

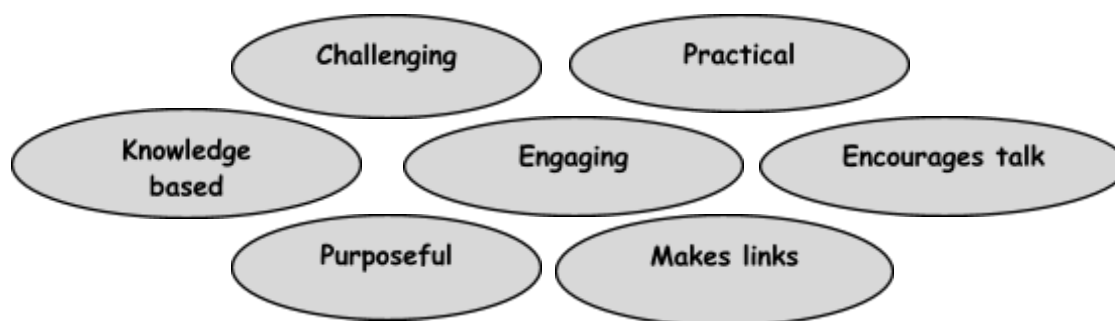
Design Technology at Belmont Infants

Our intent

Design Technology is valued as part of our rich curriculum and supports children to acquire the knowledge and skills they need to understand the role of designers and to plan and create their own work.

Through our DT curriculum children will:

- Understand the role of design and designers;
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make prototypes and products;
- Understand and apply some basic cookery skills and principles of nutrition;
- Through the teaching of subject specific **vocabulary** and opportunities to evaluate and reflect upon design, children develop their ability to think critically and present their views and ideas;
- Be given a range of Design Technology opportunities supports children's belief that they too can be great designers and engineers;
- Work with architects and designers where possible in order to give learning a real life and **practical** context;
- Use the 'trial and improvement' model which means having the confidence to have a go, to learn from mistakes and to keep trying and improving;
- Use creativity and imagination through design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs;
- All children including those who have SEND or are disadvantaged, fully access the DT curriculum. This may include additional adult support or use of visuals or adapted tools. Structured sentence stems and taught vocabulary scaffolds children in discussion.



They will learn about artists and designers from around the world, reflecting the **cultural diversity** in our school which forms an important part of our school identity. Our DT curriculum is **carefully designed** to educate children about existing design, as well as introducing them to contemporary designers who are responding to the ever-changing world our children are growing up in.

Implementation

Our DT scheme of work lays out the **sequential steps** so that new knowledge and skills build on prior learning and pupils can work towards clearly defined high quality outcomes. DT is taught in units, with lessons sometimes blocked to allow immersion in the process. Each strand of DT is covered and revisited so that pupils retain and build upon prior learning. DT is resourced with appropriate tools and materials.

DT is taught through projects, the planning of which always begins with a high-quality end-product, informed by the work of a designer and linked to the children's current topic. The teachers plan to ensure that every skill necessary to create the final piece is explicitly taught, while taking care to build upon skills developed in the Early Years.

Impact

We aim that through our DT curriculum children at Belmont Infants will begin to learn to express informed opinions, **make connections** and have a developing **knowledge** of designers. Our children will see themselves as future designers and recognise the important role design plays in our lives.

EYFS

Nursery

Theme 1: Colour, Light and Pattern: Tea-light holders Spring 2

Key knowledge, skills and designers

Links to future learning	Vocabulary	Design examples
Nursery Summer 1 design a boat	Clay dough shape candle bend squash press pull	A variety of examples of different tea-light and candle holders

Introductory experiences

- As part of the topic, explore candles and fire as a source of light. *How does a flame start? What keeps it going? How can we stay safe around fire? Does it feel hot/cold? Where do you see candles? When in the day? How do they make you feel?*
- Share a variety of candle holders, exploring their shapes, colours and materials and how this impacts the flame.

