

National Curriculum Aims

Progression Map

*Design &
Technology*

School Trips

Vocabulary

Across the Years

Inclusion

All Subjects



National Curriculum Aims

Through variety of creative and practical activities, KS1 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:

Design

Make

Evaluate

Technical knowledge

Cooking and nutrition

Design & Technology Overview

Design & Technology



Our aim at Trenance Learning Academy is to ensure that all children are inspired to imagine, design and make products that solve real and relevant problems within a variety of contexts.

We believe that Design & Technology should be about supporting pupils to take risks, becoming innovative citizens for the world in which they live. Through the evaluation of Design and Technology we want to inspire children to understand the impact of design and technology and its essential contribution to the creativity, culture, wealth and well-being of the nation.

We ensure that all children learn about Design & Technology through a variety of projects. Through the development of skills children begin designing appealing products for themselves before linking this understanding to the future design of purposeful and functional projects. Children are encouraged to evaluate existing products and discuss improvements to their designs and products.

In Design & Technology lessons, children will produce creative designs, exploring their ideas and understanding the correct skills needed to turn their design into a reality. Children's learning progresses through each year group where the purpose and complexity is suitably increased. Children are taught to understand how high-quality Design and Technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation (see progression map).

Design & Technology Overview



National Curriculum Aims



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

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.

Cooking and nutrition

- As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: Key stage 1 use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from

	Foundation	Year One	Year Two
Designing	I can talk about my ideas and consider what resources and processes I will need to make it.	I can use my experiences to generate new ideas. I can suggest ideas and explain what I will need to do. I will develop my design ideas using findings from earlier research. I will identify a target group for my design. I will record my design.	I will use my own and other people's experiences to generate ideas. I will use discussion, observation, drawing and modelling to develop my ideas. I will identify a purpose for my design. I will identify a simple criterion. I will make simple drawings and label parts.
Making	I will use a range of small tools such as scissors, paintbrushes, split pins, tape and glue. I will use and explore a range of materials and techniques such as folding, colour, texture, form and function.	I will make a stable structure by assembling, joining and combining from card, tape and glue. I will use appropriate joining techniques and appropriate tools safely. With help, I will measure, mark out, cut and assemble the structure. I will use simple finishing techniques to improve the appearance of my product.	I will begin to select tools and materials and use the correct vocabulary to describe them. I will measure, cut and score with some accuracy. I will use hand tools safely and appropriately. I will assemble, join and combine materials in order to make a product. I will cut, shape and join fabric to make a simple garment and use basic sewing techniques. I will choose and use appropriate finishing techniques.
Evaluating	I will share my creations and talk about the processes I have used.	I will discuss how well my product works in relation to the purpose. I will identify strengths and possible changes I might make to improve it.	I will evaluate my product against my design criteria. I will evaluate my product as they are developed by identifying strengths and possible changes I might make. I will talk about what I like and dislike about my product.
Food and Nutrition	I will try new foods and talk about likes and dislikes. I will visit Morrison's Supermarket and be able to talk about how foods get there. I will design and make a healthy fruit salad using fruits and vegetables purchased during our trip to Morrison's. I will wash my hands before and after working with food.	I will talk about and sort healthy and non-healthy foods. I will use appropriate foods, techniques and processes to prepare healthy food for our Banquet. I will discuss local food sources such as farms and the sea during our Beach School sessions. I will use basic food handling, hygienic practices and personal hygiene.	I will begin to use the correct names for different food groups. I will follow safe procedures for food safety and hygiene. I will be able to discuss where food comes from and make comparisons about foods from different countries. I will be able to talk about the origins of foods and see it first hand during our trip to the Royal Cornwall Show.

