



Autumn

Cook

Dips and Vegetables

Concepts

Nutrition—vegetables
Sweet v savoury
Cooked v raw
Cooking from different cultures—Greece

Skills

Following a simple recipe
Measuring in spoonfuls
Cutting, chopping
Using a knife and a chopping board
Bridge and claw technique
Cutting with scissors
Mashing, mixing

Jam Tarts/Mince Pies

Concepts

What is a recipe?
Cooking from different cultures—England
Sweet v savoury, cooked v raw
A pie can be made with pastry
Seasonality—preserving fruit for the winter

Skills

Following a simple recipe
Measuring in spoonfuls
Rubbing fat into flour
Mixing
Making, rolling and cutting pastry
Baking
Cooling

Spring

Sew

Animal Sock Puppets

Concepts

Process of design
Making products with fabric
Properties of a range of materials
Using suitable materials
Fixing fabric together
Reusing/recycling materials
Features of a puppet
Features of different animals

Skills

Research and Investigate: Existing products
Design: Understand criteria (user, purpose, function, appeal), generate/develop ideas, talking, drawing, labelling
Make: Select tools/materials, making paper templates, drawing/cutting shapes, gluing, joining fabric, drying
Use and Evaluate: Recording of children using puppets, evaluate against criteria

Summer

Build

Vehicles

Concepts

Process of design
Vehicles: user and purpose
Mechanical systems: wheels and axles
Wheels and axles in everyday examples
Structures and materials—strong, stiff and stable.
Materials—properties and functionality
Vehicles and pollution

Skills

Research and Investigate: Different types of vehicles, different parts of a vehicle, explore wheels and axles in toy cars
Design: Understand criteria (user, purpose, function, appeal), generate/innovate/develop ideas, talking, drawing, labelling
Make: Select tools/materials for making a toy vehicle with wheels and axles, cutting, different ways of joining, decorating, finishing
Use and Evaluate: Car racing in the playground exploring speed, film/photograph children doing this, evaluation against criteria and existing products



Autumn

Cook

Pizza

Concepts

Processed v home-made food
Preserving food
Cooking from different cultures—Naples, Italy
History and cost of food
Savoury

Skills

Following a simple recipe, measuring using spoons
Mixing/making a dough/kneading, rolling and shaping
Spreading
Cutting/Slicing—bridge and claw technique
Tearing
Presentation
Baking

Gingerbread

Concepts

Spices, spicy/sweet
History of food, food transport and cost of ingredients
Decoration
Cooked v raw
Baking

Skills

Following a simple recipe
Measuring using spoons
Chopping, Mixing
Rubbing fat into flour
Cracking an egg
Making a dough, rolling, cutting
Baking, cooling, decorating

Spring

Sew

Pencil Cases

Concepts

Process of design
Features of a pencil case—size, materials, fastenings, shape, joining, decoration
Using suitable materials
Properties of different materials
Making products with fabric
Join fabric together—sewing and gluing
Creating stitches with a needle and thread

Skills

Research and Investigate: Existing products
Design: Understand criteria (user, purpose, function, appeal), generate/develop ideas, talking, drawing, labelling
Make: Select tools/materials, making paper templates/patterns, drawing/cutting shapes, threading a needle, tying a knot, running stitch, sewing on a button, gluing on decoration
Use and Evaluate: Photograph pencil cases, written evaluation against criteria

Summer

Build

Moving Pictures

Concepts

Process of design
Mechanical systems: levers and sliders
Lever and sliders in everyday examples
Structures and materials to make levers and sliders in moving pictures strong, stiff and stable.

Skills

Research and Investigate: Levers and sliders, examples of what products which used these: see saw, scissors, hammer, wheelbarrow, shaduf, research examples of moving pictures
Design: Understand criteria (user, purpose, function, appeal), generate/innovate/develop ideas, talking, drawing, labelling, creating a mock up
Make: Select tools/materials for making a moving picture with levers and sliders, cutting, different ways of joining, decorating, finishing
Use and Evaluate: Photograph pictures, evaluation against criteria and existing products



Autumn Sew

Key Rings/Decorations

Concepts

Process of design
Making products with fabric
Types of fabric - natural/synthetic
Properties of fabric—thickness, softness, stretchiness
How fabric is fit for purpose
Features of a key ring/decoration—size, materials, shape, joining, stitching, decoration

