ROOTED IN GOD'S LOVE, EVERYONE GROWING TOGETHER
TO BECOME THE BEST THAT WE CAN BE

Design and technology Curriculum Overview

2026/27

Subject Leader: Mrs Rosinski

BARROW U.R.C. PRIMARY SCHOOL

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Intent, Implementation and Impact

Our Vision

Rooted in God's love, we will grow and learn together through the delivery of an enriched and creative curriculum. We are passionately committed to developing happy, well-rounded children who can reach their full potential with the skills, knowledge, and experiences to achieve their dreams. Our Curriculum drivers help to drive and shape our curriculum and are incorporated across all subjects and themes. Our Drivers are:



ACHIEVEMENTS & ASPIRATIONS



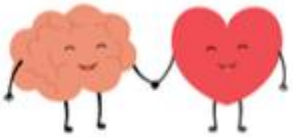
ACTIVE CITIZENS



DIVERSITY



HEALTHY ADVOCATES



RESILIENCE

Intent

At Barrow URC Primary School, Design and Technology prepares children to take part in the development of tomorrow's rapidly changing world. The subject encourages children to become autonomous and creative problem solvers both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems. Through the study of Design and Technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts. Design and Technology helps all children to become discriminating and informed consumers and potential innovators.

Implementation

We will use the following approaches in our teaching of Design and Technology:

- We teach three units of D&T per academic year.
- A minimum of 9 hours teaching over the half term. This can be done as either a block of lessons or weekly lessons; whichever best suits the learners and the unit of work;
- We teach specific key vocabulary for pupils to use, modelled by the staff;
- Lessons are closely linked to the D&T Skills & Knowledge Progression, ensuring progression and depth of knowledge and skills;
- Cross-curricular learning and activities to support subject knowledge e.g. Science when producing a product with an electric circuit.
- Questioning to support learner's knowledge; and to encourage pupils to apply their learning in an open manner that creates discussion and debate within class;
- Trips and opportunities such as experts who enhance the learning experience for the pupils.
- In ensuring high standards of teaching and learning in D&T, we implement a bespoke D&T Curriculum which uses the D&T Association's 'Projects on a Page' as a basis.
- We fulfil the requirements of the National Curriculum for D&T; providing a broad, balanced and differentiated curriculum that has the six principles of good practise in D&T at its heart: user, purpose, functionality, design decisions, innovation and authenticity.

Impact

We will assess the impact of the curriculum by:

- Reflection on standards achieved against the Investigative and Evaluative Activities, Focused Tasks and the Design, Make and Evaluate Assignment,
- Discussions about their learning,
- Marking and feedback to further inform planning,
- Sticky knowledge will be assessed by revisiting topics taught during Pupil Voice sessions,
- Pupil will have an increased subject specific vocabulary,
- Learning will be assessed through the implementation of a subject specific consolidation task,
- Children will be inspired to follow future careers related to this, e.g. We are Chefs, We are Engineers.

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Whole School Programme of Study:

Design Technology

Design Technology – Whole School Programme of Study (2025/26)

Design Technology – Whole School Programme of Study (2025/26)

DT	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS		Christmas craft: Salt dough decorations	Sculpture and 3D: Creation station Winter craft: Threaded snowflakes		Easter craft: Egg threading	
Year 1	Design Technology: Food – Preparing fruits and vegetables		Design Technology: Structures - Free Standing structures		Design Technology: Mechanisms - Sliders and Levers	
Year 2	Design Technology: Food – Preparing fruits and vegetables (including cooking and nutrition requirements)		Design Technology: Mechanisms - Wheels and Axel		Design Technology: Textiles – templates and joining techniques	
Year 3	Design Technology: Healthy and varied diet (including cooking and nutrition requirements for KS2)		Design Technology: Shell structures (including computer aided design)		Design Technology: Textiles - 2-D shape to 3-D product	
Year 4	Design Technology: Mechanisms - Levers and Linkages			Design Technology: Food - Healthy and varied diet (including cooking and nutrition requirements for KS2)	Design Technology: Electrical Systems - Simple circuits and switches (including programming and control)	
Year 5	Design Technology: Food - Celebrating culture and seasonality (including cooking and nutrition requirements for KS2)		Design Technology: Structures - Frame structures		Design Technology: Electrical Systems – Lego Robotics (including programming, monitoring and control)	
Year 6	Design Technology: Textiles - Combining different fabric shapes (including computer-aided design)		Design Technology: Mechanical Systems: Pulleys or gears			Design Technology: Food - Celebrating culture and seasonality (including cooking and nutrition requirements for KS2)

Design Technology in EYFS

Children's experience of D&T in the EYFS will included some or all of the following elements:

- Designing by talking about what they intend to do, are doing and have done.
- Saying who and what their products are for.
- Drawing what they have made, with some children drawing their ideas before they make.
- Opportunities to make their own choices and to discuss the reasons for these.
- Learning procedures for safety and hygiene.
- Developing practical skills and techniques using a range of materials including food, textiles and construction materials.
- Developing their knowledge and understanding in relation to mechanisms, structures, food and textiles.
- Exploring and using a range of construction kits.
- Asking questions about a range of existing products.
- Exploring the designed and made world through the indoor and outdoor environment, and through roleplay.
- Learning and using appropriate technical vocabulary.

