Brookside Primary School
Learn Together - Achieve Together

Teaching of Design Technology at Brookside Primary School

The intent, implementation and impact for the learning of Design Technology at Brookside Primary School

Why is DT important at Brookside Primary School?

Design and Technology in primary schools develops children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials, including food. It encourages children's creativity and encourages them to think about important issues. It enables children and young people to actively contribute to the creativity, culture, wealth and well-being of themselves, their community and their nation. It teaches how to take risks and so become more resourceful, innovative, enterprising and capable.

What are the key DT subject discipline skills?

*Pupils will create, invent and create their own works of DT.

*Pupils use critical thinking and develop a deeper understanding of design.

*Pupils will understand how Design Technology reflects and shapes our History and contributes to our culture, creativity and wealth of our nation.

*Pupils can produce creative work, explore ideas and record their experiences.

*Pupils can research, design, create and evaluate products.

*Pupils can use art, craft and DT language to evaluate and analyse creative works.

*Pupils develop technical knowledge and apply their understanding.

*Pupils are taught to cook and apply their principles of nutrition and healthy eating.

What are the key vocabulary in DT at Brookside Primary School?

Snowy Owls			
Fruit and Vegetables Smoothie	Windmills	Moving Storybook	Pouches
Blender Fruit Healthy Ingredients Peel peeler Recipe Slice	Client Design Evaluation Net Stable Strong Test Weak Windmill	Assemble Design Evaluation Mechanism Model Sliders Stencil Target audience Template Test	Accurate Fabric Knot Pouch Running stitch Sew Shape Stencil Template Thimble
Tawny Owls			
Cushions	A balanced diet	Moving Monsters	Castles
Accurate Applique Cross-stitch Cushion Decorate Detail Fabric Patch Running stitch Seam Stencil Stuffing Target audience Target customer Template	Alternative Diet Balanced diet Evaluation Expensive Healthy Ingredients Nutrients Packaging Refrigerator Sugar Substitute	Evaluation Input Lever Linear motion Linkage Mechanical Mechanism Motion Rotary motion Survey	2D shapes 3D shapes Castle Design criteria Evaluate Façade Feature Flag Net Recyclable Scoring Stable Strong Structure Tab Weak
Barn Owls			
Eating Seasonally	Torches	Slingshot cars	Pavillions
Climate Dry climate Exported Imported Mediterranean climate Nationality Nutrients Polar climate Recipe Seasonal food	Battery bulb Buzzer Cell Component Conductor Copper Design criteria Electrical item Electricity Electronic item Function	Aesthetic, Air resistance Chassis Design Design criteria Evaluation Fabric Fastening Mock up Net Running- stitch	Aesthetic Cladding Design criteria Evaluation Frame structure Function Inspiration Pavilion Reinforce Stable Structure

Seasons Temperate climate Tropical climate	Insulator Series circuit Switch Test Torch Wire	Stencil Target audience Target customer Template.	Target Audience Target customer Texture theme
Eagle Owls			
Bridges	Adapting a recipe	Electric Greeting Cards	Stuffed Toys
Abutment Accurate Arched bridge Beam bridge Bridge Compression Coping saw Evaluation File Forces Mark out Measure Predict Reinforce Research Right-angle Sandpaper Set square Shape Strong Structure Suspension bridge Tenon saw Tension Test Truss bridge Weak	Adapt Budget Equipment Evaluation Flavour Ingredients Method Net Packaging Prototype Quantity Recipe Target audience	Battery Buzzer Circuit Component Conductor Copper Design Design criteria Function Graphite Innovative Insulator LED Modify Parallel circuit Series circuit Switch Target audience Test Torch wire	Accurate Annotate Appendage Blanket-stitch Design criteria Detail Evaluation Fabric Sew Shape Stuffed toy Stuffing Template
Bay Owls			
What could be healthier?	Playgrounds	Waistcoats	Automated Toys
Beef Cross-contamination Diet Ethical issues Farm Healthy Ingredients Method Nutrients Packaging	Adapt Apparatus Bench hook Cladding Coping saw Design Dowel feedback Evaluation Idea	Accurate Adapt Annotate Design Design criteria Detail Fabric Fastening Knot Properties	Accurate Assembly-diagram Automata Axle Bench hook Cam Clamp Component Cutting list Diagram

Reared Recipe Research Substitute Supermarket Vegan Vegetarian Welfare	Jelutong Landscape Mark out Measure Modify Natural materials Plan view Playground Prototype Reinforce Sketch Strong Structure Tenon saw Texture User Vice Weak	Running stitch Seam Sew Shape Target audience Target customer Template Thread Unique Waistcoat Waterproof	Dowel Drill bits Exploded-diagram Finish Follower Frame Function Hand drill Jelutong Linkage Mark out Measure Mechanism Model Research Right-angle Set square Tenon saw