Skills

Research and Investigate: Examples of key rings/ decorations, different fabrics, how to make felt
Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, annotated drawings
Make: Select tools/materials, making paper templates/ patterns, drawing/cutting shapes, pinning, threading a needle, tying a knot, running stitch, backstitch, joining, stuffing, gluing, sewing/gluing on a loop
Use and Evaluate: Photograph, written peer evaluation— against criteria and existing products

Spring Build

Pop-up Books

Concepts

Process of design
Mechanical systems: linkages: moving pivot, fixed pivot, types of motion
Linkages: uses and purpose in everyday examples
Materials to make linkages in moving books: strong, stiff and stable.

Skills

Research and Investigate: Linkages, examples of what products which used these: clothes horse, lifts, tool box, engines
Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, create annotated drawings and prototypes
Make: Select tools/materials for making pop-up book with linkages, cutting, different ways of joining, decorating, finishing
Use and Evaluate: Photograph books, written evaluation against criteria and existing products

Summer Cook

Bread and Butter

Concepts

Sweet/Savoury
Making bread with flour made from wheat
Yeast, wholegrains and health
Baking
Dairy products, milk and butter production

Skills

Following a recipe, measuring using scales
Using yeast
Mixing
Making a dough, kneading, rising
Baking
Cooling
Slicing, spreading

Pasta

Concepts

Sweet/Savoury
Food from different cultures
Pasta, pasta production
Vegetables are part of a healthy diet
Tomatoes—production, preserving

Skills

Following a recipe
Weighing using scales
Using a knife—claw method
Using a chopping board
Chopping
Peeling
Pressing



Autumn Sew

Cushions

Concepts

Process of design
Making products with fabric
Types of fabric - natural/synthetic
Properties of fabric—thickness, softness, stretchiness
Features of a cushion – size, materials, shape, joining, decoration
Decoration—appliqué

Skills

Research and Investigate: Appliqué, cushions, running stitch, backstitch, overcast stitch (whipstitch)
Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, annotated drawings
Make: Select tools/materials, making paper templates/patterns, drawing/cutting shapes, pinning, threading a needle, tying a knot, running stitch, backstitch, overcast stitch (whipstitch), appliqué, stuffing
Use and Evaluate: Photograph, written evaluation, peer evaluation—against criteria

Spring Build

Moving Miniature Playgrounds

Concepts

Process of design
Mechanical systems: gears, teeth, interlock, motion transfer, drive gear, driven gear, gearing up, gearing down
Gears: user and purpose in everyday examples
Structures and materials to make a product with gears – 3d shapes, strong, stiff and stable.
Electrical systems: circuits, batteries, bulbs and buzzers

Skills

Research and Investigate: Gears; examples of products which used these: tin openers, bicycles, how gears on a bicycle work, history of gears, ancient Greek Antikythera mechanism (used to predict astronomical positions)
Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, create annotated drawings and exploded diagrams
Make: Select tools/materials for making a moving toy with gears and an electrical circuit, cutting, different ways of joining, decorating, finishing
Use and Evaluate: Written evaluation against criteria and existing products

Summer Cook

Ratatouille and Couscous

Concepts

Sweet/Savoury
Ratatouille—food from France
Couscous—food from North Africa
Vegetables as part of a healthy diet
The different parts of a plant which we eat

Skills

Following a recipe
Weighing using scales
Using a knife—bridge and claw method
Using a chopping board, chopping
Peeling an onion
Cooking vegetables
Soaking

Apple Crumble

Concepts

Sweet/Savoury
British cooking
Different varieties of apples, seasonality
Apples as part of a healthy diet
Environment, sustainability, affordability

Skills

Following a recipe, weighing using scales
Peeling, coring, chopping
Using a knife—bridge method
Using a chopping board
Rubbing fat into flour
Sprinkling
Baking, cooling



Autumn

Build

Cams Toys

Concepts

Process of design

Mechanical systems: cams, followers, sliders, camshaft, rotary motion, linear motion, cam profiles

Everyday examples and purpose of cams mechanisms

Structures and materials to make products with cams and followers —3d shapes, strong, stiff and stable

