



DT National Curriculum Coverage and Progression of Skills 2026

KS1 National Curriculum Objective Coverage:

Objective:	Year 1			Year 2		
	Making Healthy Snacks	Moving Minibeasts	Homes	Puppets	Vehicles	Perfect Pizzas
design purposeful, functional, appealing products for themselves and other users based on design criteria	✓	✓	✓	✓	✓	✓
generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology	✓	✓	✓	✓	✓	✓
select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]	✓	✓	✓	✓	✓	✓
select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	✓	✓	✓	✓	✓	✓
explore and evaluate a range of existing products		✓	✓	✓	✓	✓
evaluate their ideas and products against design criteria	✓	✓	✓	✓	✓	✓
build structures, exploring how they can be made stronger, stiffer and more stable			✓			
explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products		✓			✓	
use the basic principles of a healthy and varied diet to prepare dishes	✓					✓

understand where food comes from	✓					✓
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KS2 National Curriculum Objective Coverage:

Objective:	Year 3			Year 4			Year 5			Year 6		
	Moving Monsters	British Inventors	Light-Up Signs	Pencil Cases	Making Mini Greenhouses	Seasonal Food	Fairground	Chinese Inventions	Fashion and Textiles	Programming Pioneers	Building Bridges	Great British Dishes
use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	✓	✓	✓		✓		✓	✓	✓	✓	✓	
select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	✓		✓	✓	✓				✓	✓		
select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	✓		✓	✓	✓			✓	✓			
investigate and analyse a range of existing products			✓	✓	✓		✓		✓			
evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	✓		✓	✓	✓		✓	✓	✓	✓	✓	
understand how key events and individuals in design and technology have helped shape the world		✓			✓			✓		✓		
apply their understanding of how to strengthen, stiffen and reinforce more complex structures		✓	✓		✓		✓				✓	

understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	✓						✓	✓				
understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]			✓				✓			✓		
apply their understanding of computing to program, monitor and control their products			✓				✓			✓		
understand and apply the principles of a healthy and varied diet						✓						✓
prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques						✓						✓
understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed						✓						✓

Knowledge and Skills Progression:

Cooking and Nutrition:

Year	Term	Scheme of Work	Vocabulary	Knowledge and Skills
1	Aut	Making Healthy Snacks	fruit, vegetable, healthy, rainbow diet, plants, underground, on the ground, bushes, vines, trees, greenhouses, allotments, farms, harvested, ripe, weather, taste test, appearance, smell, taste, texture, colourful, bright, shiny, dull, pale, patterned, speckled, strong, mild, fruity, fresh, earthy, zesty, sweet, sour, bitter, salty, tangy, refreshing, bland, spicy, crunchy, soft, smooth, chewy, juicy, hard, crisp, cutting, knife, handle, blade, blunt, sharp, bridge hold, claw grip, fork secure method, snack, kebab, skewer, design criteria.	• I can name a variety of fruits and vegetables. • I know that eating fruits and vegetables are part of a healthy diet. • I know where fruits and vegetables grow. • I can use adjectives to describe the taste, smell and texture of a variety of fruits and vegetables. • I understand basic food hygiene, e.g. washing hands and keeping surfaces clean. • I can use a knife to cut some fruits and vegetables in different ways.
2	Aut	Perfect Pizzas	healthy, unhealthy, diet, balanced, food, food group, fruit, vegetables, fat, sugar, protein, carbohydrate, dairy, meat, fish, eggs, beans, bread, rice, nutrients, vitamins, minerals, fibre,	• I can name a variety of pizza toppings. • I can use the model of the balanced plate to evaluate how healthy different pizzas are.

