

DT overview

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
N	Teach basic skills to be developed using media and materials: Exploring creative areas of classroom – paint, glue etc. Explore construction resources- build and balance. Explore basic concepts about what is a healthy diet.		Develop skills using media and materials, using tools safely. Use recycled materials for junk modelling, building a Giant’s castle, testing ways to stick or join. Develop cutting skills with scissors. Using different materials. Cooking-pancakes / porridge.		Teaching skills to be developed using media and materials, introduce a range of tools and more ways of joining. Explore textures, create collages. Construction – build enclosures. Cooking-soup/biscuits/ playdoh.	
R	Creates simple representations of events, people and things.		Represents their own ideas, thoughts and feelings through design and technology, art, etc		Constructs with a purpose in mind. Create different textures. Explore different sounds (workshop)	
KS1 and KS2 Children will:						
<ul style="list-style-type: none"> • Investigative and evaluative • Complete focused tasks • Complete a design, make and evaluate assignment 						
	Food	Electricity	Structures	Textiles	Movement	

<p>1</p>	<p><u>Slides and Levers</u> Children read a range of books with slide and levers inside. They will make a simple mechanism that operates using a slide or a lever.</p> <p>Technical Language Slide,lever,pivot,slot,bridge</p> <p>Materials and equipment Card,masking tape,paper fastener,</p> <p>Movement Push,pull,up,down,straight,curve,forwards and backwards</p> <p>Process Design,make,evaluate,user,purpose,ideas,design criteria,product,function</p>	<p><u>Freestanding Structures</u> Children learn about structures. They create their own structure to meet a success criterion. They will evaluate this structure and understand the design process. (Links with History making 3D castles)</p> <p>Technical Language Cut,fold,join,fix Structure, wall, tower,surface,edge,thinner,thicker,curved,straigh ht,point materials Metal,wood,plastic Shapes Process Design,make,evaluate,user,purpose,ideas,desi gn criteria,product,function</p>	<p><u>Preparing Fruits and Vegetables</u> Children learn to prepare fruit and vegetables safely. They taste a range of fruits and vegetables and evaluate them against a success criterion. Children will learn about safety in the kitchen and importance of a healthy diet. They will design and make their own fruit smoothie or fruit kebab.</p> <p>Technical Language Materials and equipment Fruit and vegetables and describing words Cutting utensils: boards, knives,skewers,graters,board,blender</p>
<p>2</p>	<p><u>Templates and Joining</u> Design, make and evaluate a puppet for a child to use to retell a traditional tale.</p> <p>Technical Language Materials and equipment Tools, fabrics components</p> <p>Process Template,pattern pieces, mark out,join,decorate, finish</p> <p>Features,suitable,quality, mock up, design brief, design criteria, make ,evaluate, user, purpose, function</p>	<p><u>Preparing fruit and vegetables.</u> Children learn to prepare fruit and vegetables safely. They taste a range of fruits and vegetables and evaluate them against a success criterion. Children will learn about safety in the kitchen and importance of a healthy diet. They will design make and evaluate a healthy salad.</p> <p>Technical Language Fruit and vegetables and describing words Cutting utensils: boards, knives,skewers,graters,board. Materials and equipment Names of equipment and ingredients used, utensils Process Planning, design criteria, purpose, user, annotaed sketch, sensory, evaluations</p>	<p><u>Wheels and axles</u> Design, make and evaluate a fire engine for a child for a toy.</p> <p>Technical Language Vehicle,wheel,axle, axle holder, chassis, body, cab Materials and equipment Names of tools and materials used (card, corriflute Process Assembling, cutting ,joining, shaping, finishing, fixed, free moving, mechanism</p> <p>Design, make, evaluate, purpose, user, criteria, functional</p>

