



Crudgington Primary School Design & Technology Policy

Design & Technology Policy - Document Status				
Date of policy creation	22/06/2020	✓	Named responsibility	Natalie Latham
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Design & Technology Intent Statement

Design and Technology is an inspiring, rigorous and practical subject. Our Design and Technology curriculum will give all children the opportunity to become successful learners, through exploring the breadth and depth of the national curriculum and to learn within a coherent, carefully sequenced and progressive framework, which will enable them to use their creativity and imagination to 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 will acquire a broad range of subject knowledge, and will draw on disciplines such as mathematics, science, engineering, computing and art, through a variety of interesting contexts, which will enable them to see clear links between different aspects of their learning and will learn how to take risks, becoming resourceful innovative, enterprising and capable citizens. Our children will develop and demonstrate their creativity and will experience the challenge and enjoyment of learning. They will be helped to understand the purpose and value of their learning and through the evaluation of past and present design and technology, they will develop a critical understanding of its impact on daily life and the wider world.

Children will:

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 for a wide range of users; Understand and apply the principles of nutrition and learn how to cook; Explore different beliefs, experiences, faiths, feelings and values towards different areas of design and technology; Enjoy learning about the work of others around them and the surrounding world; Use imagination and creativity when producing their work and will be encouraged to reflect on their experiences; Learn to appreciate cultural influences in design and technology and use this learning to inform their own ideas; Understand, accept, respect and celebrate diversity in design and technology.

Our Design and Technology curriculum will: Our Design and Technology curriculum will:

- Give children the opportunity to use a range of social skills to make a positive contribution in the local community and beyond;
- Allow children to appreciate diverse viewpoints about design and technology throughout the ages; participate, volunteer and cooperate when working collaboratively; and resolve conflict, when it arises;
- Show children how to respect and tolerate the opinions of others;
- Be part of a system where everyone will be free to express views and ideas.
- Will give children the opportunity to learn in a peaceful and supportive environment where they will get to work in a range of groups and settings, build respectful friendships and recognise that people are good at different areas across the design and technology spectrum.

Children will learn how to respect themselves and others and to develop their self-esteem and confidence in their abilities. They will reflect and think mindfully about their learning and will be encouraged to follow their own interests and to be

themselves;

- Give children the opportunity to express their opinions on a range of different design and technology movements. They will take part in age-appropriate discussions and make choices about the work that they produce. Children will be asked to share what they like and dislike about their work and will be invited to contribute to the planning of their own learning. All children will be encouraged to make a positive contribution to the school and local community and explore ways of using outcomes to become a responsible global citizen;
- Be taught through a pedagogy that excites, promotes and sustains children's interest, enabling and fostering their natural curiosity. They will be offered a memorable experience at the start of every topic and will learn how to problem solve, how to be creative and how to communicate. Our curriculum will enable the children to reflect on and evaluate their learning and will promote their innovation;
- We will enrich our curriculum by using quality resources in and out of the classroom as well as offering opportunities for the children to learn outdoors. We will provide on and off-site subject or topic-related activities and hold specialist Design and Technology days.

It is important for us to welcome parents and carers to take part in children's learning and experiences, and we will develop partnerships with external providers that extend children's opportunities for learning.

Implementation & Organisation of Design & Technology

Our Design and Technology curriculum is taught in explicit units, in line with the National Curriculum. A “blocked approach” has been agreed to implement the Design and Technology curriculum. Pupils can work intensively through the stages within the sequence of learning to produce a high-quality outcome to be proud of.

		<u>Autumn Term</u>	<u>Spring Term</u>	<u>Summer Term</u>
Class 5	A	Textiles Combing different fabric shapes(Tudor purse)	Structures Frame Structures(Making a catapult)	Electrical Systems Monitoring and Control
	B	Mechanical Systems CAMS (Viking moving longboat)	Electrical Systems More complex switches an circuits(Victorian light up house)	Food Celebrating culture and seasonality (breads and comparing food)
Class 4	A	Food Healthy and varied diet (Healthy sandwich using rations)	Structures Frame Structures(Anglo Saxon house)	Mechanical Systems – Pneumatics(moving pictures)
	B	Textiles Roman Purse	Mechanical Systems Pulleys or Gears (Space Transporter)	Food Celebrating culture and seasonality (Greek food and breads)
Class 3	A	Structures Shell structures(Stone Age Shelter)	Mechanical systems Levers and linkages(Egyptian stone pulleys)	Food Healthy and varied diet(Mayans and where does food come from)
	B	Structures – Shell structures -(recyclable lunchboxes)	Electrical Systems Simple Circuits and switches(light box)	Textiles – 2D shape to 3D product(apron for 1960s)
Class 2	A	Textiles Templates and joining techniques	Food Food preparation –fruit and vegetables.	Structures Freestanding structures
	B	Food Year Food preparation –fruit and vegetables–baking bread).	Mechanisms sliders and levers	Mechanisms Year Wheels and Axles
Class 1	A	Food preparation –fruit and vegetables.	Textiles templates and joining techniques	Mechanisms Wheels and Axles
	B	Food Food preparation –fruit and vegetables	Structures Freestanding structures	Mechanisms sliders and levers

Our Design Technology curriculum is taught in explicit units, in line with the National Curriculum. Key knowledge, skills and vocabulary have been carefully mapped to ensure progression between year groups. As a result, pupils learn about real life structures and the purpose of specific examples, as well as developing their skills throughout the programme of study.

