

Design Technology

Curriculum Intent

Bilton Community Federation

It is our intent that children will leave our schools resilient, emotionally literate, aspirational, effective communicators who are happy and therefore ready for the next stage of their life through the behaviour, knowledge and skills they have learnt whilst in our care. If we can achieve this for our children then we believe we are giving them the best opportunity to achieve success in their life. Through an inclusive and stimulating environment we will develop every child and allow them to write their own story in life. This intent is defined as our REACH principles.

Resilient: Every child is resilient.

Emotionally Literate: Every child is aware of their feelings and those of others.

Aspirational: Every child aspires for more in their learning and in life.

Communicators: Every child is an effective communicator.

Happy: Every child has the right to be happy.

What makes our curriculum unique?

Our vision for Design Technology

To nurture imaginative thinking, innovation and an awareness of the impact of technology on everyday life. Resulting in:

Enjoyment, creativity and purpose in designing and making.

Enhanced practical and problem solving skills and an interest in how things work.

At Bawnmore, Design Technology is taught through topic approach. Our curriculum is carefully planned to engage and excite all our learners. Our Design and Technology curriculum is built around essential knowledge, understanding and key skills. We have developed a progression of skills which shows year group expectations and has clear continuity and progression. Teachers use the design, make and evaluate cycle whenever possible. Introducing children to appropriate vocabulary is an important aspect of our curriculum. Teachers use some of the Plan Bee and Projects on a page units of work to supplement their planning and ensure progression. These units provide teachers with detailed plans, power-points to introduce relevant skills and differentiated worksheets. Our Outdoor classrooms are used for design technology projects throughout the year.

In our Design Technology Curriculum pupils are taught to:

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 are 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 are taught to:

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from

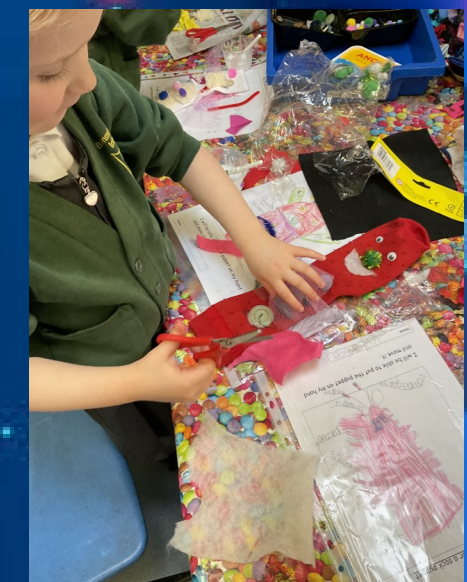


DT Vocabulary KS1

Materials	Construction	Textiles	Skills	Food	Design/Planning and communicating ideas
<p>Materials Textiles, wood, plastic, glass, metal, water, rock, brick, fabric, sand, paper, card, soil, foil, rubber, leather</p> <p>Properties of materials hard/soft, stretchy/not stretchy, shiny/dull, rough/smooth, bendy/not bendy, flexible, transparent/not transparent, opaque, translucent, sticky/not sticky, waterproof/not waterproof, strong, stiff absorbent/not absorbent, rigid, malleable,</p> <p>Man-made Natural</p>	<p>Equipment & Tools Scissors, Ruler, Wheels, Axles, Chassis Dowel Cotton reels Tube, cylinder Staples/stapler Glue/ glue spreader Glue stick Glue gun Tape/masking tape /sellotape Yoghurt pots, cartons Paper, Card Corrugated card Lolly sticks Saw/Hacksaw Hammer, Nail Screw /screw driver Bench hook Hole punch Split pin Paper clip Straw Hinge Pattern Templates Structure Junk Sandpaper Corks</p>	<p>Fabric Felt, Wool, cotton, silk, Needle Eye of a needle Thread Texture</p> <p>Buttons Sequins Pipe cleaners Pom-poms Ribbons Beads Braid String Collage Appliqué</p>	<p>Make Cut Shape Join Build Construct Strengthen Measure Fix Sew Stitch Finish Paint Print Dye Glue Stick Tear, rip Fringe Curl Fold Weave Knot Fray Twist Plait Decorate</p> <p>Instruction First, next, then</p>	<p>Ingredients Recipe Healthy, Diet Balanced diet Hygiene Nutrition Fruit, Vegetables flour, butter, milk, eggs, salt, sugar, seasoning Vitamins</p> <p>Skills Prepare, Cook, Bake, Boil, Mix, Beat, Chop, Grate, Cut, Peel, Core, Slice, Melt, Stir, Sieve, grease, pour Weigh Spoons, teaspoon, tablespoon, cups, measuring jug, scales Grams, Litres/ml</p> <p>Taste, smell, texture, feel, look raw</p>	<p>Explore Design Draw Ideas Invent Notes Purposeful Functional Appealing Colourful Attractive Products Existing Target group User Criteria Model Develop Test Stable Select Finish Mock-ups, Prototype Pop up Mechanisms Moving levers, sliders, wheels, axles Evaluate Adapt</p>