Our long term Design Technology Plan

	YEAR A			YEAR B		
	AUTUMN	SPRING	SUMMER	AUTUMN	SPRING	SUMMER
Snowy	(Cooking and nutrition) Fruit and Vegetables Smoothie		(Structures) Windmills	(Mechanisms) Moving storybook		(Textiles) Pouches
Tawny	(Textiles) Cushions		(Cooking and nutrition) A balanced diet	(Mechanisms) Moving monsters		(Structures) Castles
Barn	(Cooking and nutrition) Eating seasonally		(Electrical systems) Torches	(Mechanisms) Sling shot cars		(Structures) Pavillions
Eagle	(Structures) Bridges		(Cooking and nutrition) Adapting a recipe	(Electrical systems) Electric greetings cards		(Textiles) Stuffed toys
Bay	(Cooking and nutrition) What could be healthier?		(Structures) Playgrounds	(Textiles) Waistcoats	(Mechanisms) Automated Toys	

EYFS

Expressive Arts and Design The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.

EAD at Brookside in Hoot Owls …

There is a rich tradition at Brookside of quality music and drama. The children have the opportunity to watch the Brass Band to see instruments and hear the sounds they make. We also want children to sing songs, make music, dance and perform. We have regular music lessons and the children take part in 2 productions during their Reception year. Children are given time to play imaginative games and make up stories, songs and dances. Our Music curriculum develops through Charanga, which is a class favourite.

In both Art and Design Technology, the children learn how to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. We want the children to become confident and independent artists/designers who are not afraid to express themselves as an individual. Child-initiated art/DT activities are encouraged during continuous provision as well as art and crafts skills learnt directly. We endeavour that children leave Reception with good art/DT skills, as well as encouraging them to use their own ideas and techniques in their art and design work. The children have the opportunity to see the work of other artists and designers throughout the year.

We strive to make them ready for the more formal art teaching starting in KS1 by them experiencing a range of techniques Painting, Printing, Collage, Clay, Sewing, Observational drawing, and 3D Sculpture. We hold a Design a 'Boat to Float' Challenge, which encourages the children to come up with a boat design using junk modelling. It must carry 4 Compare Bears and float for at least 1 minute (timed). The children discuss adaptations they could make to make it better.

EYFS	**EAD**
Autumn Andy Goldsworthy	Natural Autumn Collage pictures – Diva clay pots Sewing- Snowman Puppets Charanga Music- Me The Nativity Show Puppet theatre Nativity opportunity Sing and Sign Christmas songs
Spring *Still Life with Apples and Pitcher* – Camille Pissarro and Giuseppe Arcimboldo	Split pin moving parts Polar Bears Painting pandas and Chinese Dragons Food Technology- Sandwich making Observational drawings - fruit&veg Charanga Music-everyone Charanga Music-Our world
Summer Michelle Reader – 3D sculptor Tony Castro https://www.tonycastroyachts.com/	3D sculpture-junk minibeasts Charanga Music-Big Bear Funk Food Technology- Fruit kebabs Printing-shells/starfish/pebbles Design & Make a Boat to Float Challenge ICT Dazzle3- Under the sea pictures

How does Brookside Primary School ensure progression in our key knowledge and concepts in DT?

*Key concepts are revised year after year to consolidate pupils' understanding.

*Knowledge continues to build on prior learning and is more in-depth.

*Subject specific language becomes increasingly complex.

*Development of pupil understanding and use of language in DT.

*Ability to think critically and develop a deeper understanding of DT.

How do we know our children have made progress in DT

End points EYFS –Expressive Arts and Design

The children are assessed against the EAD Early Learning Goals in the EYFS Statutory Framework.

ELG: Creating with Materials Children at the expected level of development will: - 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; - Make use of props and materials when role playing characters in narratives and stories.

ELG: Being Imaginative and Expressive Children at the expected level of development will: - Invent, adapt and recount narratives and stories with peers and their teacher; - Sing a range of well-known nursery rhymes and songs; Perform songs, rhymes, poems and stories with others, and – when appropriate – try to move in time with music.

End Points KS1- DT

Children can

*Understand the basic principles of a healthy and varied diet to prepare dishes.

*Understand where food comes from.

*Design purposeful, functional, appealing products for themselves and others based on design criteria.

*Generate, develop, model and communicate ideas through talking, drawing, templates, mock- ups, and, where appropriate, information and communication technology.

*Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

*Explore and evaluate a range of existing products
Build structures, exploring how they can be made stronger, stiffer and more stable.

*Explore and use mechanisms (eg levers, sliders, wheels, and axles) in their products.

End Points KS2 – DT

Children can

*Understand and apply the principles of a healthy and varied diet.

*Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.

*Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

*Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at certain 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.

*Select from and use a wider range of materials and components inc construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

*Investigate and analyse a range of existing properties.

*Evaluate their ideas and products against their own 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.

*Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

*Understand and use mechanical systems in their products (eg gears, pulleys, cams, levers and linkages)

*Understand and use electrical systems in their products (eg bulbs, buzzers, motors)