

Design Technology Foundation Subject Policy

Intent

"Have nothing in your house that you do not know to be useful or believe to be beautiful"
William Morris

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.

WE CAN provide teaching that develops knowledge and skills so children can learn and progress effectively

DT is taught in two blocked units each year. Content from the National Curriculum has been divided between the year bands to ensure that DT skills are introduced progressively and children have opportunities to revisit what they have learnt before. All strands of learning including Cooking and Nutrition and Designing and Making are taught.

Decisions regarding sequencing follow a clear rationale. Cooking is taught in every year group as this is an essential life skill. In Designing and Making, children are taught to construct increasingly complex products with each building on their prior learning. For example in Year 2 children produce a strong base for their windmill while in Year 4 the strong frame of their greenhouse has to also fulfil the criteria of looking attractive.

Designing and making construction units link to the wider curriculum. Vertical links embed learning in the same subject across year groups or units. For example, in KS1 children cook pizza in Year 1 and the skill of kneading is then built upon in Year 2 when children produce their own bread roll.

Horizontal links link learning in the same year group with another curriculum subject. For example, in UKS2, Year 6 children use the programming skills they have learnt in Computing to program their crumble buggies.

Diagonal links link learning in a different year group with another curriculum area. For example, in LKS2, Year 3 produce a moving toy using a CAMS based mechanism which builds on their prior knowledge of how toys worked in the past studied in Year 1 History.

At Grendon, a good DT lesson will employ the principles of the 5 a day approach including a review of previous learning, introduction of vocabulary and tasks scaffolded at appropriate levels. Children will be encouraged to develop Grendon's Goals such as Independence and Resilience.

It is our intent that DT lessons include memorable chocolate chip events and activities which enrich learning. DT forms part of our programme of curriculum enrichment. In Year 1 as part of their moving pictures unit, a Parent Share Session is held. In Year 6, parents are again invited into school for a Parent Share Session where children are able to demonstrate their Crumble Buggies.

WE CAN offer enriching activities, events and experiences

DT sometimes forms part of our Whole School Days and Junior Leadership Days. Children working on the Fiver challenge in Year 6 may need to apply their DT skills to their enterprise project. Children may use DT skills during their Feel Good Friday activities.

WE CAN work together to remove barriers and ensure equality

It is our intent that DT teaching develops the skills of all children from their starting point. For pupils with EAL the experience of cooking or building is a universal one that they can engage in without a language barrier. Where needed, children with special educational or sensory needs are supported to engage with lessons and record their ideas in an accessible way so they are able to achieve. Children who demonstrate a particular talent for DT, will be offered learning opportunities to challenge them to their full potential.

WE CAN build independent and resilient learners who are able to communicate confidently

It is our intent that Grendon's Goals of independence, resilience and communication are embedded in DT teaching.

Children are encouraged to work towards a design brief, meet design criteria and explore their own ideas in DT lessons. Scaffolding supports children to achieve this with increasing independence across the school.

The process of developing a product has evaluation and re-drafting built in and children are supported in this process and encouraged to employ a resilient growth mindset.

Shared design work gives pupils a clear purpose for expressing their ideas and presents real opportunities for children to apply communication strategies to team work.

WE CAN listen to and treat each other and all members of the community with respect, tolerance and concern

It is our intent that through DT learning, children demonstrate respect, tolerance and concern for others. This is especially true during the evaluation phase of a project where children learn about using supportive language, sharing feedback sensitively and celebrating others' successes.

WE CAN recognise ability, maximise potential and prepare children well for their future and life in modern Britain

It is our intent that our DT teaching will prepare children for their futures. Skills learnt in DT are life skills which will allow children to feed themselves and understand how things work in their adult lives. Children learn to work through the various stages of a project, this experience is transferable to other real-life project based work.

It is our intent that our DT curriculum sets the foundations for pupils continuing with DT in their secondary schooling.

An interest in DT at primary school may lead children into design, catering, architecture or engineering in their future lives.

Implementation

Roles and Responsibilities

- The Class teacher is responsible for delivering DT learning as outlined in the curriculum
- The DT subject leaders are responsible for
 - ☀ Updating unit plans in response to annual evaluations
 - ☀ Ensuring all resources for teaching are available and well organised,
 - ☀ Offering support with DT teaching and learning,
 - ☀ Maintaining an oversight of assessment outcomes,

- ☀ Monitoring the quality of teaching and learning,
- ☀ Keeping up to date with the latest best practice DT teaching.
- The Curriculum Manager is responsible for supporting the DT subject leaders in their role.
- The Academic Lead is responsible for ensuring progression and continuity across the school.
- The Headteacher is responsible for overall academic provision and performance.

