

Gordon Primary School

Design Technology Policy

Revised Autumn Term 2023

Signed _____ Chair of Governors

To be reviewed Autumn Term 2024

Gordon Primary School

Design Technology Policy

Introduction

This policy outlines the teaching, organisation and management of Design Technology teaching and learning at Gordon Primary School. Design technology, or D.T., is the study, design, development, application, implementation, support and management of computer and non-computer-based technologies for the express purpose of communicating product design intent and constructability.

The policy has been drawn up by the Design Technology Subject Leader (CF), in consultation with members of the school's teaching staff, and has the full agreement of the Governing Body. The implementation of this policy is the responsibility of all teaching staff, under the direction of their year group leaders. The responsibility for monitoring and reviewing DT teaching and learning rests with the SLT and the DT Subject Leader.

Rationale

Design Technology is a foundation subject in the National Curriculum which gives young people the skills and abilities to engage positively with the designed and made world. It is a subject that will be taught each term in conjunction with other curriculum areas.

All pupils are entitled to access the DT curriculum at a level appropriate to their needs arising from race, gender, ability or disability and all DT lesson plans will therefore be differentiated to meet the needs of the children in each class. School visits will be planned for throughout the children's time at school and, where necessary, will be adapted to meet the individual requirements of identified pupils.

INTENT

Through our teaching of Design Technology, we aim to:

- Ensure that pupils always **“design and make a real product with a real purpose for a real person”**.
- Embed the four main principles for EYFS; when designing and making products children should be thinking about:-
 - **User** – children should consider who their products are for, eg. a coat for Teddy, a new cloak for Little Red Riding Hood
 - **Purpose** - children should think about what their products will do, eg. a chair for teddy bear to sit on, sandwiches for a tea party
 - **Function** – children should think about how their products will work, eg. a construction kit wall strong and stable enough for Humpty
 - **Aesthetics** – children should think about how their users would like the end products to look like, eg. decoration used on a simple textile hand puppet for a little sister, an overnight bag for one of the three pigs
- Embed the six main principles of the National Curriculum for Design and Technology into the school curriculum for Year 1 to Year 6:-
 - **User** – pupils should consider who their products are for
 - **Purpose** – pupils should decide which tasks their products will perform
 - **Functionality** – pupils should think about how their products will work
 - **Design Decisions** – pupils should have opportunities to make informed choices
 - **Innovation** – pupils should have scope to be original with their thinking

- **Authenticity** – pupils should design and make products that are real, believable and can be evaluated through use
- Ensure that the **two strands of subject content:-**
 - **Design and Making**
 - **Cooking and Nutrition**

are covered as per the requirements of the National Curriculum
- Ensure that one unit of food technology (Cooking and Nutrition) and two units of Design and Making are completed per academic year from Year 1 to Year 6.
- Ensure that children in EYFS are given regular opportunities to develop confidence with tools and techniques for designing and making, as well as cooking and nutrition skills.
- Ensure consistent presentation of subject content across all year groups – from Year 1 to Year 6 (using Design And Technology Association – DATA - workbooks).
- Ensure consistency of practise for all DATA workbooks to be filed in children’s DT Folders, and that these are passed on to the new teachers at the end of the academic year in order to track pupil’s progress across Gordon Primary School.

IMPLEMENTATION

Curriculum

Details on specific topics each year group will study can be found in the progression map for Design Technology. Within Early Years, there are four main principles:

- **User**
- **Purpose**
- **Function**
- **Aesthetics**

Throughout Key Stage One and Two, there are six main principles:

- **User**
- **Purpose**
- **Functionality**
- **Design Decisions**
- **Innovation**
- **Authenticity**

In addition, there are a further **two strands of subject content:-**

- **Design and Making**
- **Cooking and Nutrition**

When Planning DT, we:

- Follow long term planning of subject content collectively with the DT subject leader to ensure complete curriculum coverage (as per Gordon Primary School DT Curriculum document) and progression across all years and key stages.
- Ensure the sequential progression of initial engagement (investigating examples of the product), coverage of key skills (making a prototype or the mechanism), design (including computer-based design), making, and then evaluating are planned for all DT units.
- Ensure that this circular (design – make – evaluate - new iteration design) process is embedded in the Cleveland planning process for DT.
- Put the designing and making process at the heart of the subject.

- Investigate and analyse existing products and famous designers of these products.
- Create products using a wide range of materials and components.
- Have evaluating own ideas and products built into end of unit plans, identifying areas of improvement and strengths of the product to incorporate into future DT work – as per real world design and make process of improving on previous iterations of all products.
- Provide appropriate vocabulary, ensuring accessibility to all pupils.