Skills

- Allow the children time to experiment with using clay and dough *making bowl shapes* - thumb bowl, coil bowls

Make

- Create a tea-light holder using clay to form the shape, checking that each holder will fit a candle inside.
- Mix different o few colours to decorate the holder, thinking about how they will work with the light.

Ongoing provision

Our Nursery has a permanent 'Making Area' which is well-stocked with a variety of materials, collage supplies and paper of different colours, shapes and weight. The children are able to access this area throughout the day, and can either create something inspired by the provocation set up by the adults, or use the permanent resources to create whatever has inspired them in that moment. Every child with work with an adult once a week on a more adult-led art or design activity which ensures every child is introduced to a variety of methods, artists and materials throughout the year.

We have a dedicated mark-making space in our outdoor learning area which the children can access for most of their session at Nursery. The table is set up each day with a different provocation, but the children are able to use any resources found in the dedicated cupboard to support their creations. There is also a woodwork shed which is opened at different times during the week and term, with projects and skills planned for. Each week one adult runs an art or design activity outside for both Nursery children to take part in, and these are planned to incorporate natural materials and the outdoors.

Ongoing provision: Woodwork

Children in Nursery have regular opportunities to learn woodwork. They learn how to use the tools safely and effectively in our well organised and purpose built woodwork shed. Learning to use tools helps our children to develop their concentration, fine motor skills, communication and language and self-confidence. The focus in Nursery is developing the skills of hammering, screwing, drilling and sawing.

Ongoing provision: Cooking

Throughout Nursery there is a focus cooking session each week focusing on a range of themes such as measuring, following recipes, stirring, cutting, pouring melting, baking,

Nursery

Theme 2: Adventures and Journeys: Boats Summer 1

Key knowledge, skills and designers

Links to prior learning	Vocabulary	Design examples
Explore paper, glue and tape in continuous provision	Float Heavy	A variety of toy boats
Links to future learning	sink light	
Reception Theme 3, Autumn 1 Making houses	Waterproof shape Hold join	

Introductory experiences

- As part of the topic, explore different modes of transport, particularly boats. *Where do boats go? How are they different to cars, trains and planes?*
- Share a variety of toy boats, exploring their shapes and materials and how this impacts how they float, and how many people they can hold.
- Share a variety of materials, testing each to see how it changes in water (e.g. paper, card, plastic, cork, string, metal)

Skills

- Give children the opportunity to explore different junk modelling materials, particularly boxes, tubes and newspaper
- Teach how to use masking tape, paying particular attention to joining

Design

- Generate ideas for what to make boats with through discussion

Make

- Individually and in small groups, create a boat, which must float in water and hold at least one toy person.

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Reception

Theme 3: Tell me a story: Building houses Autumn 1

Key knowledge, skills and designers

Links to prior learning	Vocabulary	Design examples
Reception continuous provision design and make with paper and tape	Move join Glue tape Paper card	Card houses e.g. Maisie's House book Card doll's houses
Links to future learning	Strong weak Fold cut	
Reception Theme 4 Spring 2 Making bags		

Introductory experiences

- Reference continuous provision paper, tape, glue experimentation; junk modelling attempts
- Discuss the story of The Three Pigs and the houses – how could we make a house for a pig? What might we use? How would we join things together?

Skills

- Learn some joining techniques – card and paper with tape, cutting tape smaller
- Practise joining card and paper with masking tape, glue and Sellotape

Design

- Generate ideas through discussion, focusing on the purpose of the house

Make

- Use appropriate tools and materials – card, paper to make a small house
- Select appropriate joining techniques

Evaluate

- The houses – adapt as they make, and at the end. Is your house strong? Can it stand up?

Ongoing provision

Both Reception classes have a permanent 'Making Area' which are well-stocked with a variety of enticing craft materials, often tailored to the children's current interests. The children are able to access this area independently throughout the day, and can either create something sparked by the provocation set up by the adults, or use the permanent resources to create whatever has inspired them in that moment. Adult-led activities are regularly planned throughout the term to ensure that every child takes part in long-term explorations of new media, artists and processes.

