



Y3 Design & Technology Curriculum Overview

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



Y4 Design & Technology Curriculum Overview

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



Dunchurch Boughton Church of England Junior Academy



Y5 Design & Technology Curriculum Overview

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
Baking

Skills

Following a recipe
Measuring using scales and a measuring jug
Mixing
Cracking an egg
Beating
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



Dunchurch Boughton Church of England Junior Academy



Y6 Design & Technology Curriculum Overview

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