<p style="text-align: center; font-size: 24pt; font-weight: bold;">3</p>	<p><u>Levers and Linkages:</u> A moving poster</p> <p>Technical Language Mechanism, lever, linkage, pivot, slot, bridge, guide</p> <p>Materials and equipment Card,masking tape,paper fastener,</p> <p>Movement Linear, rotary, oscillating, reciprocating</p> <p>Process User,purpose, function, prototype, design criteria, innovative,appealing, design brief.</p>	<p><u>Shell Structures</u> Make an earthquake proof building model.</p> <p>Technical Language Shell structure, net, 3-D Shape names(prism, cube etc) graphic decisions, font, lettering Design brief, evaluating, design criteria, innovate, prototype</p> <p>Materials and equipment Card, laminating, ribbing</p> <p>Process Marking out, scoring, shaping, tabs, adhesives, joining,assemble, reduce, recycle, re-use</p>	<p><u>Healthy and Varied Diet Tastes from Italy</u></p> <p>Prepare and cook a variety of dishes using a range of cooking techniques.</p> <p>Technical Language Hygienic, edible,grown,frozen, texture, taste Descriptive words of appearance and smell</p> <p>Materials and equipment Names of equipment and ingredients used, utensils</p> <p>Process Planning, design criteria, purpose, user, annotaed sketch, sensory, evaluations</p>
<p style="text-align: center; font-size: 24pt; font-weight: bold;">4</p>	<p><u>Simple circuits and switches –</u> Pyramid security buzzer – pressure switch.</p> <p>Technical Language Series cicuit, fault,connection, control, program,</p> <p>Materials and equipment Switch, battery, battery holder, bulb, bulb holder, wire, insulator, crocodile clip</p> <p>Process: User, purpose, function, prototype, design criteria, innovative, appealing, design brief.</p>	<p><u>Pneumatics –</u> Moving parts – rainforest creatures (crocodiles etc)</p> <p>Technical Language: Componets, fixing, pnematic systems, airtight.</p> <p>Movement: input movement, process, ouput movement, control, compression, pressure, inflate, deflate, seal, linear, oscillating, reciprocating</p> <p>Materials and equipment tubing, syringe, plunger, split pin, paper fastener</p> <p>Process User, purpose, function, prototype, design criteria, innovative, appealing, design brief, research, evaluate,ideas, constraints, investigate.</p>	<p><u>Healthy and Varied Diet</u></p> <p><u>Greek food</u> Prepare and cook a variety of dishes using a range of cooking techniques.</p> <p>Technical Language Hygienic, edible,grown,frozen, texture, taste Descriptive words of appearance and smell</p> <p>Materials and equipment Names of equipment and ingredients used, utensils</p> <p>Process Planning, design criteria, purpose, user, annotaed sketch, sensory, evaluations</p>

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Frame Structures

skills and techniques for accurately joining framework materials

Technical Language:

frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent

Materials and equipment:

card, paper straws, newspaper, square sectioned wood, masking tape, bench hooks, G-clamp, junior hacksaws, finishing media and materials

Process:

design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional

Mechanical systems – Pulleys and gears

investigate combinations of two different sized pulleys to learn about direction and speed of rotation

Technical Language:

pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor

Materials and equipment:

annotated drawings, exploded diagrams

mechanical system, electrical system, input, process, output, pulley, drive belt, gear,

Process:

design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief

Celebrating Culture and Seasonality

(Mexican food)

Follow a basic recipe to prepare and cook a savory food product.

Technical Language:

Ingredients, fat, sugar, carbohydrates, protein, vitamins, nutrients, nutrition, healthy, gluten, dairy, allergy, intolerance, savory

Materials and equipment:

Food items (varied)
basic recipes, suitable equipment and utensils such as: weighing scales, measuring jugs, bowls, spoons, baking trays, parchment paper, plastic film

Process:

Planning, design criteria, purpose, user, sensory, evaluations

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Combining Different Fabric Shapes

Felt Phone Cases

Create a product following design process encompassing a range of different stitching and fixing techniques. Use of computer aided design

Technical Language:

seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces

Materials and equipment:

name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, iron transfer paper

Process:

design criteria, annotate, design decisions, functionality, innovation, authentic, user, purpose, evaluate, mock-up, prototype

**More Complex Switches
Electrical Systems - Vacuum Cleaners –**

Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional

Technical Language:

series circuit, parallel circuit, names of switches and components, input device, output device, system, monitor, control, program, flowchart

Materials and equipment:

zinc carbon or zinc chloride batteries, crocodile leads, bulbs, bulb holders, buzzers, LEDs, micro switches, reed switches and magnets, (LDRs), wire, automatic wire strippers, construction materials and tools as required computer control software and interface boxes or standalone boxes, connecting leads

Process:

function, innovative design specification, design brief, user, purpose

Celebrating Culture and Seasonality

Creating healthy diets – Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Different cultures regarding foods.

Technical Language:

Ingredients, fat, sugar, carbohydrates, protein, vitamins, nutrients, nutrition, healthy, gluten, dairy, allergy, intolerance, savory

Materials and equipment:

Food items (varied)
basic recipes

suitable equipment and utensils such as: weighing scales, measuring jugs, bowls, spoons, baking trays, parchment paper, plastic film

Process:

Planning, design criteria, purpose, user, sensory, evaluations