



Great Wilbraham C of E Primary School

Policy title: Design and Technology

Date created: May 2022

Date ratified:

Next Review Date: May 2025

Signed:

1. Introduction

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)

Life is a mountain of solvable problems and I enjoy that.

(James Dyson, 2012)

2. Quality of Education

2.1. Intent of the Curriculum

2.1.1. Curriculum design and coverage

Our curriculum intent for Design and Technology (D&T) is:

- *HEAD*: aid development of pupil skills and provide problems to solve
- *HEART*: challenge stereotypes and be aware of sustainability
- *HANDS*: encourage creative ways to solve problems and be memorable for our pupils

2.1.2. Knowledge and skills – National Curriculum

The National Curriculum sets out programmes of study for key stages 1 and 2. This ensures continuity and progression in the teaching of D&T. The aims for our pupils are to:

- develop the creative, technical and practical expertise needed to perform everyday 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.

2.1.3. Knowledge and skills – EYFS Statutory Framework

The EYFS Framework in relation to D&T aims for our pupils to develop skills and solve problems practically within the Knowledge and Understanding of the World and Expressive Arts and Design strands, providing the basis for the National Curriculum aims above.

2.1.4. Special educational needs & disabilities (SEND)

D&T lessons should be planned to meet the needs of all learners. It is the teachers' responsibility to ensure that all children are challenged and that lessons are accessible to all.

2.1.5. Cultural capital and diversity

Challenging stereotypes and promoting the impact of a variety of inspirational design and engineering figures locally, nationally and historically is key to developing children's attitudes. Working with a range of individuals from within the sector, and using links with the University of Cambridge, aids the development of D&T and STEM capital.

2.2. Implementation of Teaching and Learning

2.2.1. Subject knowledge – Long Term Planning





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As a staff we have created a long term plan for the STEM subjects to create as many links as possible. The coverage of D&T across the school ensures that every two year topic cycle includes textiles, mechanisms, food and nutrition and structures; computing control and electrical systems are additional for KS2.

2.2.2. Subject knowledge – Medium Term Planning

Medium Term Plans are created using the agreed school format and should demonstrate a build up of skills and experiences to solve a problem. Skills are chosen from the Design and Technology association (DATA) progression of skills document for the relevant phase groups. A D&T unit may take place through a series of weekly lessons, over a couple of whole days or even longer but roughly six afternoon sessions is a guide to the time allocated. The unit may include:

Investigative Disassembling and Evaluative (IDE) – idea creation tasks

Focused Practical Tasks (FPT) – skills based tasks

Design and Make Activity (DMA) – using skills and knowledge to solve a problem.

2.2.3. Formative assessment

Teachers make assessments of children through observation of IDE, FPT and DMA tasks. Assessment should be made about both designing and making. These ongoing assessments inform future planning and teaching. Lessons are adapted readily, and short-term planning evaluated in light of these assessments.

2.2.4. Resources

Resources are kept in the group room and maintained by the D&T leader. It is the role of the classteacher to ensure they request consumable items for any future projects and if resources are limited to inform the D&T coordinator. During a D&T unit, care must be made to use resources carefully and children must be aware of the responsibility for the environment and the need to be frugal.

The use of the kitchen may be necessary, at least four members of the school are Health and Hygiene qualified, and the area must be kept clean and hygienic before, during and after the sessions.

2.2.5. Learning environment

During a D&T project the classroom environment may be adapted. Separate areas for tools and materials and space for children to work without chairs are possible. Small group work with food and nutrition or with textiles are also organisational techniques that may be used. Assessing risks and ensuring the health and safety of everybody in the room is paramount.

2.3. Impact

2.3.1. Summative assessment

Annual judgements for D&T are made in Target Tracker for Y1-Y6 and D&T is reported through the EYFS framework. Judgements are made through formative observations throughout the year for both designing and making.

2.3.2. Preparation for next stage of education

Using the progression of skills document from DATA to plan MTP ensures that the children have achieved the necessary skills in order to aid them to be ready for their next stage of education.

2.3.3. High quality pupil work

Completed products should be celebrated and have a purpose and the design process is the key learning. During IDE and FPT activities the teacher teaches skills and guides the pupils. During DMA tasks, the emphasis is on children using these skills to solve a problem independently with the teacher carefully questioning and challenging children to succeed.

2.3.4. Applying learning

Children are encouraged to apply their learning within and from other subjects – for example maths, science and art all have influences upon D&T and vice versa.

3. Behaviour and Attitudes

TOGETHER we are CARING, CONFIDENT and CREATIVE learners





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3.1. Attitudes to learning

Children are taught to use the design process to solve problems and self-directed learning is encouraged. Children need to be challenged to solve problems independently but also supported where needed.

3.2. Positive and respectful culture

Staff and children will respect each other's abilities in D&T and aim to support each other to be the best they can be in a safe and supportive environment. Collaborative learning and thinking critically are key within this subject and must be managed carefully.

3.3. Supporting colleagues

Colleagues will be supported by the D&T coordinator and provided with CPD or key ideas to develop their teaching when appropriate.

4. **Personal development**

4.1. Social, Moral, Spiritual, Cultural

Children will:

- Work together to solve problems
- Make responsible moral decisions and act on them, helping others
- Make an active contribution in D&T sessions
- Understand, appreciate and contribute to a positive mindset culture

5. **Leadership and management**

5.1. Roles and responsibilities

Leadership

- To lead in the development of D&T throughout the school.
- To monitor the planning, teaching and learning of D&T throughout the school.
- To help raise standards in D&T.
- To provide teachers with support in the teaching of D&T.
- To monitor and maintain high quality resources.

Staff

- To adhere to the policies and provide children with challenging yet engaging activities within a supportive and understanding atmosphere

Children:

- To be positive when approaching D&T
- To try their best

5.2. Continuing professional development

Staff needs in CPD in relation to D&T may come through performance management, recognition of a whole school need or through the needs of individual pupils.

5.3. Community links

GWPS have worked with a variety of outside agencies and businesses to inspire our pupils within this industry. Children across the school have completed real life problem solving with Department of Engineering, University of Cambridge and have entered design competitions with other schools.

5.4. Working with governors

The D&T coordinator links with a key governor who reports back to the Full Governing Body progress in D&T teaching, learning and data. Learning Walks including governors are taken triennially.

5.5. Inclusion and equal opportunities





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This policy is in line with the school's 'Equality' policy. The aim is to ensure that everyone makes progress and gains positively from lessons and to plan inclusive lessons. Positive discrimination may be necessary to address some of the gender stereotypes that children may have developed.

5.6. Safeguarding

The safety of children is paramount in all situations. High standards of behaviour are expected in any lesson but where tools and equipment have potential dangers then it is imperative that if a child's behaviour endangers the safety or learning of themselves or others the adult in charge will cease the activity. A senior member of staff will be called if the child needs to be removed. Great Wilbraham CE Primary School is committed to safeguarding and promoting the welfare of all children.

5.7. Health and safety

D&T sessions can entail the use of a variety of tools and equipment that without care and consideration could cause harm. At all times a safe and healthy environment is maintained, tools are checked regularly and risk assessments are undertaken to ensure there is a safe working environment. Any issues are reported to the Headteacher, the County health and safety policy should be adhered to for all D&T activities (including food and nutrition) and there are at least four members of staff who are Health and Hygiene qualified.

5.8. Reviewing and monitoring

This policy will be renewed triennially in accordance with updates on Design and Technology.

6. **Links to other policies**

- 6.1. Curriculum Policy
- 6.2. Assessment Policy
- 6.3. Health and Safety Policy

7. **Appendices**