Teaching and Learning

The principal aims are:

- To develop children's knowledge, skills and understanding in Design and Technology.
- That teachers ensure the children **apply** their knowledge and understanding when developing ideas, planning and making products and then evaluating them. This is done through a mixture of whole-class teaching and individual/group activities especially for key focus groups.
- That children are given the opportunity both to work on their own and to collaborate with others; listening to other children's ideas and treating these with respect.
- That children research the topic prior to and during every project.
- That teachers make sure that pupils have enough time to prepare and plan, collect ideas, information and materials, and to make and evaluate work.
- That teachers ensure quality teaching is taking place by becoming familiar with Design Technology techniques required for their year group and their DT unit; the Design Technology Leader may also be consulted to support teachers that require assistance with DT skills and/or Health and Safety protocols.
- Organisation of the lessons must be clearly set out by collecting equipment and materials needed prior to the lesson and by setting out the classroom environment in an appropriate manner according to the requirements for the DT tools of that session.
- Suitable learning opportunities must be provided for all children by matching the challenge of the task to the ability of the child.
- That planning for the subject is cross-curricular linked, especially with Art, Computing, Science and Mathematics as per the subject mind maps.

IMPACT

As with all our subject teaching, we do not teach DT in isolation to other curriculum areas; where possible, we relate the work undertaken to real life situations and we also aim to:

- Improve pupils' skills in English, Maths, Science, History, Geography and Computing.
- Develop pupils' critical thinking skills.
- Promote pupils' awareness and understanding of gender, cultural, spiritual and moral issues.
- Develop pupils as active and responsible citizens within their own and wider communities.

Assessment

- Teachers assess pupil's work in Design Technology by making assessments as they observe them working during lessons. Progress is recorded by assessing the children's work against the learning objectives for their lessons. At the end of a unit of work, teachers record children's attainment using Target Tracker. Teachers then use this data to plan the future work of each child or group of children as well as to make an annual assessment of progress for each child, as part of the July report to parents/carers.

The DT subject leader will:

- Ensure that all pupils have the knowledge, understanding and skills in DT in order to learn and develop across Gordon Primary School; ie. to ensure a minimum entitlement for the subject in the school curriculum.
- Ensure that everything that is planned, taught and learnt is filled by the National Curriculum Programmes of Study.
- Ensure that this planning is sequential; viz. subject mind maps lead to individual session plans lead to high quality learning thereby enabling children at Gordon Primary School to make at least good or better progress across the primary phase.
- Ensure that our **intent** of high-quality teaching is **implemented** consistently across Gordon Primary School in order to have the **impact** of allowing all children to easily access the key skills for DT and to make at least good or better progress in the subject.
- Work with teachers and year group leaders to develop a curriculum that is relevant to pupils and enables them to meet these expectations via the introduction of our own approaches to formative assessment, as well as to support pupil attainment and progression. The assessment framework should be built into the school curriculum (with the DT Curriculum Map statements) so that teachers can check what pupils have learnt at the end of each DT unit via Target Tracker and whether they are on track to meet or exceed expectations at the end of EYFS, Key Stage 1 and Key Stage 2, and so that they can report regularly to school leaders and parents.
- Tailor the curriculum to meet our local needs – which is in line with the overall concept of localisation.
- Ensure the supply and maintenance of DT and Food Technology equipment and resources required for lessons across the school.
- Regularly review and update our Health and Safety protocols, and to ensure that all class-based staff are confident with implementing these during DT lessons.

The Design Technology subject leader ensures continuity and progression of skills by maintaining an overview of the development of Design and Technology throughout the school. The DT Leader works alongside class teachers in order to:

- Ensure the quality of teaching and learning is enhanced by delivering sample lessons and offering advice and suggestions, as well as supporting new teaching and support staff with knowledge of DT techniques, and health and safety protocols.
- Monitor children's progress throughout the school by talking to children, talking to teachers and support staff, devising questionnaires and producing a portfolio of children's work from each year group, as well as with Target Tracker data.
- Review procedures, plans and assessment methods.
- Ensure plans are differentiated to meet the needs of all abilities.
- Ensure consistency and quality of pupils work presentation in DATA workbooks.
- Review Health and Safety policies with school leaders.
- To maintain the profile of the subject in the school curriculum and for the greater Cleveland community.

The DT subject leader ensures that the schemes of work and plans are revised in order to cater for the needs of the school. The co-ordinator is also responsible for keeping the staff informed of any changes by working with both the local DT network and Food Technology experts and the national Design and Technology Association to ensure that such experiences permeate the curriculum at all levels.

Resources

Design Technology resources are stored in the cupboard under the Y3/5 staircase. The keys for this cupboard are kept with the subject leader. All DT tools and resources are to be requested well in advance of the session by the class teachers. Additional lengths of wooden batons and dowels as well as cardboard tubes are stored in the basement in the “baton box” and these can be requested from the main office staff.

Before and at the end of every lesson, it is the class teacher’s responsibility to check that all tools are accounted for and are returned to the subject leader upon the completion of the DT unit of work, as per school policy.

Tools

A) Design and Making

Depending on the age of the children, the following tools may be used in a lesson. The following below is a general guideline of what tools and materials a year group should use. If a teacher is unsure about any tool, equipment or material to use they should refer to the DT leader for advice.

