

Design and Technology at Church Eaton



Intent: What are our aims?

Our entire curriculum is designed to educate and form the whole child. We want children to have a deep understanding of their own story – to know where they have come from, what their own aspirations for the future are and what skills they will need to achieve them. We want children to leave Church Eaton understanding that:

- They are part of a small rural community with a very long and very proud history. (**Community**)
- They are also part of an enormous diverse wider world that will provide endless opportunities. (**Diversity**)
- They are equipped with a toolkit of skills which they can, regardless of their starting points, use to succeed and be the best that they can be (**Social Mobility**).

The Design and Technology scheme of work supports these guiding principles by aiming to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, and testing and to be reflective learners who evaluate their work and the work of others. Through our scheme of work, we aim to build an awareness of the impact of design and Technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.

Our Design and Technology scheme of work enables pupils to meet the end of key stage attainment targets in the National curriculum and the aims also align with those in the National curriculum. EYFS (Reception) units provide opportunities for pupils' to work towards the Development matters statements and the Early Learning Goals.

Implementation: What do we teach?

The Design and Technology National curriculum outline the three main stages of the design process: design, make and evaluate. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical, and technical understanding required for each strand. Cooking and nutrition* has a separate section, with a focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality.

The National curriculum organises the Design and Technology attainment targets under four subheadings,

- Design
- Make
- Evaluate
- Technical knowledge

Cooking and nutrition is given a particular focus in the National curriculum and we have made this one of our six key areas that pupils revisit throughout their time in primary school:

- Cooking and nutrition
- Mechanisms/ Mechanical systems
- Structures
- Textiles
- Electrical systems (KS2 only)
- Digital world (KS2 only)

Our Design and Technology scheme has a clear progression of skills and knowledge within these strands and key areas across each year group. Our Progression of knowledge and skills document shows the precise knowledge and skills that are taught within each year group and how these skills develop to ensure that attainment targets are securely met by the end of each key stage. **(See Knowledge and Skills Document on our Website in the Design and Technology section of our curriculum page)**

Through our Design and Technology scheme, pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in the six key areas.

Each of our key areas follows the design process (design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. It is a spiral curriculum, with key areas revisited again and again with increasing complexity, allowing pupils to revisit and build on their previous learning.

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands-on, computer-based and inventive tasks. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Differentiated guidance is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required. Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

Implementation: How do we ensure that knowledge and skills are progressive?

Nursery: Children will be taught to

	Nursery
Physical Development	<ul style="list-style-type: none"> • Use one-handed tools and equipment, for example, making snips in paper with scissors.
Expressive Art and Design	<ul style="list-style-type: none"> • Explore different materials freely, to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Join different materials and explore different textures. • Create closed shapes with continuous lines and begin to use these shapes to represent objects. • Draw with increasing complexity and detail, such as representing a face with a circle and including details. • Use drawing to represent ideas like movement or loud noises. • Show different emotions in their drawings and paintings. • Explore colour and colour-mixing

Reception to Year 6

- Our National Curriculum mapping document shows which of our units cover each of the national curriculum attainment targets as well as each of these strands within it. (See Website)
- Our Progression of skills and knowledge shows the skills that are taught within each year group and how these skills develop year on year to ensure attainment targets are securely met by the end of each key stage. (See Website)

Implementation: What units do we cover and when do we cover them?

Because we have mixed aged classes, we operate a two-year cycle for Design and Technology. Units are mapped out with the links to our Curriculum drivers of Community, Diversity (D) and Social Mobility (M) as indicated below. The precise knowledge and skills that are taught in each unit are indicated in our Progressive Knowledge and Skills Documents and the national Curriculum mapping document that is on the Curriculum section of our website. Please note: The order in which the units are completed may be altered if necessary.

	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
EYFS	Unit 1: structures Junk modelling Autumn: Hibernation Box	Christmas: Sliding Picture	: Cooking and nutrition Soup	Textiles Bookmarks	Easter: Hanging decoration Spring : Flower threading	Unit 4: Structures Boats Summer lessons: Designing a rainbow salad and making a rainbow salad
	C D M	C D M	C D M	C D M	C D M	C D M
Years 1/2 Cycle A		Structures: Constructing a windmill		Textiles: Puppets		Smoothies
	C D M	C D M	C D M	C D M	C D M	C D M
Years 1/2 Cycle B	Structures Baby Bear's Chair		Mechanisms: fairground Wheel		Mechanisms Making and Moving Monster	
	C D M	C D M	C D M	C D M	C D M	C D M
Years 3/4 Cycle A	Cooking and nutrition: Eating seasonally		Digital world: wearable Technology		Structures: Constructing a Castle	
	C D M	C D M	C D M	C D M	C D M	C D M
Years 3/4 Cycle B	Structures: Pavilions		Mechanical systems: Making a slingshot car		Electrical Systems Torches	
	C D M	C D M	C D M	C D M	C D M	C D M
Years 5/6 Cycle A	Electrical Doodlers		Mechanical systems		Cooking and Nutrition: Developing a Recipe	
	C D M	C D M	C D M	C D M	C D M	C D M
Years 5/6 Cycle B	Textiles: Waistcoats		Structure Playgrounds		Digital World Navigating the World	
	C D M	C D M	C D M	C D M	C D M	C D M