Overview of skills for Design Technology

Area of DT	R	1	2
Textiles	Basic joining of textiles	Joining range of textiles	Running Stitch to join textiles
Mechanisms	Construct simple structures	Construct structures Use sliders and levers	Use axles and wheels. Use levers
Food	Using cutlery, cutting, spreading	Peeling, grating	Cutting



Progression of Skills

	EYFS	Year 1	Year2
Knowledge	To use scissors accurately. To use a hole punch. To use paper clips and treasury tags. To use glue. To use sticky tape. To use cutlery correctly.	To cut a range of materials to size. To know how to use PVA glue and glue spreaders. To identify properties of materials. To understand a design criteria. To use a peeler and grater.	To cut doweling with hack saw. To understand how an axel moves a wheel. To be able to use a running stitch. The safety implications of using sharper utensils.
Vocabulary	Construct, purpose, make, build, join, scissors, hole punch, glue, glue spreader, staple, paper clips, treasury tags, sticky tape, product, evaluate, design, cutlery, knife, fork, spoon, hygiene.	Design, criteria, construct, purpose, build, join, structure, stability, pattern, movement, pivot, glue, glue spreader, plan, size, fabric, sliders, peel, grate, design, materials, ingredients, produce, diet, healthy, unhealthy, hygiene, local, fruit, vegetables, prepare, product.	Axles, wheels, stitch, saw, product, purpose, levers, pivot, movement, attach, structures, doweling, build, stability, explore, appeal, mock-up, tools, explain, assemble, join, shape, finish, embellish, decorate, select, textiles, construct, measure, prepare, evaluate, utensils, world-wide food.

	EYFS	Year1	Year2
Skills			
Design	Manipulates materials to achieve a planned effect. Encourage children to speculate on the reasons why things happen or how things work. Provide a range of materials and objects to play with that work in different ways for different purposes, for example, egg whisk, torch, other household implements, pulleys, construction kits.	Suggest ideas and know things about common products. Plans show that, with help, they can put my ideas into practice. Use pictures and words to show what they want to do. (plan) Explore a range of existing products. Describe how a product works. Design purposeful and appealing product for themselves and others based on design criteria.	Look at existing products. Identify similarities and difference in common products including joins and sliders. Annotate and label pictures of their design. Design purposeful, functional and appealing products for themselves and others based on design criteria. Describe using technical vocabulary how a product works.