Planning in Design Technology is coherent and in a logical order so that pupils can make links, transfer knowledge and content from previous learning to build on their understanding. Learning is planned in manageable, connected steps; lessons are coherently and deliberately constructed to ensure that pupils develop secure knowledge and understanding of key concepts and strategies that are built upon in later learning. The momentum of Design Technology lessons sustains pupils' interest, increases their productivity, learning and progress. Discretion is used by teachers about the effective use of differentiation. Central to our Design Technology planning is a variety of real-life contexts; this engages pupils in the amazing work and contribution of individuals within engineering and the design technology industry who have made significant contributions as responsible, active citizens in the wider world. Transferrable knowledge and vocabulary from a range of other curriculum subjects, particularly in the explore stage of Design Technology curriculum, enables pupils to make links and build on to previous learning.

The Design Technology Subject Leader is responsible for monitoring the curriculum, including the development of medium term and short-term planning, as well as the standards within the Design Technology Profiles. Also, the Design Technology Subject Leader evaluates the Quality of Education for each year group by lesson visits, scrutiny of pupils' work and pupil discussions; this provides key strengths and areas of development to further develop the Design Technology curriculum. Within our professional development procedures, the Design Technology Subject Leader is given training and the opportunity to keep developing their own subject knowledge, skills and understanding; as a result, they can support curriculum development and their colleagues throughout the school.

Our Design Technology curriculum is tailored and adapted to suit the individual needs of each year group. This allows us to ensure that all pupils are keeping up with the curriculum, therefore making good progress. Our skills progression enables us to ensure that pupils' Design Technology understanding is consistently being built upon, as it provides clear, differentiated structure. We monitor pupils' outcomes across each Design Technology unit as they move throughout the school.

EYFS

By the end of EYFS, pupils will:

- be able to explore and choose a range of materials to create and make things
- be able to investigate how things work
- draw, build and make things which fulfil a function

Key Stages 1 & 2

By the end of Key Stage 1, pupils will:

- learn the knowledge and skills needed to design and make products for a range of relevant contexts
- be able to design and test products that are purposeful and appealing
- select tools and materials which are most suitable to make their products from
- evaluate their products against existing products and design criteria
- develop the technical knowledge needed to build structures which are stronger and more stable and be able to use a range of mechanisms
- develop an understanding of where food comes from and how to use the basic principles of a healthy diet to make their own simple dishes

By the end of Key Stage 2, pupils will:

- develop further knowledge and skills to enable them to design and make purposeful and quality products in

different contexts

- be able to research how existing products work and use this to develop designs and products to meet a design brief
- be able to produce more detailed, annotated designs and to test and refine their ideas
- be able to select and use a wider range of tools and materials according to their function and properties
- develop the technical knowledge required to make their products work effectively
- be able to evaluate the effectiveness and quality of their products and use this to improve their work
- develop an understanding of a healthy and varied diet and be able to prepare and cook a range of dishes.

Any child working below their age-related expectation, will receive a tailored curriculum with personalised objectives taken from the Curriculum Assessment Toolkit. This will enable all children to build the skills and knowledge needed to bridge the gap between themselves and their peers, enabling them to reach their full potential.

Resources

D&T Resources are stored in the central school storeroom. They are audited at the end of each D&T unit to ensure resources are sufficiently stocked and organized well.

Assessment – Measuring Impact

A wide range of strategies are used to measure the impact of our Design and Technology curriculum. Our teaching sequence allows children to revisit prior learning at the start of each unit and each lesson. This enables the knowledge and skills taught to be transferred from the thinking memory into the long-term memory and to be recalled.

Formative Assessments are carried out by teachers after each lesson which will allow them to prepare interventions and inform future planning. Additionally, summative assessments are carried out by using internal low stakes testing. As a result of these assessment tools, pupils' misconceptions or gaps in subject knowledge, skills, behaviours and attitudes are addressed and additional teaching and support is provided.

In EYFS, staff professional judgements are valued. Assessments are formative so that they quickly make a difference to children's learning. They inform the provision of activities and experiences which develop children's skills and knowledge as well as giving opportunity for further practice. We record WOW moments on Tapestry and build up a detailed picture of each child using a Child. The Design Technology coordinator will monitor the effectiveness of their curriculum through carrying out regular subject evaluations. These evaluations are quality assured by the Curriculum Lead, Senior Leadership and Governors.

Equality

We believe that pupils should not be discriminated against in terms of the 9 protected characteristics (Age, Disability, Gender reassignment, Marriage/Civil partnership, Pregnancy/Maternity, Race, Religion/Belief, Sex and Sexual orientation). This intent is embedded and implemented across the whole Design and Technology curriculum. All children should have the opportunity to participate fully in classroom Design and Technology lessons, extra-curricular and whole school activities, therefore reasonable adjustments are made to accommodate all pupils.

SEND

Where a child's need prevents them from accessing the Age-Related Expectations for subjects, planning is tailored to meet the individual needs of all pupils using the skills progression documents. This document breaks down each objective across the curriculum to enable all pupils to achieve success at an appropriate level for their needs. This ensures that there is no ceiling on any child's learning. In addition to this, some pupils are given the opportunity to

Policy Review

This policy will be reviewed regularly. Its effectiveness will be monitored by the D&T Co-ordinator and will be based upon discussions with other members of staff, observation of children's work and re-evaluation of teaching plans. The outcome of the review will influence the future school development plan.