Design Technology and SEND Provision

The Design and Technology curriculum is planned and delivered to accommodate and challenge pupils of all abilities and address a range of learning needs. Teachers of Design and Technology will consider any additional needs of SEND pupils and will implement any relevant targets and support strategies as outlined on pupils' Individual Education Plans. Where necessary, we will provide specialist equipment, adapt room layouts, utilise adult support and allow additional time for tasks, according to the needs of our pupils.

Design Technology and identifying the more able learner

The more able pupil in DT will come up with original solutions to design challenges, excel in the design process (consider user needs, functionality and aesthetics), grasp new skills quickly and effectively explain their design ideas to others.

In DT, we use this criteria to identify the characteristic of the More Able Learner;

- Be fascinated by, or passionate about DT, enjoys learning new knowledge and wants to be a successful learner,
- Achieves , or shows potential in a wide range of contexts across DT,
- Works flexibly, processes unfamiliar information and applies their knowledge of DT, experiences and insight to unfamiliar situations,
- Communicates their thoughts and ideas well in DT,
- Have flashes of inspiration and highly original or innovative ideas,
- Display high quality making and precise practical skills (relative to their age),
- Be prepared to try out different ideas and modify designs to improve outcomes and solve problems.

Classroom Provision for the More Able Learner;

- Encourage a more iterative process where pupils recognise the importance of continuously checking the effectiveness of their model/ prototype and adapt/alter to take account of problems with the design,
- Use deeper questioning at the evaluation stage of the process to prompt pupils to think further e.g. using Bloom's Taxonomy,
- Wherever possible, provide real users and clients whose needs and wants can then be explored by the pupils,
- Encourage selection of appropriate tools from a wider range.

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Knowledge and Skills Progression

Design and Technology

	Design	Make	Evaluate		Technical Knowledge		Cooking and Nutrition
Year 6	Plan the sequence of work Devise step by step plans which can be read/followed by someone else Use exploded diagrams and cross-sectional diagrams to communicate ideas Use and understand why we use CAD	Make prototypes Use researched information to inform decisions Produce detailed lists of ingredients / components / materials and tools Refine their product – review and rework/improve	Identify the strengths and weaknesses of their design ideas Report using correct technical vocabulary Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. Understand how key people have influenced design in a variety of contexts	Investigate key events and individuals in Design and Technology	Use the correct vocabulary appropriate to the project Join materials using appropriate methods Create 3D textile products using pattern pieces Understand pattern layout with textiles Cut strip wood, dowel, square section wood accurately to 1mm Build frameworks to support mechanisms Stiffen and reinforce complex structures Use mechanical systems such as cams, pulleys and gears Use electrical systems such as motors and switches Program, monitor and control using ICT	Select as appropriate to the focus of the D&T focuses in the year group	Understand & apply the principles of a healthy & varied diet. Choose ingredients to support healthy eating choices when designing their food products. Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques
Year 5	Record ideas using annotated diagrams Use models, kits and drawings to help formulate design ideas Sketch and model alternative ideas Decide which design idea to develop	Develop one idea in depth Select from and use a wide range of tools Cut accurately and safely to a marked line Select from and use a wide range of materials	Research and evaluate existing products Consider user and purpose Consider and explain how the finished product could be improved related to design criteria				Join and combine a widening range of ingredients Select and prepare foods for a particular purpose Know where and how ingredients are grown and processed
Year 4	Record the plan by drawing using annotated sketches Use prototypes to develop and share ideas Consider aesthetic qualities of materials chosen Use CAD where appropriate	Prepare pattern pieces as templates for their design Select from techniques for different parts of the process	Draw/sketch existing products in order to analyse and understand how products are made Identify the strengths and weaknesses of their design ideas in relation to purpose/user Consider and explain how the finished product could be improved	Investigate key events and individuals in Design and Technology	Use an increasingly appropriate technical vocabulary for tools materials and their properties Understand seam allowance Prototype a product Sew on buttons and make loops Strengthen frames with diagonal struts Measure and mark square section, strip and dowel accurately to 1cm Incorporate a circuit into a model Use electrical systems such as switches bulbs and buzzers Use ICT to program and control products Use linkages to make movement larger or more varied.	Select as appropriate to the focus of the D&T focuses in the year group	Make healthy eating choices – use the *Eatwell plate* Understand seasonality Know where and how ingredients are reared and caught. Prepare and cook using different cooking techniques
Year 3	Develop more than one design or adaptation of an initial design Plan a sequence of actions to make a product Think ahead about the order of their work and decide upon tools and materials Propose realistic suggestions as to how they can achieve their design ideas	Select from a range of tools for cutting, shaping, joining and finishing Use tools with accuracy Select from materials according to their functional properties Use appropriate finishing techniques.	Investigate similar products to the one to be made to give starting points for a design Research needs of user Decide which design idea to develop Consider and explain how the finished product could be improved Discuss how well the finished product meets the user's design criteria.				Follow instructions/recipes Join and combine a range of ingredients. Begin to understand the food groups on the *Eatwell Plate*.
Year 2	Propose more than one idea for their product Use ICT to communicate ideas Use drawings to record ideas as they are developed Add notes to drawings to help explanations	Discuss their work as it progresses Select and name the tools needed to work the materials Explain which materials they are using and why	Decide how existing products do/do not achieve their purpose Discuss how closely their finished product meets their own design criteria.		Use appropriate technical vocabulary Cut out shapes which have been created by drawing round a template Join materials in a variety of ways Decorate using a variety of techniques Know some ways of making structures stronger	Select as appropriate to the focus of the D&T focuses in the year group	Cut, peel, grate, chop a range of ingredients Work safely and hygienically Know about the *Eatwell Plate*. Understand where food comes from.
Year 1	Use pictures & words to convey what they want to design/make Explore ideas by rearranging materials Select pictures to help develop ideas Use mock-ups e.g. recycled material trial models to try out their ideas.	Select materials from a limited range Explain what they are making Name the tools they are using	Explore existing products and investigate how they have been made (including teacher-made examples) Talk about their design as they develop and identify good and bad points Say what they like and do not like about items they have made and attempt to say why		Show how to stiffen some materials Know how to make a simple structure more stable Attach wheels to a chassis using an axle Know some different ways of making things move in a 2D plane		Group familiar food products e.g. fruit and vegetables Cut and chop a range of ingredients Work safely and hygienically Know about the need for a variety of foods in a diet