We have a dedicated space in our outdoor learning area which the children can access throughout the day. The table is set up each day with a different provocation, but the children are able to use any resources in the dedicated cupboard to support their creations. Each week one adult runs an art or design activity outside for Reception children to take part in, and these are usually planned to incorporate natural materials and the outdoors.

Ongoing provision: Woodwork

Children in Reception continue to have regular opportunities to learn woodwork. The focus in the Autumn term is developing the skills of hammering, screwing, drilling and sawing. In Spring and Summer the children create products linked to their own interests or their current learning e.g. planes, boats, cars. In Spring the year group sets up an exhibition of work to share with parents.

Ongoing provision: Cooking

Throughout Reception there is a focus cooking session each week focusing on a range of themes such as measuring, following recipes, stirring, cutting, pouring melting, baking, In Autumn 2, Who am I through the science and health children explore different foods and the impact they have on our bodies. They look at snacks the children often have at home, comparing what is the same and what is different. Share a variety of healthy foods and snacks, exploring their shapes and ingredients. Taste them, think about the different flavours in each snack, and which children like the best. In Spring 2, Bookshops and Bakers, the children learn where different foods (fruit and veg) come from, taste unusual fruits and make snacks from ingredients from all over the world.

Reception

Theme 4: Bookshop and bakers and candlestick makers: Making bags Spring 2

Key knowledge, skills and designers

Links to prior learning	Vocabulary		Design examples
Reception Theme 3 Autumn 1 Making houses	Carry	strong	Range of different carrier bags Range of different reusable bags
	Purpose	fabric	
Links to future learning	Join	evaluate	
Year1 Theme 2 Spring 1 Making chairs	Glue	stitch	

Introductory experiences

- Reference continuous provision playing with shopping bags and purses - what are bags for? What properties do they need?
- Reference trips to Poundland to buy ingredients for cooking and the class party - what sort of bags might we need to carry heavy shopping?
- Look at a range of carrier bags, reusable bags and discuss likes and dislike - style, decoration, handles, length etc.

Skills

- Learn joining techniques - PVA glue, glue gun (supported), basic stitching
- Practise joining fabric in continuous provision

Design

- Generate ideas through discussion, focusing on the purpose of the bag - style, decoration, size, handles

Make

- Use appropriate tools and materials to make a bag
- Use careful joining techniques

Evaluate

- The bags Is your bag strong? Can it carry some shopping?

Ongoing provision

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Ongoing provision: Cooking

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In Spring 2, Bookshops and Bakers, the children learn where different foods (fruit and veg) come from, taste unusual fruits and make snacks from ingredients from all over the world.

Key Stage 1 National Curriculum

Year 1

Theme 1: Why do the leaves fall? Autumn 1

Design and make task - a seasonal snack for Beegu / a squirrel

Key knowledge, skills and designers

Links to prior learning	Vocabulary	Design examples
Reception cooking during continuous provision, Spring 2 healthy snacks	Melt Freeze Combine	A variety of bird fat balls
Links to future learning	Solid	
Year 2 Spring 2 Design and make cereal bars for explorers	Measure	

Introductory experiences

- Reference Reception Spring 2 design and make a healthy snack
- Explore different seasonal produce: berries, fruit, seeds, leaves - identify favourite colour, texture etc.
- Evaluate a range of fat balls for birds / animals

See: [How to make fat cakes for birds | National Trust](#)
[How to make fat balls for birds - Rushfields Plant Centre](#)

Skills

- Explore combining materials - mud, clay, water (ice), PVA glue, lard, dough, Plasticine

Design

- Generate ideas through discussion, focusing on the needs of Beegu / a squirrel - what might his 'snack' include? What does he like? Does his snack need to be edible to humans?
- Establish criteria for Beegu's snack - colour, variety, size, appearance

