

**Barrow CEVC
Primary School**

Inspire, Create, Discover, Together

DESIGN & TECHNOLOGY INTENT



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Design and Technology- Intent

At Barrow Primary School, we believe that Design and technology should be 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.

The children at Barrow are taught to 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.

Aims of the Design and Technology Curriculum

The national curriculum for design and technology aims to ensure that all pupils:

- 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.

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The CUSP Design and Technology curriculum is organised into blocks with each block covering a particular set of disciplines, including food and nutrition, mechanisms, structures, systems, electrical systems, understanding materials and textiles. Vertical progression in each discipline has been deliberately woven into the fabric of the curriculum so that pupils revisit key disciplines throughout their Primary journey at increasing degrees of challenge and complexity.

In addition to the core knowledge required to be successful within each discipline, the curriculum outlines key aspects of development in the Working as a Designer section. Each module will focus on promoting different aspects of these competencies. This will support teachers in understanding pupils' progress as designers more broadly, as well as how successfully they are acquiring the taught knowledge and skills.

Working as a Designer			
Design	Make	Evaluate	Apply
The art or process of deciding how something will look or work.	Create something by combining materials or putting parts together.	Form an opinion of the value or quality of something after careful thought.	Use something or make something work in a particular situation.

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Early Years

During the Early Years Foundation Stage, the essential building blocks of children's design and technology capability are established. There are many opportunities for carrying out D&T-related activities in all areas of learning in the EYFS.

By the end of the EYFS, most children should be able to:





































- Construct with a purpose in mind, using a variety of resources
- Use simple tools and techniques competently and appropriately
- Build and construct with a wide range of objects, selecting appropriate resources and adapting their work when necessary
- Select the tools and techniques they need to shape, assemble and join materials they are using



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Coverage Overview

Core DT Content

Year	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
1	<p>Core discipline: Mechanisms </p> <p>Key Concept: Sliders and levers</p>	<p>Core discipline: Structures </p> <p>Key Concept: Freestanding structures</p>	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Preparing fruit and vegetables</p>	<p>Core discipline: Understanding materials </p> <p>Key Concept: Selecting materials CUSP link: Materials</p>	<p>Core discipline: Textiles </p> <p>Key Concept: Templates and joining techniques CUSP link: Hot and cold places</p>	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Understanding a recipe</p>
2	<p>Core discipline: Textiles </p> <p>Key Concept: Exploring shape and texture</p>	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Following a recipe CUSP link: Animals, including humans (Keeping healthy)</p>	<p>Core discipline: Mechanisms </p> <p>Key Concept: Axles and wheels</p>	<p>Core discipline: Understanding materials </p> <p>Key Concept: Manipulating materials CUSP link: Use of everyday materials</p>	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Increasing our intake of fruit and vegetables</p>	<p>Core discipline: Structures </p> <p>Key Concept: Freestanding structures with moving parts</p>
3	<p>Core discipline: Textiles </p> <p>Key Concept: Combining materials</p>	<p>Core discipline: Food and nutrition </p> <p>Key Concept: A balanced and varied diet CUSP link: Animals, including humans</p>	<p>Core discipline: Mechanisms </p> <p>Key Concept: Levers and linkages CUSP link: Forces and magnets</p>	<p>Core discipline: Electrical systems </p> <p>Key Concept: Switches and circuits CUSP link: Light</p>	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Adapting a recipe</p>	<p>Core discipline: Structures </p> <p>Key Concept: Developing strength in structures</p>
4	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Food choices</p>	<p>Core discipline: Mechanisms </p> <p>Key Concept: Hinges</p>	<p>Core discipline: Electrical systems </p> <p>Key Concept: Switches and circuits revisited CUSP link: Electricity</p>	<p>Core discipline: Structures </p> <p>Key Concept: Designing structures</p>	<p>Core discipline: Textiles </p> <p>Key Concept: Fixings and fastenings</p>	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Understanding dietary requirements CUSP link: Animals, including humans (Digestion)</p>
5	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Eating seasonally</p>	<p>Core discipline: Electrical systems </p> <p>Key Concept: Complex switches and circuits</p>	<p>Core discipline: Textiles </p> <p>Key Concept: Making clothes last longer</p>	<p>Core discipline: Mechanisms </p> <p>Key Concept: Pulleys CUSP link: Forces</p>	<p>Core discipline: Structures </p> <p>Key Concept: Developing stability in structures</p>	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Celebrating culture CUSP link: World countries</p>
6	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Eating ethically</p>	<p>Core discipline: Mechanisms </p> <p>Key Concept: Gears</p>	<p>Core discipline: Food and nutrition </p> <p>Key Concept: Eating on a budget</p>	<p>Core discipline: Structures </p> <p>Key Concept: Designing structures revisited</p>	<p>Core discipline: Electrical systems </p> <p>Key Concept: Complex switches and circuits CUSP link: Electricity</p>	<p>Core discipline: Textiles </p> <p>Key Concept: Sustainable materials</p>