Implementation: What do Design and Technology lessons look like?

We have identified a series of Teaching and Learning Pillars which underpin all teaching and learning at Church Eaton.

Pillar	
Focused Planning	Curriculum programmes of study are developed into medium term plans which highlight learning objectives, assessment opportunities and sticky knowledge objectives designed to help pupils remember long term content. Teachers then plan and tailor units of work based around big questions that need answering. These units of work integrate Technology, opportunities for discussion and creativity to address the specific individual needs of pupils so that all pupils can reach their full potential regardless of their starting point. Knowledge organisers for each unit support pupils by providing a highly visual record of the key knowledge and techniques learned, encouraging recall of skills processes, key facts, and vocabulary.
Quality First Teaching	Lessons are always practical in nature and encourage experimental and exploratory learning with pupils using books to document their ideas. Teachers are expected to consider prior knowledge and experiences and build upon these through us 7-stage lesson planning
Effective Target Setting through Meaningful Assessment	Individual and class strengths and areas for development are identified and used to inform future planning and interventions. Assessment sheets are used to track whether children achieve Learning Objectives and Cornerstones is used to collate information to enable subject leads to ascertain the number of children in line to achieve national expected standards.
Targeted Interventions	Staff Solution Circles are used to support data analysis and identify what support children will need and how this can be achieved. This is supported by Raising Achievement and Progress Meetings that are held once every twelve weeks.
Purposeful Learning Environment	DT Is celebrated with displays in and out of the classroom, and on social media. Learning resources and visual prompts are easily accessible to enable children to work independently and shared displays are used to celebrate final products and parent engagement days. Regular access to alternative learning spaces e.g., library, hall, outside to enhance the learning experience is also explored
Extended Curriculum	Children are given the opportunity to attend numerous DT clubs throughout the year e.g., craft
Reading at the core	Children are provided with reading resources at an appropriate level to support their learning. They are provided with opportunities to borrow books on Design Technology from the school library and library bus to supplement their knowledge and interest.

Impact: What will our children have learnt from our Design and Technology Curriculum?

Through our carefully planned and sequenced curriculum we work to develop learners, from their individual starting points who are:

Community Builders who are aware that they are part of a small rural community with a very long and very proud history and can use this sense of community spirit to work collaboratively with others for the common good.

Clear Communicators who are literate and numerate in all contexts and aware that they are part of an enormous diverse wider world that will provide endless opportunities for them to apply these skills.

Successful learners who are equipped with a toolkit of skills which they can, regardless of their starting points, use to succeed and be the best that they can be (social mobility).

The expected impact of following our Design and Technology scheme of work is that children will:

- Understand the functional and aesthetic properties of a range of materials and resources.

- Understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.
- Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD, and products to fulfil the needs of users, clients, and scenarios.
- Understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.
- Have an appreciation for key individuals, inventions, and events in history and of today that impact our world.
- Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- Self-evaluate and reflect on learning at different stages and identify areas to improve.
- Meet the end of key stage expectations outlined in the National curriculum for Design and Technology.

Impact: How do we track progress?

EYFS: Assessment in the EYFS takes the form of observation, and this involves the teacher and other adults as appropriate. These observations are recorded in a variety of forms in the children's Tapestry accounts, floor books or their exercise books. Each child's progress is assessed whether they are working below age related expectations, working within age related expectations, or working above age related expectations. At the end of EYFS (Reception) Children will be assessed using the Early Learning Goals. They will either be emerging at the goal or achieved it.

Years 1- 6: The impact of our scheme can be constantly monitored through both formative and summative assessment opportunities. Each lesson includes guidance to support teachers in assessing pupils against the learning objectives. An assessment spreadsheet including the learning outcomes for children with secure understanding and those working at greater depth enables teachers to keep records of summative assessments for each child. Children complete endpoint assessments which we call Products., We then complete book looks/ pupil interviews and regular moderation exercises of this work to check on the progress made and identify how we can support your child in the future