HOWE DELL PRIMARY SCHOOL
Design and Technology Policy
Autumn 2025
Next review: Autumn 2027

Intent

At Howe Dell our Design and Technology is inspiring, rigorous and practical. We provide all children with the opportunity to create a range of structures, mechanisms, textiles, electrical systems and food products which link to relevant real world purposes. Teachers deliver the vocabulary rich DT curriculum, through CUSP tasks and Curriculum Visions which are modified to meet the needs, strengths and abilities of the children. Building on their prior knowledge, they continue to develop their skills throughout their time at Howe Dell. Using the purpose built kitchen, children are able to learn key skills while also learning about food safety, for example children in Year 3 have learnt how to make healthy chips where they used a variety of skills including correct knife cutting techniques. Children in Year 6 take part in a 'Food and Farming day' where they learn how honey is made and are given the opportunity to taste a variety of seasonal produce to understand how they are grown. Children are taught to acquire a broad range of subject knowledge and use their knowledge across the curriculum to enhance their experiences.

Aims of the National Curriculum

Aims
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.

Key Stage One

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].
When designing and making, pupils should be taught to:

<u>Design</u>

- 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

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

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

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.

Key Stage Two

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and
- computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

Early Years

In Early Years, 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. The children develop skills and vocabulary through play, adults modelling, observing one other, and through guided learning and direct teaching.
By the end of the EYFS at Howe Dell the children will have the opportunities to:

- Construct with a purpose in mind, using a variety of resources. For example, children are encouraged to design creations in the construction area and creative area before making and have access to a range of resources in the junk modelling area.
- Use simple tools and techniques competently and appropriately for example in the malleable area children have access to tools and are able to select a range tools to complete their desired effect.
- Build and construct with a wide range of objects, selecting appropriate resources and adapting their work when necessary for example in the construction area children have access to a wide range of resources and are supported to plan and evaluate their creations.
- Select the tools and techniques they need to shape, assemble and join materials they are using. For example in the creative area children have access to a range of scissors, hole punches, tapes and glues to construct their creations and are supported in developing new skills and trying different techniques.

The most relevant early years outcomes for DT are taken from the following areas of learning:

- Physical Development
- Understanding the World
- Expressive Arts and Design

	ELG Creating with materials	**How this is achieved in EYFS**	**Key Vocabulary to be developed in EYFS**	**Design and Technology KS1**
Expressive Arts and Design	• 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.	• Learning to construct with a purpose in mind. Children weave strips of paper to create a basket for Little Red Riding hood. The children selected and experimented with different colours and developed the weaving technique. • Cooking techniques: the children had opportunities to weigh ingredients, pour and stir the mixture during cooking activities. • The children have the opportunity to discuss what tools they have used to make their creation e.g. scissors, stapler and glue and	Cut Shape Stick Join Colour Fold Tools Design	<u>Design</u> • 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 <u>Make</u> • select from and use a range of tools and equipment to

Physical development	**Fine Motor Skills** • Use a range of small tools including scissors, paint brushes and cutlery.	through discussions they may adapt their initial idea and use tape to stick pieces together. • The children use a range of tools to create models. They learn about designing and planning ideas and then adapting them.	Mix Stir Pour Scoop Measure Chop Cut	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 <u>Evaluate</u> • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria <u>Technical knowledge</u> • 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.

<u>Implementation</u>

Planning

At Howe Dell, we teach Design and Technology enriched by the CUSP resources and our learning is sequential. All modules have a sequenced overview outlining recommended number of sessions, key concepts, knowledge and vocabulary to be taught. Teachers use this overview to plan individual sessions approximately 2 hours in length. All planning is created on Smart Notebook, which incorporates cooperative learning techniques, key vocabulary, core concepts and a class profile to enable all teaching staff to effectively plan and support the needs of all pupils in the classroom.

CUSP Design & Technology Long term sequence	Block A	Block B	Block C	Block D	Block E	Block F
Year 1	Mechanisms	Structures	Food and Nutrition	Understanding Materials	Textiles	Food and Nutrition
Year 2	Textiles	Food and Nutrition	Mechanisms	Understanding Materials	Food and Nutrition	Structures
Year 3	Textiles	Food and Nutrition	Mechanisms	Food and Nutrition	Systems	Structures
Year 4	Food and Nutrition	Mechanisms	Textiles	Structures	Electrical Systems	Food and Nutrition
Year 5	Food and Nutrition	Systems	Textiles	Mechanisms	Structures	Food and Nutrition
Year 6	Food and Nutrition	Mechanisms	Food and Nutrition	Structures	Electrical Systems	Textiles

Linking to previous learning and across subjects – EYFS to Year 1

Knowledge Organisers, Notes and Key influencers

Accompanying each module is a Knowledge Note, which contains key vocabulary, information, and concepts which all pupils are expected to understand and retain. Knowledge notes are the elaboration and detail to help pupils acquire the content of each module. They support vocabulary and concept acquisition through a well-structured sequence that is cumulative. Each Knowledge Note contains key vocabulary and key facts for the focus module. The modules are based on a different designer with hexagons of information shared at the beginning of a unit and referred to during the unit to ensure an understanding of the purpose.

Vocabulary

Vocabulary forms a key part of our wider curriculum. Subject specific Tier 2 and Tier 3 words are incorporated in each module.

Continuous Professional Development

Staff have taken part in CPD from the CUSP hub to outline anything new and upcoming and support for delivery. Some staff have taken part in the Primary engineering program that will be delivered in the 25/26 curriculum inline with the CUSP unit of learning (Mechanisms) there will be time for engineers from the rail company to talk to the children.

Impact

Pupil Book Study

Senior leaders and subject leaders regularly undertake book studies to monitor the effectiveness of teaching and learning. This includes sessions with small groups of pupils using questioning to check and ensure information and knowledge is acquired and understood with increasing confidence. Feedback is given to teaching staff to inform future planning.

Ongoing Teacher Assessment

Teachers assess pupils at the end of each unit using the grids below to monitor pupils and inform planning for subsequent sessions.

Howe Dell School Year 1 DT assessment

Class: **Academic year:**

Working as a designer – ongoing assessment throughout the year and should be used to inform judgements in subject areas.

- Design: the art or process of knowing how something will look or work
- Make: create something by combining materials or putting parts together
- Evaluate: form an opinion of the value or quality of something after careful thought
- Apply: use something or make something work in a particular situation

Mechanisms

- Know common uses of sliders
- Know different methods to create card sliders
- Know how sliders can create simple mechanisms
- Be able to design and make a slider product
- Be able to evaluate the success of their outcomes and recommend improvements

Total number of pupils in class	Initials of those WTS / F20%	Number EXS	Initials of stand out pupils
Assessment notes: E.g. areas to revisit next half term.			

Structures

- Know a freestanding structure is a structure that stands on its own foundation or base without attachment to anything else
- Be able to build structures that are freestanding using a range of different materials

Total number of	Initials of those	Number EXS	Initials of stand out