted in technical knowledge. Children should be introduced to, and encouraged to use relevant technical vocabulary. The design process should allow children to explore in real life contexts, giving meaning to their learning. The making process should allow children to independently choose from a range of tools and materials. Children should be able to evaluate their plan or product against a design criteria.

During the Early Years Foundation Stage (EYFS) pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities

In Key Stage 1 children will access the Design and Technology curriculum three times a year, plus an additional Cooking and nutrition session.

In Key Stage 2 children will access the Design and Technology curriculum three times a year, plus an additional Cooking and nutrition session.

Our definition of learning is that our children will know more, remember more and understand more about Design and Technology.

Implementation.

Planning

- Long term plans map out the units to be covered each term, during each Key Stage.
- Medium term plans identify learning objectives and outcomes for each unit, as well as indicating the skills being taught and key vocabulary.
- Short term plans prepared by each teacher, highlight the skills and objectives of the lesson, and identify resources and appropriate differentiation.

Structure of a lesson

1. Warm-up to the lesson which activates prior knowledge and vocabulary encountered in order to increase the power of working memory.
2. A metacognitive approach to teaching and learning:
 - Explicitly teach metacognitive strategies - activating prior knowledge, independent practice and structured reflection
 - Modelling by the staff, verbalising their thinking and scaffolding tasks in relation to design and technology
 - Setting an appropriate level of challenge
 - Promoting and developing metacognitive talk in the classroom – language development and acquisition
 - Explicitly teaching children how to organise and effectively manage their learning
3. Task – independent / paired / group
4. Plenary

Resources

- Central resources are kept in the stock cupboard.

Assessment

In Design and Technology assessment is continuous. From the beginning of every lesson, teachers and teaching assistants will be assessing what their pupils are, or are not understanding and use this to scaffold each segment of the lesson. Interventions will be both planned for and 'live', meaning that misconceptions are dealt with immediately and high attaining pupils are challenged appropriately.

Subject leaders to have a termly meeting with the class teacher to track progress.

Early Years Foundation Stage

- Staff's ongoing observational assessments ascertain a baseline when each child begins EYFS which then informs subsequent teaching and learning for each child.
- Future attainment is noted using photographs and observational notes. Progress is recorded in each child's Learning Journey and the next steps to be taken are identified. Progress is monitored termly.
- Statutory assessments are made on exit of the EYFS.

KS1 and KS2

- In the Design and Technology lesson, formative assessments are made on a lesson basis. Practitioners observe, question and evaluate lesson outcomes to further determine progress made and the next steps in learning.
- Assessments are made at the end of each term to monitor children's knowledge and understanding of concepts taught. Assessments are recorded on the DT assessment grids termly.

Monitoring procedures

The Head teacher and D.T. subject leader play a central role in the monitoring and evaluation of the quality of teaching and learning of D.T. in the school.

The monitoring strategy:

1. Children's work and planning scrutinies are conducted.
2. Pupil progress meetings are held.
3. Lesson 'drop ins' and observations take place in all classes throughout the year.

The subject leader is responsible for monitoring attainment and progress, the outcomes of which are collated in the subject leadership folder and fed back to staff at an appropriate time.

Impact

As a result our learners will know more, remember more and understand more about DT.

By the time children leave our school they will have:

- A life - long passion for learning, in particular in Design and Technology.
- Respect, compassion, trust and perseverance for themselves and for others they are working with and working for.
- The ability to work constructively and productively with others, within a defined time frame.
- The ability to work as responsible designers and makers, working carefully and safely with the materials and tools available.
- The ability to choose tools, equipment and materials based upon sound knowledge.
- The ability to apply skills of Maths, Science and Art across the wider curriculum, particularly in Design and Technology.
- The ability to ask questions, carry out research and show initiative to develop a detailed knowledge of a user's needs.
- The ability to manage risks well, in order to manufacture products safely and hygienically.
- The ability to evaluate their plans and products and make necessary adjustments.
- The ability to transfer skills learned into other areas of their lives.
- The ability to use technical vocabulary in the correct way.