Make

- Select from and use appropriate ingredients and tools - weighing and mixing
- Select how to combine the ingredients
- Select how to make the snack solid
- Decide how to add a hanging string

Evaluate

- Evaluate their 'snack' - appearance, texture. Identify possible improvement
- Evaluate the creations of others
- Decide if squirrels might like the snack and hang outside if yes

Ongoing provision: Woodwork

Children in Year 1 will continue to have opportunities to develop their woodwork skills. We are extending our woodwork provision into Year 1 in Autumn 2022

Year 1

Theme 2: Happy ever after...NOT!: A chair for baby bear Spring 1

Design and make task - a chair for baby bear

Key knowledge, skills and designers

Links to prior learning	Vocabulary	Design examples
Reception Theme 3 Autumn 1 Making houses,	Strong Join	A variety of chairs <u>Designer's e.g.</u>
Links to future learning	Material	Charles and Ray Eames - Eames chair
Year 1 Summer 2 Design and make a moving bus picture	Rolled Hinge	Philippe Starck Arne Jacobsen - swan chair Verner Panton - Panton chair Noboru Nakamura - Poang chair

Introductory experiences

- Reference Reception continuous provision design and make with paper and tape
- Observe and discuss a range of chairs, stools and seats - explore their shapes and materials and identifying the key features of a safe, sturdy chair.
- In Goldilocks and the Three Bears - Why do you think that chair broke? What makes a chair strong?
- Identify and evaluate joining techniques - card and paper

Skills

- Give children the opportunity to explore different junk modelling materials, particularly newspaper and masking tape, paying particular attention to joins and creating strength e.g. through rolling newspaper into tubes. Teach joining techniques.

Design

- Generate ideas through discussion, focusing on the needs of the bear - size, weight

Make

- In small groups, create a chair which is strong enough to hold baby bear, using only newspaper and tape (or other junk modelling materials).
- Select from and use appropriate tools and materials -boxes, tubes, card, and paper.
- Learn joining techniques such as creating tabs, zig-zag hinges

Evaluate

- The chairs - adapt as they make, and at the end. Can the bear sit on the chair for 5minutes?

Year 1

Theme 3 On the buses Summer 2

Design and make task - moving parts bus picture in 2D

Key knowledge, skills and designers

Links to prior learning	Vocabulary		Design examples
Year 1 Spring 1 Extending techniques learnt in making a chair for baby bear	Cut Paper Lever	Card Join Split-pin	A range of pop-up books and cards e.g. The Jolly Postman
Links to future learning			
Year 2 Summer 1 Design and make instruments using paper, card and joining techniques			

Introductory experiences

- Reference Year 1 Spring 1 Extending techniques learnt in making a chair for baby bear
- Look carefully at high-quality photographs of London buses, thinking about what the key features are that help us to recognise they are buses. Allow every child to complete a close-observational drawing of a bus using a sketching pencil and/or fine-liner pen.
- Observe and discuss pop up books, card levers, moving parts in books. Explore picture books which have moving parts, looking at how they are attached and what makes them move.

Skills

- Learn some joining techniques - card and paper, split pins, basic hinge
- Practise making a join to make simple moving-parts pictures

Design

- Generate ideas through discussion, focusing on the purpose of the book. And which aspects will move

Make

- Using their previous observational drawing, and the photographs of London buses, as a guide draw and cut out a simple bus shape, using it to make a moving-parts bus picture. Incorporate 1+ moving parts
- Use appropriate tools and materials - card, paper.
- Select appropriate joining techniques

Evaluate

- The chairs - adapt as they make, and at the end. Can the bear sit on the chair for 5minutes?