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Early Years to Key Stage 1



RECEPTION LONG TERM PLAN 21-22

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
GENERAL THEMES	ALL ABOUT ME!	DO COWS DRINK MILK? LETS CELEBRATE!	WILL YOU READ ME A STORY	ARE WE THERE YET?	MINIBEAST MADNESS!	UNDER THE SEA!
EXPRESSIVE ARTS AND DESIGN	<p>The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.</p> <p>Give children an insight into new musical worlds. Invite musicians in to play music to children and talk about it. Encourage children to listen attentively to music. Discuss changes and patterns as a piece of music develops.</p>					
<p><i>Painting, 3D modelling, messy play, collage, cutting, drama, role play, threading, moving to music, clay sculptures, following music patterns with instruments, singing songs linked to topics, making instruments, percussion.</i></p> <p><i>Work will be displayed in the classroom</i></p> <p><i>lots of links to Fine Motor Skills. Children to explain their work to others. Children will have opportunities to learn and perform songs, nursery rhymes and poetry linked to their work / interests and passions.</i></p>	<p>Join in with songs</p> <p>beginning to mix colours</p> <p>Build stories around toys (small world) use available props to support role play</p> <p>Build models using construction equipment.</p> <p>Junk modelling, take picture of children's creations and record them explaining what they did.</p> <p>Exploring sounds and how they can be changed, tapping out of simple rhythms.</p> <p>Play pitch matching games, humming or singing</p> <p>To draw a self-portrait (enclosing lines): draw definite features</p> <p>To do an observational drawing of a pet</p> <p>Feelings: taking photos of children acting out emotions</p> <p>Drama conventions through literacy</p>	<p>Use different textures and materials to make firework pictures</p> <p>Listen to music and make their own dances in response.</p> <p>Christmas decorations, Christmas cards, Divas, Christmas songs/poems</p> <p>The use of story maps, props, puppets & story bags will encourage children to retell, invent and adapt stories.</p> <p>Shadow Puppets Teach children different techniques for joining materials, such as how to use adhesive tape and different sorts of glue</p> <p>Role Play of The Nativity</p> <p>Making a stick man using natural objects</p> <p>Music: Christmas Songs</p> <p>Drama conventions through literacy</p>	<p>Van Gogh Starry Night: I can produce a piece of artwork using an artists style as a stimulus</p> <p>I can explore how colour can be changed</p> <p>I can talk about a famous artist.</p> <p>Making lanterns, Chinese writing, puppet making, Chinese music and composition</p> <p>I can recognise, create and describe pattern: tiger skin</p> <p>Drama conventions through literacy</p> <p>I can use various construction materials: making a goat for the Billy Goats Gruff</p>	<p>Make different textures; make patterns using different colours</p> <p>Children will explore ways to protect the growing of plants by designing scarecrows.</p> <p>Mother's Day crafts</p> <p>Junk modelling, houses, bridges boats and transport.</p> <p>Learn a traditional African song and dance and perform it / Encourage children to create their own music.</p> <p>Exploration of other countries – dressing up in different costumes Easter crafts printing, patterns on Easter eggs</p> <p>Rubbings of leaves/plants</p> <p>I can combine media to make a collage (collage chick)</p> <p>Andy Goldsworthy natural art</p> <p>Drama conventions through literacy</p>	<p>Collage-minibeasts / Making houses. Pastel drawings, Life cycles,</p> <p>Flowers-Sun flowers (Van Gogh)</p> <p>Provide children with a range of materials for children to construct with.</p> <p>Create collaboratively: making 3d ladybird shells: <u>paper mache</u>: working in pairs</p> <p>Drama conventions through literacy</p> <p>Weaving spider webs</p>	<p>Water pictures, collage, shading by adding black or white, colour mixing for beach huts, making passports.</p> <p>Colour mixing – underwater pictures.</p> <p>Father's Day Crafts</p> <p>Making models from recycled materials: link to keeping our sea clean</p> <p>Using clay to make a coil pot (link to the curled shell in Sharing a Shell)</p> <p>Drama conventions through literacy</p>

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Early Years to Key Stage 1

Design and Technology – EYFS – KS1

ELG 16 Creating with Materials	How this is achieved in EYFS	Art and Design KS1
<ul style="list-style-type: none"> • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used. 	<p>Children can self-select from a range of tools and materials in the continuous provision. Children learn by experimenting with tools such as scissors, staplers and hole punches.</p> <p>They make use of fixing and joining materials such as sellotape, masking tape, string, pipe cleaners and glue.</p> <p>Through questioning children are encouraged to talk about what they like about their work and other children's designs and how they would improve it.</p> <p>Activity Examples:</p> <ul style="list-style-type: none"> • Designing and making a kite on a windy day, choosing the best materials. • Building a minibeast hotel outside. • Creating vehicles outside with large bricks. • Construction of houses, bridges and boats in the outdoor Builders Yard. • Using junk model boxes to create vehicles inspired by Naughty Bus story. • Using tools to prepare <u>snack</u> – E.g. cutting bananas. • Selecting the best resources for den building outside. • Cookery - Observing the effects of heat when melting chocolate when making Easter nests.. 	<p>Design Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p>Make Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Evaluate Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.</p> <p>Technical knowledge build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>