Vocabulary

Year 2



Annotated diagram, cross-section, design proposal, engineering, graphics, chassis, circuit, friction, abrasive, risk assessment, proportion, prototype, modify, market-research, malleable, disassembly, ergonomics, grid, customer survey, components list, aesthetics

Year 1

Artefact, design process, equipment, brittle, dismantle, naive, transparent, mechanism, motion, taste test, question, performance research, mock-up, landscape/portrait, investigation, graphs, function, flexible

artefact, design process, equipment, brittle, dismantle, naive, transparent, mechanism, motion, taste test, question, performance research, mock-up, landscape/portrait, investigation, graphs, function, flexible

Foundation

appearance, design, tools, ingredients, model, pattern, recipe, shape, sketch, style, fibers, textile

appearance, design, tools, ingredients, model, pattern, recipe, shape, sketch, style, fibers, textile

appearance, design, tools, ingredients, model, pattern, recipe, shape, sketch, style, fibers, textile



Design & Technology *(Year Foundation)*

In Foundation, we teach the children the fundamental skills to support them with Design Technology as they move into KS1. Throughout the year children are taught and given opportunities to practice skills such as cutting, taping, folding, stapling, hole punching, joining, threading, weaving, gluing, decorating and designing. Our exciting topics all incorporate Design Technology projects for children to experience creating for a purpose.



Wild and Wonderful Weather – Design, Make and Evaluate

During our Weather topic the children design and make their own kites. We test them out in the wind and think about any changes we could make to improve them. We discuss the best materials and techniques for making kites.

The Circle of Life – Cooking and Nutrition

In our Circle of Life topic we begin to think about where food comes from, We have a trip to Morrisons Supermarket where we buy our own fruits and vegetables. Back at school we learn about cutting techniques to make our own fruit salad and we talk about healthy foods.

[Next Page](#)

Design & Technology Overview

Design & Technology *(Year One)*



Deep In The Woods- Structures - Baby Bear's Chair

Children will design a chair for a purpose, whilst drawing on their story telling of Goldilocks and the Three Bears. They will explore different materials and think about joining techniques to make the chair as stable and strong as possible.



Castles and Knights - Mechanisms - Castle with Dragon Slider

In this project children will test materials to make the strongest and most efficient slider for their final piece. They will design a castle and dragon of their choice and learn how to make it a moving mechanism.



Castles and Knights - Food and Nutrition - Tudor Banquet

Children will draw on their knowledge of their Tudor Traditions and recipes used for celebratory banquets. There will be opportunities to prepare and handle food safely and discuss the taste and texture.

Beach School- Textiles - Sea Creature Puppets

Children will choose a sea creature which they have learnt about during Beach School and then design a puppet based on their choice. They will explore different joining methods and embellish the puppet using a variety of resources.

[Next Page](#)

Design & Technology Overview

Design & Technology *(Year 2)*



Titanic- Structures - Lifeboat

We will explore and test different materials to design a lifeboat that will withstand the elements and make it safe for passengers.



Space- Mechanism- Mars Rover

Children will learn that they need a successful axle mechanism to make a vehicle move and they will use this knowledge to design and make their own.

The Great Outdoors - A Balanced Diet - Healthy Wrap

Children will explore the nutritional information of products that we buy daily. They will then discuss the five food groups and how we can live a healthy life. We will learn the most ideal ingredient combinations for a healthy and tasty wrap and the children will get to make their final product during their exciting camp experience!

The Great Outdoors- Textile-

Rainforest Animal Puppet

Children will learn the skill of a running stitch to join parts of the animal puppy together. They will embellish their puppets to create detailed features of their chosen animal.

Design & Technology Overview

School Trips



Year 2-Royal Cornwall Show



Foundation- Morrisons Supermarket



Year 1 - Pendennis Castle



Inclusion

Design and technology provides particular opportunities for:

- *"practical learning experiences which promote success and raise achievement"*
- *focusing on real scenarios and design problems that are meaningful to pupils*
- *"using appropriate, differentiated materials to suit pupils of different abilities"*
- *"using a range of methods to communicate – avoiding over-reliance on the written word"*
- *"using ICT as a way for pupils to realise, develop and enhance their work"*
- *"supporting learning in other subjects, eg mathematics and science"*
- *"work on personally motivated design tasks where the pupil takes ownership of their work and of their own learning"*
- *working in a flexible range of contexts and topics that can be adapted to suit individual interests and motivations*
- *"pupils to work at their own pace and level with appropriate support and intervention from the teacher, and"*
- *"individually negotiated targets between the teacher and pupil that can be reviewed as required – pupils who need to work at a slower pace can do so, and pupils who work more quickly can be further challenged to develop their work with activities which extend and enrich their experience."*