Year 2

Theme 4: Fantastic Voyages Spring 2

Design and make task - cereal bar for an explorer

Key knowledge, skills and designers

Links to prior learning	Vocabulary		Design examples
Year 1 Autumn 1 Seasonal snack making for Beegu in	Ingredients	Healthy	A range of cereal and snack bars
	Measure	Combine	
Links to future learning	Weigh	Stir	
Year 3 Spring 2 Design a healthy dip Art: Painting Artists: Jackson Pollock,	Melt	Taste	

Introductory experiences

- Reference
- Explore and taste different cereal bars
- Gained experience of basic mixing and melting

Skills

- Learn to weigh accurately using scales and measuring spoons, measure ingredients

Design

- Generate realistic ideas and their own ideas for a tasty cereal bar through discussion, focusing on the needs of the explorer.

Make

- Select from and use appropriate tools - weighing, mixing, melting, and cooling.

Evaluate

- Evaluate their cereal bars - texture and taste.

Year 2

Theme 5: Life on the river! Summer 1

Design and make task - instruments

Key knowledge, skills and designers

Links to prior learning	Vocabulary	Design examples
Year 1 Summer 2 Card and paper joining techniques - moving bus picture	Purpose Strong Secure	Star Feminine Band: contemporary a band from Benin formed of seven teenage girls
Links to future learning	3 dimensional 3D	A variety of instruments and music by Star Feminine Band
Year 2 Summer 3 design and make bug hotels	Elastic band Masking tape	

Introductory experiences

- Reference Year 1 Summer 2 Card and paper joining techniques - moving bus picture
- Share the music of Star Feminine Band, watching a music video. Explore where the band is from, and discuss the different instruments they are playing. *What do you know about these different instruments? Are they all the same/different? Can you play any instruments?*
- Share a variety of instruments - shakers, strings, beaters, skins - exploring their shapes and materials and noticing the key features of each. Explore which part makes the music, and if there are any features which they share.

Skills

- Explore different junk modelling materials, paying particular attention to sounds different materials make when combined in certain ways. Learn new joining techniques e.g. elastic bands, tape

Design

- Generate realistic ideas and their own design criteria through discussion, focusing on the purpose
- Use annotated sketches to develop and communicate ideas.

Make

- Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.
- **Create instruments using junk modelling materials.**
- Select from and use finishing techniques suitable for the product they are creating.

Evaluate

- Evaluate their instruments - is it strong and well made? Does it make a musical sound?

Year 2

Theme 6: Magical Minibeasts Summer 2

Design and make task - Bug hotels

Key knowledge, skills and designers

Links to prior learning	Vocabulary	Design examples
Year 2 Autumn 2 Environmental geography Year 2 Summer 1 Design and make musical instruments	Purpose Suitable Habitat Needs	Gillian Burke: contemporary a British natural historian and presenter. A range of bug hotels
Links to future learning	Wood Bamboo	www.inhabitat.com 19 Bug Hotel Ideas, Bee Boxes & Insect Houses Garden Patch
Year 3 Autumn 2 Shell structures: Design, make and evaluate a themed desk tidy		

Introductory experiences

- Reference Year 2 Summer 1 Design and make musical instruments and Year 2 Autumn 2 Environmental geography
- Revisit the concept of conservation from the previous topic, looking specifically at what we can do to preserve minibeasts, and the important role they play in our eco-system. Introduce the role of people like Gillian Burke, who work hard to keep our wildlife safe.
- Introduce the idea of 'bug hotels', asking the children if they are familiar and if they have seen them. Share a variety of different models of bug hotel, exploring their shapes and materials and noticing the key features of each. Discuss how some bug hotels are designed for only certain insects.
- Gain experience of cutting wood and bamboo as well as card.

Skills

- Give children the opportunity to revisit different junk modelling materials, paying particular attention to the important shapes they can make, and how they might be impacted by weather

Design

- Generate realistic ideas and their own design
- Use annotated sketches to develop and communicate ideas.

Make

- In small groups, design and make bug hotels with a particular insect in mind.
- Select from and use appropriate tools with some accuracy to cut, shape and join junk, paper and card.

Evaluate

- Evaluate their bug hotels against criteria and the minibeast needs.