	EYFS	Year1	Year2
Make	Use simple tools and techniques safely and appropriately. Select appropriate resources. Select tools and techniques needed to shape, assemble and join materials.	Talk about what they are making and which tools and materials to use. Select from a range of tools, equipment and materials to perform practical tasks such as cutting and joining including construction materials and textiles.	Choose suitable tools and materials to perform practical tasks such as cutting, shaping, joining and finishing. Use tools and assemble, join and combine materials and components in different ways.
Evaluate	Children to articulate whether they like/dislike their product and explain why.	Talk about their work and other's work.	Recognise what they have done well whilst making suggestions about how they could improve. Evaluate their ideas and products against the design criteria.
Technical knowledge	Constructs with a purpose in mind, using a variety of resources.	Build structures, exploring how they can be made stronger and more stable including sliders	Explore and use mechanisms, such as wheels and axles in a range of products.
Cooking and Nutrition	Taste a healthy range of food and understand the need to eat a variety of foods. Develop fine motor skills by cutting, spreading and using cutlery.	Select from and use a wide range of ingredients including locally sourced ingredients where possible. Use the basic principles of a healthy diet to prepare dishes. Understand where food comes from e.g. plants and animals. Prepare simple dishes safely and hygienically without using a heat source. Use the skills of cutting, peeling and grating.	Select from and use a wide range of materials including locally sourced ingredients. Use the basic principles of a healthy and varied diet to prepare dishes e.g. that everyone should eat at least five portions of fruit and vegetables a day. Understand where food comes from (Worldwide) Prepare simple dishes safely and hygienically without using a heat source. Use the skills of cutting, peeling and grating.



Long Term Progression EYFS

EYFS	Knowledge/skill
Textiles	To use glue To explore different fabrics
Mechanisms	To use scissors accurately. To use a <u>hole</u> punch. To use paper clips. To use sticky tape. To build simple structures To explore different materials
Food	To develop gross motor skills by cutting, spreading and using cutlery. To understand where food comes from To explore school gardens



Long Term Progression Year 1

Year1	Knowledge/skill	Resources	Term/Project
Textiles	To use PVA glue and spreaders to attach fabric To explore different fabrics	Puppets How can we put on a finger puppet show? (Learning Challenge Curriculum) Templates and joining (Projects on a page)	Autumn 2 What can we find in the <u>toybox</u> ?
Structures	To build stable structures	Wacky Windmills (Plan Bee) Freestanding Structures (Projects on a page)	All year Lego and building projects
Mechanisms	To cut materials To explore materials To use sliders and levers	Moving Pictures (Plan Bee) <u>Moving Pictures</u> (Traditional Tales <u>Twinkl</u> Plan it) How can we make a picture move? (Learning Challenge Curriculum) Sliders and levers(Projects on a page)	Spring 2 Aliens/space theme
Food	To use a peeler and grater To understand where food comes from	Eat more Fruit and vegetables (Plan Bee) What could be in our fruit salad? (Learning Challenge Curriculum) Sensational salads (<u>Twinkl</u> Plan it) Preparing fruit and vegetables (Projects on a page)	Summer1



Long Term Progression Year 2

Year 2	Knowledge/skill	Resources	Term/ Project
Textiles	To be able to use a running stitch	Delightful decorations (Plan Bee)	Autumn 2 Christmas
Mechanisms	To understand how an axle moves a wheel. To cut dowelling with a hacksaw	Vehicles (Plan Bee) Wheels and axles (Projects on a Page)	Spring 1 Making Vehicles
Structures	To build stable structures	Freestanding Structures (Projects on a Page)	All year <u>lego</u> / building projects Boats <u>Eggbox</u> dragons
Food	To use basic principles of a healthy diet To understand where food comes from.	<u>Teddybears</u> picnic (Plan Bee) Dips and Dippers (<u>Twinkl</u> Plan it) Preparing fruit and vegetables (Projects on a Page)	Autumn 1 Pumpkin Project Autumn 2 Christmas Cooking Spring 1 Baking



Outdoor learning

Taking our learning outside is a key feature of the design and technology curriculum. Each year group uses their outdoor classrooms to give children the opportunity to work with larger construction equipment, to have a larger area to work in and the opportunity to work with natural materials.