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Planning Examples

Design Technology

We are chefs Years 1&2 - food – preparing fruit and vegetables

Consolidation task: Design, make and evaluate a _____(product) for _____ (user) for _____(purpose)



Key vocabulary

soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria

What could children design, make and evaluate? (highlight)

fruit salads fruit yogurt fruit drinks fruit jelly fruit smoothies vegetable salads fruit and vegetable kebabs other – specify

Intended users (highlight)

themselves parents siblings grandparents friends peers at school younger/older children visitors other – specify

Purpose of products (highlight)

picnic celebration party school event sports day pleasure café corner other – specify

1. Investigative and Evaluative Activities (IEAs)

- Children examine a range of fruit/vegetables. Use questions to develop children's understanding e.g. *What is this called? Who has eaten this fruit/vegetable before? Where is it grown? When can it be harvested? What are its taste, smell, texture and appearance? What will it look like if we peel it or cut it in half? What are the different parts called?*
- Provide opportunities for children to handle, smell and taste fruit and vegetables in order to describe them through talking and drawing. e.g. *What words can we use to describe the shape, colour, feel, taste?*
- Evaluate existing products to determine what the children like best; provide opportunities for the children to investigate preferences of their intended users/suitability for intended purposes e.g. *What do you prefer and why? What might we want to include in our product to meet our user's preferences? Which fruit/vegetables might be the best for our product to match the occasion/purpose?*

2. Focused Tasks (FTs)

- Discuss basic food hygiene practices when handling food including the importance of following instructions to control risk e.g. *What should we do before we work with food? Why is following instructions important?*
- Demonstrate how to use simple utensils and provide opportunities for the children to practise food-processing skills such as washing, grating, peeling, slicing, squeezing e.g. *Do we eat the whole fruit? Why or why not? Which parts do we eat? What might we have to do before eating this? Why do we cut, grate, peel and slice in this way?* Discuss different effects achieved by different processes.
- **Y2** - Discuss healthy eating advice, including eating more fruit and vegetables; using *The Eatwell Guide* model talk about the importance of fruit and vegetables in our balanced diet e.g. *Why is it good to eat fruit and vegetables? How many pieces of fruit/vegetables do you eat per day? Why is it important to wash fruit/vegetables before we eat them?*

3. Design, Make and Evaluate Assignment (DMEA)

- Set a context for designing and making which is authentic and meaningful.
- Discuss with the children the possible products that they might want to design, make and evaluate and who the products will be for. Agree on design criteria that can be used to guide the development and evaluation of children's products e.g. *Who/what is the product for? What will make our product unique/different? How will we know that we designed and made a successful product?*
- Use talk and drawings when planning for a product; ask the children to develop, model and communicate their ideas e.g. *What will you need? What fruit/vegetable will you need? How much will you need? How will you present the product?*
- Talk to the children about the main stages in making, considering appropriate utensils and food processes they learnt about through IEAs and FTs.
- Evaluate as the children work through the project and the final products against the intended purpose and with the intended user, drawing on the design criteria previously agreed.