Early Years and Key Stage 1

Both Early Years and Key Stage 1 children are expected to use pencils, rulers, scissors, plastic sewing needles (for Early Years) and large-eye sewing needles (for Key Stage 1). These children mainly use resources such as paper, card, split pins, straws, cardboard tubes, paint, different textiles and a variety of foods that do not require heat sources to prepare. Woodworking tools and materials are to be used at the woodworking bench as part of the daily free-flow activities.

Lower Key Stage 2 (Years 3 and 4):

Children of this age group can use pencils, rulers, scissors, sewing needles, junior hack saws, modelling saws, bench hooks, mitre boxes, G-clamps and vice clamps. These children mainly use resources such as card, split pins, straws, cardboard tubes, coroflute plastic, foam, paint, balloons, different textiles and a variety of foods including those that require heat sources for preparation.

Upper Key Stage 2 (Years 5 and 6):

Children of this age group can use the same equipment as lower school as well as a pin and claw hammers, hand drills, and low melt glue guns. These children can use the same resources as the lower school as well as wood, plastic and metal.

Tools under Adult Supervision

Low melt glue guns and junior modelling knives (for KS2).

Tools only for Adult use

Heavy duty modelling knife and high melt glue guns.

B) Food and Nutrition

All pupils are to access all food technology equipment in the children’s kitchen (under adult supervision). Only Key Stage 2 pupils use heat sources to prepare their food technology products. These pupils are expected to use the cooking hobs and ovens with due care, digital scales, knives (with the bridging method), as well as an assortment of cooking and baking utensils. Before and at the end of every lesson, it is the responsibility of the adults’ working with the children in the kitchen to check that all cooking utensils are accounted for and are returned to the storage places, as well as that all stoves and ovens are

switched off and all kitchen utensils and work surfaces are cleaned as per Health and Safety regulations for Gordon Primary School.

Health and Safety

Health and Safety is an integral part of Design Technology. The class teacher and DT subject leader must ensure that the product can be made without causing any danger to anyone and that it is safe to use.

The teacher must provide opportunities for pupils to:

- be given careful instruction on the use of tools
- recognise possible hazards when designing and making, prior to as well as during the lesson
- consider and use simple rules to help keep pupils safe
- consider how to reduce risk by changing the situation or the way their pupils behave eg. deciding how to set up the class learning environment to reduce the hazards of working with certain tools (such as glue guns and junior hack saws)
- consider the safety of the finished product when it is used

All teachers, learning support assistants, helpers and children in the classroom have the responsibility for using safe working techniques in order to avoid harm to themselves and others. Safety at work involves:

- Safe storage and use of tools and equipment
- Safe storage and the use of materials which must be stored so that sharp edges and ends cannot cause injury
- The teacher informing and instructing children on how to prepare food safely and how to use food technology equipment with minimum risk; especially with regards to using knives
- Pupils are only to access the contents of the heated ovens when wearing elbow-length oven mitts
- Adults are to supervise pupils to ensure that all work surfaces are cleaned with disinfectant cleaning solution which is effective against a wide spectrum of micro-organisms after food preparation

Equal Opportunities and Special Needs (including Gifted and Talented)

All pupils should be given an equal access to the Design Technology curriculum. This is the entitlement of every child at Gordon Primary School. This can be achieved through classroom organisation and careful planning that enables the active participation of all pupils. In all classes there are children of differing ability. Some pupils may need provision to be made for additional support or extension tasks. Equal learning opportunities are provided for all children by matching the challenge of the task to the ability of the child. This is done by:-

- Setting common tasks that are open-ended and can have a variety of results (targeting Gifted and Talented children)
- Setting tasks of increasing difficulty where some children are challenged with additional tasks (targeting Gifted and Talented children)
- Grouping children by ability and setting different tasks for each group
- Providing a range of challenges through the provision of different resources
- Arranging pupils into mixed ability groups with more able pupils supporting SEN and EAL pupils to access the DT tasks
- Pre-teaching technical vocabulary and/or techniques for focus groups to better enable access to the DT sessions
- Adults supporting the work of individual children or small groups, especially SEN and EAL pupils

- Modifying or providing additional resources that can be used to support a child's access to the curriculum.
- Adults supporting SEN children with fine motor skill needs will provide alternative resources/tools which enable them to access the curriculum, such as using large-eyed plastic needles or binca/hessian.
- Use of Design and Technology Association (DATA) workbooks with images alongside the technical vocabulary to support EAL and SEN children to access the planning element of the DT units
- Differentiated activities and tasks for SEN children based on DATA Projects on a Page resources and DT Progression Map statements

The UNICEF Rights Respecting School Framework

We are proud to be working with the UNICEF Rights Respecting School framework. Ensuring that children understand their rights as per the United Nations Convention of the Rights of the Child is central to our school's ethos. Where learning opportunities and links exist, relevant articles from the UNICEF Rights of the Child are made explicit through the teaching of the curriculum.

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Policy to be Reviewed: Spring 2024