



Design Technology at WEPS

Intent

Our goal for our children at WEPS in Design Technology (DT) is to inspire all pupils to be creative, innovative thinkers, who have an appreciation for the product design cycle through ideation, creation, and evaluation.

We want our pupils to develop the confidence to think critically and experiment through drafting design concepts, modelling and testing and to be reflective, problem solving learners who evaluate their own work and the work of others. We aim to, wherever possible, link work to other disciplines such as mathematics, science, computing and art.

We want to allow children to aspire to reach their full potential, through creating opportunities for them in the wider world. Through the DT curriculum, children should be inspired by engineers, designers, chefs and architects to enable them to create a range of structures, mechanisms, textiles, electrical systems and food products with a real life purpose.

At WEPS we believe in a broad enriched curriculum which is created by putting an emphasis on key vocabulary, cultural knowledge, developing recall within the long term memory, speaking and communicating, providing a variety of creative and practical activities. Through our PKC scheme we teach the knowledge, understanding and skills needed to engage in an interactive process of designing and making. The children work in a range of relevant contexts (for example home, school, leisure, culture and the wider environment). At WEPS lessons are planned and reviewed by teachers continually.

Implementation

Here at WEPS we believe every child should have the opportunity to develop and succeed in all subjects including D.T. this is implemented through mixed ability groups, visual aids, adult support and understanding the needs of all learners.

Our policy is reviewed, discussed, agreed upon and followed by all teachers and support staff. It is shared and discussed with the governing body, parents and carers; and pupils. The impact of our subject policy is continually evaluated and reviewed. At a minimum, the policy is reviewed once per academic year.

The National Curriculum organises the Design and technology attainment targets under 5 subheadings: Design; Make; Evaluate; Cooking and Nutrition; and Technical knowledge. Our curriculum overview shows which of our units cover each of the NC attainment targets as well as each of the five strands. All classes will have scheduled Design and Technology lessons each term and will also be taught alongside other curriculum subjects.

Design: Use research to develop innovative designs, functional, appealing products that are fit for purpose, aimed at particular individuals or groups, generate, develop, model and



communicate ideas through discussion, annotate sketches, cross sectional 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 variety 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. Cooking and Nutrition use the basic principles of a healthy and varied diet to prepare dishes. Children need to understand where food comes from and apply the principles of a healthy and varied diet to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques as well as understanding seasonality. They are expected to know where and how a variety of ingredients are grown, reared, caught and processed.

Technical knowledge: Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Use mechanical systems in their products.

KS2 (Yr 5 and Yr6) need to be aware of electrical systems and use it in their final products and apply their knowledge of computing to programme, monitor and control their products.

Impact

We ensure the children develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They will build and apply a repertoire of knowledge and skills in order to design and make high-quality prototypes and products for a wide range of users and critique, evaluate and test their ideas and products and the work of others. Children at WEPS apply the principles of nutrition and learn how to cook. Children will design and make a range of products. A good quality finish will be expected in all designs and activities made appropriate to the age and ability of the child. Children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop an understanding of its impact on daily life and the wider world.

Teaching and learning

Design and Technology will engage the children in a broad range of designing and making activities which involve a variety of methods of communication, speaking, designing, drawing, assembling, making, writing, taking photographs and computer technology.



Units of work have been selected and planned to ensure a balance of materials, skills, knowledge and understanding throughout each Key Stage. Our curriculum overview shows which of our units cover each of the NC attainment targets as well as each of the five strands. We use PKC to aid our planning and assessment.

Through our DT scheme, pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in 6 key areas: • Mechanisms • Structures • Textiles • Cooking and nutrition (Food) • Electrical systems (KS2) • Digital World (KS2) Each of our key areas follow the design process (design, make and evaluate) in a spiral curriculum, with key areas revisited often with increasing complexity, allowing pupils to revisit and build on their previous learning. We find fascination in our learning through different types of activities: art lessons, outdoor learning and educational visits (science and art museums).

Tech: All Children at WEPS are taught through PKC scheme

<https://www.primaryknowledgecurriculum.org/vle/pkc-partnership/>

and are able to use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

Children in KS2 use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] and apply their learning of computing to program, monitor and control their products.

Lesson timings:

Projects are taught termly over a week which allows for more effective learning in which teachers can focus on teaching and developing DT skills, allowing children to develop their ideas and techniques.

Lessons should be 1 hour daily, over the course of one week. Teachers will plan these lessons according to their individual timetables. This gives children plenty of time to complete the D.T. cycle to a high standard.

Displays There is no need for D.T, displays. Evidence of learning can be shown in class floor books.

Books: All lessons are required to have key vocabulary, L.O clearly outlined along with the key skills. Children's work needs to be collected and examples displayed in class folders and floor books. High expectations are set across the whole school D.T, curriculum. (Class floor books should reflect this).

Homework Cross curricular tasks should be set and linked to as many subjects as possible. D.T. projects can be set only to reinforce learning and not as a replacement of learning.

Assessment teachers use formative assessment opportunities to evaluate progress and provide ongoing continuous support.



Lesson Structure

Each lesson is split into 6 lessons across the course of a week. Years 1-6 have a D.T. week every term. You can choose which lesson you would like to do from either the first or second half term. All projects must cover; Cooking, structure/mechanism and sewing project.



Curriculum Overview

DT Curriculum Overview

D&T – All Units should include exploring ideas, Planning, Design, make and evaluate element.

Year Group	Autumn 1 21st October	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2 11th July - 15th July (one day)
Year 1	<u>DT: Cooking</u> <u>Making Items Picnic - sandwich</u>			<u>DT: Textiles/Mechanisms</u> <u>Moving Pictures</u>		<u>DT: Structures</u> <u>Making a house (Tusk Modelling)</u>
	Spreading/cutting			Levers/slider Measure, mark out, cut, shape materials		Assembly, join, combine
Year 2	<u>DT: Structures and Mechanisms</u> <u>Making Fire Engines</u>			<u>DT: Cooking</u> <u>Making Pizza</u>		<u>DT: Textiles</u> <u>Designing & Make Glove Puppets</u>
	Assemble, join, combine materials Wheels & axels			Chopping, slicing		Basic sewing techniques, cut, shape & joining
Year 3	<u>DT: Cooking</u> <u>Sandwich Snacks</u>			<u>DT: Textiles</u> <u>Pencil cases</u> <u>Cushions</u>		<u>DT: Structures and Mechanisms</u> <u>Moving monsters</u>
Year 4	<u>DT: Cooking</u> <u>Seasonal food</u>			<u>DT: Textiles</u> <u>Seasonal stockings</u>		<u>DT: Structures and Mechanisms</u> <u>Light up signs</u>

Links

Curriculum maps

<https://docs.google.com/document/d/1LDNMJqXead3UyaREmLqIQ1X197vazIPMsuN7Vp0sWpg/edit>

Floor books

<https://docs.google.com/document/d/1FkmSHtN4M-QwSh07YQ2HdQyR-hqlypl5KkfkJntkOM0/edit>

Lessons

KS2-<https://drive.google.com/drive/folders/16JBapKeliieY41b4t-weNu1ZPSPH-iGH>

KS1-<https://drive.google.com/drive/folders/1IH2hZ76XWzJsCjDdHqVXk0FJ1uSHfMsg>

National Curriculum on DT

https://assets.publishing.service.gov.uk/media/5a7ca43640f0b6629523adc1/PRIMARY_national_curriculum_-_Design_and_technology.pdf

PKC <https://www.primaryknowledgecurriculum.org/vle/pkc-partnership/>