Prior Learning

- Experience of common fruit and vegetables, undertaking sensory activities i.e. appearance taste and smell.
- Experience of cutting soft fruit and vegetables using appropriate utensils.

Future Learning

- Year 3 – Healthy and varied diet

National curriculum

- Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.
- **Y2** - Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of *The Eatwell Guide*.
- Know and use technical and sensory vocabulary relevant to the project.

Enrichment/ home learning

- Visit to a local supermarket.
- Prepare a healthy snack for your family.

Years 1/2

Food

Preparing fruit and vegetables

Instant CPD




Tips for teachers

- ✓ Display fruit, including photographs and associated technical vocabulary, to encourage the children to use it when discussing, designing and making a food product.
- ✓ Ask the children to sort a selection of fruit and vegetables – which is which? Photo cards could be used for this.
- ✓ Include fruit that is less likely to be known to the children.
- ✓ Stories and poems about food could be used for inspiration and as an introduction to the project.
- ✓ Visit a local shop or food market to give your project a real-life context.
- ✓ Carrots can provide a relatively cheap food for examining the effects of using different equipment such as grating, slicing into thin rings, slicing into sticks.
- ✓ Serrated knives with rounded ends are the best.
- ✓ Foods for chopping/slicing could be cut in half lengthways to provide a flat base and held still with, for example, a fork so that children cut safely.
- ✓ Before you organise any food tasting in your class, you need to check your school and local authority health and safety policy. Seek parental consent.
- ✓ As homework ask children to keep a weekly fruit and vegetable diary and ask them to record their results in a chart/table. If more appropriate, focus on fruit and vegetables served in school.

Useful resources at www.data.org.uk

- **Caribbean fruit cocktails** (7-9 years but contains useful information)
- **Are you teaching food in Primary D&T?**
- **Super salads** (7-9 years but contains useful information)
- **Fantastic fruit**

Other useful web-based resources:

- www.foodafactoflife.org.uk
- http://www.nhs.uk/livewell/5aday/pages/5adayhome.aspx

Teaching aids to demonstrate food processing skills


Peeling


Cutting


Slicing


Grating


Squeezing

Food Processing Equipment

Utensil	Food	Effect	Mouth feel
Juicer 	Orange	Makes juice	Liquid
Peeler 	Apple	Unpeeled apple	Crunchy
Knife 	Carrot	Thin rings	Crispy hard

Hygiene – some key pointers

- Jewellery is removed
- Hair is tied back
- Sleeves are rolled up
- Aprons are on
- Hands are washed
- Cuts are covered with blue waterproof dressing



Further information from www.foodafactoflife.org.uk

Designing, making and evaluating a fruit snack for a class picnic

An iterative process is the relationship between a pupil's ideas and how they are communicated and clarified through activity. This is an example of how the iterative design and make process might be experienced by an individual pupil during this project:

THOUGHT	ACTION
What sort of fruit product shall I make? Who will it be for? Which fruit will I put into my salad? Will my product appeal to my intended user?	Talking, drawing, writing lists, generating design criteria.
How will I process my fruit?	Using different tools and practising using different food-processing skills, e.g. cutting, slicing, grating.
How will different food processes create different effects?	Discussing and comparing different effects. Trying them out and evaluating.
What tools and food processing skills will I use? What order will I work in? How will I present my fruit snack?	Negotiating, developing and agreeing a plan of action, evaluating actions.
Do I need to adjust or change anything? Refining and reflecting.	Discussing, trying out and modifying the design.
Will my fruit salad meet the needs of the user and achieve its purpose?	Evaluating the product with the intended user and against the design criteria.

Glossary

- **Fruit** – plant or tree's edible seed with envelope.
- **Vegetable** – plant used for food.
- **Nutrients** – all the things in food that the body needs to remain healthy.
- **Pith** – the soft white lining inside fruit such as oranges.
- **Salad** – a cold dish of fresh and/or cooked vegetables or fruit.
- **Sensory evaluation** – subjective testing of foods where senses are used to evaluate qualities such as appearance, smell, taste, texture (mouth feel).
- **Kebab** – cooked and/or fresh ingredients on a skewer.