Skills

Research and Investigate: Cams mechanisms, examples of what products use cams and followers (mechanical toys, sewing machines, engines, clocks), history of cams and mechanisms (Ismail al-Jazari), structure of a cams toy

Design Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, create annotated drawings, cross-sectional diagrams

Make Select tools/materials for making a cam toy, cutting, different ways of joining, decorating, finishing

Use and Evaluate Videoed peer evaluation—against criteria and existing products

Spring

Cook

Pitta Bread

Concepts

Sweet/Savoury

Bread as part of a balanced, healthy diet, different types

Using yeast—leavened/unleavened bread, baking

Cooking from different cultures

Wheat production

Skills

Following a recipe

Measuring using scales

Activating yeast

Mixing

Making a dough, kneading

Rolling and shaping

Baking, cooling

Honey Cake

Concepts

Sweet/Savoury

Honey production and history

Health benefits of honey

Cooking from different cultures

Baking

Skills

Following a recipe, measuring using scales

Mixing

Cracking an egg

Beating

Pouring

Sprinkling

Baking, cooling

Summer

Sew

Bags

Concepts

Process of design

Making products with fabric

Types of fabric—natural/synthetic

Properties and suitability of fabric

How fabrics are made—weaving

Features of a bag – size, materials, fastenings, shape, joining, decoration, handles.

Decoration—appliqué, embroidery

Skills

Research and Investigate: Methods of decoration—appliqué, embroidery, bag design, materials and features

Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, annotated drawings

Make: Select tools/materials, drawing/cutting shapes, pinning, threading a needle, tying a knot, backstitch, overcast stitch (whipstitch), joining, embroidery, appliqué, plaiting

Use and Evaluate: Written evaluation, photograph, film peer evaluation—against criteria and existing products



Autumn

Build

Water Walls

Concepts

Process of design
Mechanisms: pulleys, Archimedes' screw
Everyday examples and purpose of pulleys, purpose of Archimedes' screw
Structures and materials to make products with pulleys in everyday examples—3d shapes, strong, stiff and stable
Plastics pollution/recycling/reuse
Use of electricity and connection to global warming
Engineering systems to create environmentally friendly solutions—Nav Sawhney and the Washing Machine Project.
Appropriate use of materials

Skills

Research and Investigate: Investigate water wall and pulleys
Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, create annotated drawings and prototypes
Make: Select tools/materials for making a water wall for Reception with recycled objects, cutting, tying knots, sticking, making holes
Use and Evaluate: Evaluation with user (Reception)—against criteria and existing products

Spring

Cook/Build

Mezze

Concepts

Sweet/Savoury
Bread as part of a balanced, healthy diet, different types
Using yeast—leavened/unleavened bread, baking
Cooking from different cultures
Wheat production

Skills

Following a recipe, weighing ingredients using scales
Using a knife—bridge and claw method
Chopping, grating
Squeezing a lemon
Using a garlic press, seasoning
Soaking, mixing, mashing
Cracking an egg, cooking with meat

Electrical Toys

Concepts

Process of design
Electrical Toys: user and purpose in everyday examples.
Electrical systems: circuits, batteries, bulbs, buzzers and motors.
Structures and materials to make a product with an electrical circuit — 3d shapes, strong, stiff and stable.

Skills

Research and Investigate: Examples of products which use electrical circuits
Design: Devising criteria (user, purpose, function, appeal); generate/innovate/develop ideas; create annotated drawings
Make: Select tools/materials for making a toy with an electrical circuit, connecting components, cutting, joining, decorating, finishing
Use and Evaluate: Written evaluation against criteria and existing products

Summer

Sew

Upcycling Fashion

Concepts

Process of design
Fast fashion and globalisation
Waste and pollution
Upcycling, recycling, sustainability
Processes for making clothes—seams and hems
Decoration—appliqué, embroidery, buttons, gluing

Skills

Research and Investigate: Fast fashion, upcycling, recycling, sustainability
Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, annotated drawings, pattern pieces
Make: Experimentation with upcycling existing garments, select tools/materials, drawing/cutting shapes, creating pattern pieces, pinning, threading a needle, tying a knot, joining, appliqué, embroidery, running stitch, backstitch, overcast stitch, plaiting, attaching a button
Use and Evaluate: Written evaluation, photograph, evaluation—against criteria and existing products, film fashion show