Subject Organisation

DT teaching is taught as a blocked subject. 2 units are taught each year. One is a cooking and nutrition unit. The other is a designing and making construction unit. In the EYFS DT is addressed through the Expressive Art and Design area of learning.

The units are written 'in house' and are outlined in the Curriculum Document.

DT is included in the annual cycle of homework projects. This allows children to engage in project based design work at home with their families.

Planning Process

Unit Plans:

A unit plan showing content, progression and assessment criteria is provided to staff in Curriculum folders.

Medium Term Planning:

Teachers delivering the unit must map out the content across the number of lessons available. The DT subject leaders are available to offer advice on Medium Term Planning.

Well in advance of beginning teaching, class teachers must identify which resources will be required, check what is available and make a request to the DT subject leader for any additional resources required.

Lesson Planning:

Teachers then plan individual lessons to deliver the required content.

Lesson plans should contain differentiation as appropriate to the children. Lessons should be practical and the focus for lessons should be on the DT knowledge and skills.

Smart boards should reflect the lesson planning, offer 'daily review' of previous learning and include opportunities to explicitly teach DT skills.

Resources:

Textiles are stored between the KS1 and KS2 hall.

A trolley holding woodwork tools is stored in the art cupboard.

The DT cupboard holds consumable construction resources and the cooking and nutrition resources.

Please remember to return items you have borrowed and keep all resources tidy and clean as you find them. Report any broken items to the subject leaders.

We are unable to request a payment from parents for cooking ingredients as cooking is a part of our core curriculum. A budget allocation of £20 per class is allowed to cover the costs of ingredients and consumables (e.g. bags or foil). Receipts should be submitted to the school office.

Health and Safety:

Some lessons in DT will include an element of risk. In these instances, class teachers should identify the best ways to mitigate risk e.g. by setting clear expectations or increasing the level of adult support. Teachers must discuss any health and safety concerns with a Senior Leader and refer to any risk in planning on Smart boards.

Where children will be exposed to food stuffs, the class teacher must be allergy aware; check the latest allergy information and send a note to parents informing them that children will be cooking in school.

Equality and Inclusion:

DT teaching will be accessible to all children and challenge them appropriately. Where children need additional support, this may be provided through scaffolding or adult support as part of universal provision.

Recording:

Children from Year 1-6 have a DT exercise book in which they should record any of their own individual work. It is appropriate to include any research, planning or evaluations. A photograph of a finished project should be included in individual books.

Class teachers may display group or individual work on the relevant Grendon's Goals board during the course of a unit. Key vocabulary should be included on the communication board.

Teaching and Learning

Best practice is for DT lessons to include practical tasks and activities and to be set in a real life context addressing a particular problem or client need. A DT unit should follow a research, plan, do, evaluate process. Children will need to be explicitly taught skills and to have the opportunity to practise these before they apply the skills to a final project. We use the 5 a day approach throughout lessons in DT including regular review of prior learning, small well sequenced learning steps, explicit modelling, effective scaffolding, flexible grouping and the judicious application of technology.

Modelling:

A varied range of models, examples and images should be used for exploration or to demonstrate how things work. Modelling of how to complete tasks should form part of the teaching process. This can include identifying improvements and developing prototypes.

Scaffolding:

To enable all children to develop from their starting points, scaffolding strategies should be used to enable children to complete an increasingly challenging standard of work with increased independence. The scaffold should be gradually removed.

Adaptive Teaching:

Children of all ability levels should be supported to access DT work and to record their ideas in an appropriate way. Modifications to practical tasks including the use of different apparatus or additional adult or peer support may be appropriate.

Some children may be asked to share their ideas verbally or have a simpler proforma for recording. To extend the most able children, tasks may be modified to require additional explanation or alternatives.

Impact

By the end of their time at Grendon Primary School children will have been exposed to a wide range of DT projects. They will understand the design process and be able to research requirements for a product, make plans and designs individually and as part of a team, demonstrate construction and cooking skills and make evaluations.

Children will learn life skills such as maintaining a healthy balanced diet, teamwork and resilience.

Assessment

Formative assessment throughout the unit enables class teachers to identify adjustments in teaching. A summative assessment is made at the end of each unit. Class teachers refer to the assessment criteria referenced on unit plans and make a judgement on which children are meeting the expected standard, below the expected standard or exceeding the expected standard.

The DT lead will analyse the data and identify any trends, strengths, weaknesses or any area where additional support is needed. Appropriate plans will be put into place to address any concerns identified.