

Brookvale Primary School

Design and Technology
Curriculum

Sequences of Learning



Year 1

Year 1: Unit 1 Textiles- Making a puppet

Sequence of Learning:

- Lesson 1: To join two fabrics together using different methods.
- Lesson 2: To learn a basic sewing technique.
- Lesson 3: To use a template to create my design.
- Lesson 4: To join two fabrics together accurately.
- Lesson 5: To embellish my design using joining methods
- Lesson 6: To evaluate against a given criteria.

Year 1: Unit 2 Food- Fruit and Vegetables

Sequence of Learning:

- Lesson 1: To identify if a food is a fruit or vegetable
- Lesson 2: To identify where plants grow and which parts we eat.
- Lesson 3: To taste and compare fruit and vegetables
- Lesson 4: To design a smoothie
- Lesson 5: To make a fruit and vegetable smoothie.
- Lesson 6: To evaluate a smoothie.

Year 1: Unit 3 Mechanisms- Wheels and axles

Sequence of Learning:

- Lesson 1: To understand how wheels move.
- Lesson 2: To identify what stops wheels from turning.
- Lesson 3: To join wheels and axles effectively.
- Lesson 4: To design a moving vehicle.

Lesson 5: To build a moving vehicle.
Lesson 6: To evaluate a moving vehicle that I have made.

Year 1: Unit 4

Structures: Constructing a Windmill

Sequence of Learning:

Lesson 1: To investigate a winding mechanism
Lesson 2: To include individual preferences and requirements in my design.
Lesson 3: To make a stable structure.
Lesson 4: To assemble the components of my structure.
Lesson 5: To evaluate my project and adapt my design

Year 2

Year 2: Unit 1

Food- A Balanced Diet

Sequence of Learning:

Lesson 1: To know what makes a balanced diet
Lesson 2: To know what makes a balanced diet
Lesson 3: To taste test food combinations
Lesson 4: To design a healthy wrap
Lesson 5: To make a healthy wrap

Year 2: Unit 2

Mechanisms: Fairground Wheel

Sequence of Learning:

- Lesson 1: To investigate a winding mechanism
- Lesson 2: To explore wheel mechanisms and design a wheel
- Lesson 3: To select appropriate materials
- Lesson 4: To build and test a moving wheel
- Lesson 5: To make a structure with a rotating wheel
- Lesson 6: To evaluate a structure with a rotating wheel

Year 2: Unit 3 Textiles- Pouches

Sequence of Learning:

- Lesson 1: To use existing designs for inspiration
- Lesson 2: To make a repeated pattern design
- Lesson 3: To sew a running stitch
- Lesson 4: To use a template accurately
- Lesson 5: To join fabrics using a running stitch
- Lesson 6: To decorate a pouch using fabric glue or stitching

Year 2: Unit 4 Structures- Baby Bear's Chair

Sequence of Learning:

- Lesson 1: To relate the way things work to their intended purpose
- Lesson 2: To explore the concept and features of structures and the stability of different shapes
- Lesson 3: To understand that the shape of the structure affects its strength
- Lesson 4: To design a structure according to a criteria
- Lesson 5: To make a structure according to design criteria.
- Lesson 6: To produce a finished structure and evaluate its strength, stiffness and stability.

Year 3

Year 3: Unit 1 Textiles- Making a Cushion

Sequence of Learning:

- Lesson 1: To learn how to sew cross-stitch
- Lesson 2: To learn how to applique
- Lesson 3: To design a product and its template
- Lesson 4: To decorate fabric using applique and cross stitch
- Lesson 5: To assemble a cushion
- Lesson 6: To evaluate a product against a design criteria

Year 3: Unit 2 Mechanical Systems- Pneumatic Toys

Sequence of Learning:

- Lesson 1: To know how air pressure can be used to produce and control movement.
- Lesson 2: To understand how pneumatic systems work
- Lesson 3: To be able to make a simple pneumatic system
- Lesson 4: To design a toy which uses a pneumatic system
- Lesson 5: To create a pneumatic system
- Lesson 6: To test and finalise ideas against design criteria

Year 3 : Unit 3 Food- Eating seasonally

Sequence of Learning:

- Lesson 1: To know that climate affects food growth
- Lesson 2: To know that importing food impacts the environment and is one of the reasons why we should eat seasonal foods grown in the UK

Lesson 3: To follow a basic recipe
Lesson 4: To create a recipe that is healthy and nutritious using seasoning vegetables.
Lesson 5: To safely follow a recipe when cooking
Lesson 6: To safely follow a recipe when cooking

Year 3: Unit 4

Structures- Constructing a castle

Sequence of Learning:

Lesson 1: To recognise how multiple shapes (2D and 3D) are combined to form a strong and stable structure.
Lesson 2: To design a castle
Lesson 3: To know how to measure, mark out, cut, score and assemble a 3D net
Lesson 4: To learn different techniques for strengthening a shape
Lesson 5: To construct 3D nets
Lesson 6: To construct and evaluate my final product

Year 4

Year 4: Unit 1

Food- Adapting a recipe

Sequence of Learning:

Lesson 1: To evaluate an existing product
Lesson 2: To follow a basic recipe
Lesson 3: To make and test a prototype
Lesson 4: To design a biscuit to a given budget
Lesson 5: To make packaging that meets a given design brief
Lesson 6: To make a biscuit that meets a given design brief

Year 4 : Unit 2

Textiles- Fastenings

Sequence of Learning:

- Lesson 1: To identify and evaluate different types of fastenings
- Lesson 2: To understand that some joining techniques are stronger/weaker than others
- Lesson 3: To design a product to meet a design criteria
- Lesson 4: To make and test a paper template
- Lesson 5 and 6: To assemble a book jacket

Year 4: Unit 3

Electrical systems- Torches

Sequence of Learning:

- Lesson 1: To investigate existing light sources
- Lesson 2: To learn about electrical items and how they work
- Lesson 3: To analyse and evaluate electrical products
- Lesson 4: To design a torch
- Lesson 5: To make and evaluate a torch
- Lesson 6: To evaluate a product

Year 4: Unit 4

Digital world- Mindful moments timer

Sequence of Learning:

- Lesson 1: To create a design criteria for an electronic timer based on analysis of existing products
- Lesson 2: To apply understanding of computer programming to instruct and control a Micro:bit to function as a timer
- Lesson 3: To design, make and develop a prototype case for my mindful moment timer

Lesson 4: To design a logo for a mindfulness company using computer-aided design.

Year 5

Year 5: Unit 1 Structures- Bridges

Sequence of Learning:

Lesson 1: To relate the way things work to their intended purpose

Lesson 2: To explore how to reinforce a beam (structure) to improve its strength

Lesson 3: To build a spaghetti truss bridge

Lesson 4 and 5: To build a wooden truss bridge.

Lesson 6: To complete, reinforce and evaluate my truss bridge.

Year 5 : Unit 2 Food- What could be healthier?

Sequence of Learning:

Lesson 1: To understand where food comes from

Lesson 2: To understand the term 'healthy'

Lesson 3: To adapt a traditional recipe

Lesson 4 and 5: To complete a food product

Lesson 6: To evaluate a product against a recipe

Year 5 : Unit 3 Mechanical systems- Pop up book

Sequence of Learning:

Lesson 1: To design a pop-up book

Lesson 2: To follow my design brief to make my pop up book

Lesson 3: To use layers and spacers to cover the working of mechanisms

Lesson 4: To create a high-quality product suitable for a target user

Lesson 5: To test mechanisms and make adjustments where necessary

Year 5: Unit 4

Textiles- Making a stuffed toy

Sequence of Learning:

Lesson 1: To design a stuffed toy

Lesson 2: To sew blanket stitch

Lesson 3: To create and add decorations to fabric

Lesson 4 and 5: To use a blanket stitch to assemble the components of a stuffed toy

Lesson 6: To evaluate a product against a design criteria

Year 6

Year 6: Unit 1

Food- Come dine with me

Sequence of Learning:

Lesson 1: To research and design a three-course meal

Lesson 2, 3 and 4: To prepare a meal using a recipe. To understand where their food comes from. To write up a recipe

Lesson 5: To evaluate a three course dinner.

Year 6: Unit 2

Textiles- Making a waistcoat

Sequence of Learning:

Lesson 1: To design a waistcoat

Lesson 2: To mark and cut fabric according to a design

Lesson 3 and 4: To use an appropriate stitch to join two pieces of material together

Lesson 5: To use a variety of techniques for decorating

Lesson 6: To evaluate a product against design criteria

Year 6: Unit 3

Electrical Systems- Steady Hand Game

Sequence of Learning:

Lesson 1: To research and analyse a range of children's toys

Lesson 2: To design a steady hand game

Lesson 3: To construct a stable base

Lesson 4: To use tools to shape materials.

Lesson 5: To assemble electronics and complete their electronic game.

Lesson 6: **To evaluate a product against a design criteria**

Year 6: Unit 4

Digital World- Navigating the world

Sequence of Learning:

Lesson 1: To write a design and criteria based on a client request.

Lesson 2: To write a program to include multiple functions as part of a navigation device

Lesson 3: To develop a sustainable product concept

Lesson 4: To develop 3D CAD skills to produce a virtual model

Lesson 5: To present a pitch to 'sell' the product to a specified client