			calcium, iron bodies, bones, blood, muscles, skin, digestion, energy, grow, move, repair, digest, design, make, prepare, evaluate, product, recipe, ingredients, pizza, base, sauce, topping, tomato, cheese, mushroom, olive, ham, salmon, pepperoni, hygiene, wash, clean, sharp, safety, hazards, rules, equipment, bowl, spoon, fork, knife, grater, scissors, chopping board, oven, oven tray, apron, tie, handle, prepare, cut, chop, grate, stir, mix, cook, spread, sprinkle, appearance, smell, taste, touch, texture, appetising	• I can explore different types of bread and evaluate which would work best for a pizza base. • I can identify which food group a variety of pizza toppings belong to. • I can sort pizza toppings into groups based on different criteria, e.g. animal vs plant products. • I can explain why each of the food groups is important for a balanced diet. • I can design and make a healthy pizza following given criteria. • I can evaluate my finished pizza, saying what I think and feel about it.
4	Sum	Seasonal Food	seasonal food, seasonality, seasons, hemisphere, Northern Hemisphere, Southern Hemisphere, seasonal ingredients, British produce, supermarket supply, imported food, greenhouse growing, grains, wheat, milling, flour, baking, recipe, ingredients, equipment, hygiene, food safety, cooking safely, measuring, weighing, flow diagram, food production, harvesting, climate, weather conditions, food processing, food storage, food preservation, ripening, fruit, vegetables, plant classification, healthy diet, balanced diet, vitamins, minerals, fibre, nutrients, raw, foods, knife skills, bridge hold, claw grip, chopping, dicing, meat, animal products, dairy, fats, vegetarian foods, fish, seafood, sea fishing, freshwater fishing, fish farming, fish stocks, sustainable fishing, environment, seasonal availability	• I can explain what the term 'seasonal food' means. • I know that different parts of the world have different seasonal food. • I can discuss the benefits and problems of unseasonal food being available in shops all year round. • I know that some foods, like wheat, are available all year round in the UK. • I can practise cooking skills including slicing, dicing, beating, whisking, folding, sieving, rolling and grating. • I can follow a recipe to make fairy cakes. • I can describe the cycle of wheat production in the UK. • I can distinguish between fruits that are grown in the UK and those that are grown abroad. • I know how food producers can speed up or slow down the ripening process to make fruits and vegetables available all year round. • I know some of the nutrients we get from fruits, vegetables, meat, fish and dairy products. • I know when certain meats are in season in the UK and which are available all year round. • I can follow a recipe to make a variety of meals. • I know some vegetarian options that provide the same nutrients as meat. • I can explain how fish are caught or reared, processed and used in healthy meals. • I can use what I have learnt about seasonal food to design healthy meals and menus.
6	Sum	Great British Dishes	dish, recipe, ingredient, food product, British cuisine, traditional dish, savoury, sweet, seasonal food, locally sourced, nutrition, healthy diet, balanced diet, food group, carbohydrate, protein, dairy, fruit, vegetables, preparation, cooking, method, measure, measurement, weighing, portion, chopping, slicing, dicing, peeling, grating, mixing, stirring, boiling, baking, frying, heating, combine, flavour, seasoning, herbs, spices, texture, appearance, hygiene, food hygiene, safety, cross-contamination, utensils, equipment, evaluate, taste test, improvement, design criteria	• I understand that national dishes are foods strongly associated with a particular country and often use locally available ingredients. • I can name and describe some traditional British dishes from England, Scotland and Wales. • I know that ingredients and climate influence the types of food traditionally eaten in different countries. • I can use a range of food preparation skills, such as peeling, chopping, grating and mixing. • I can follow and adapt a recipe to make a traditional dish safely and hygienically. • I understand that cuisines from other countries have influenced British food and cooking.

				• I can research, compare and discuss similarities and influences between different cuisines. • I can plan a meal by choosing a recipe, creating a shopping list and considering cost, storage and health.
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Stable Structures:

Year	Term	Scheme of Work	Vocabulary	Knowledge and Skills
1	Sum	Homes	homes, house features, shapes, door, roof, walls, windows, rectangle, square, triangle, circle, materials, bricks, stone, wood, glass, metal, concrete, architect, model, exterior, interior, cutting, shaping, joining, scissors, glue, tape, stapler, sticky tack, string, elastic bands, structure, strength, furniture, table, curtains, properties of materials, flexible, sturdy, transparent, suitable materials, design, design plan, design criteria, goals, client, materials list, equipment, joining methods, stable structure, secure joins, decorated room, making process, stability, base, cardboard, safety rules, finishing techniques, finished product, evaluation, success, improvement, effectiveness, design criteria, product evaluation, reflection	• I can recognise different types of homes and identify some of their features. • I can identify and name shapes used in houses, such as rectangles, squares and triangles. • I know that homes can be made from different materials such as brick, wood, glass and metal. • I can cut, shape and join materials to make a simple structure. • I understand that different materials have different properties and are suitable for different purposes. • I can design a model house using given design criteria. • I can follow my design to make a model house using appropriate materials, tools and joining methods. • I can evaluate my finished model house and suggest ways it could be improved.
3	Spr	British Inventors	invention, inventor, innovation, technology, design, design idea, design criteria, problem, solution, evaluate, evaluation, improvement, product,	• I can explain how concrete is used to make structures more stable. • I can create a structure strong enough to hold a dictionary using just

			prototype, influence, impact, telephone, communication, microphone, speaker, sound, vibration, signal, copper wire, string telephone, internet, network, computer network, World Wide Web, webpage, website, hyperlink, information sharing, reinforced, reinforcement, reinforced concrete, concrete, steel rod, structure, strength, weight, load, crack, material, material properties, waterproof, water-resistant, flexible, lightweight, durable, fabric, rubber, waterproof fabric, mackintosh, layer, coating, testing, investigation, prediction, result	newspaper and tape.
4	Spr	Making Mini Greenhouses	greenhouse, mini greenhouse, structure, frame, panel, covering, ventilation, environment, temperature, heat, sunlight, light, trap heat, transparent, translucent, opaque, stable, stability, strength, support, base, frame structure, cuboid, triangular prism, pyramid, prism, 3D shape, design, design brief, design criteria, design idea, labelled diagram, plan, measurement, materials, material properties, waterproof, lightweight, durable, join, joining method, seal, airtight seal, attach, assemble, construct, prototype, model, test, evaluation, improve, modification	• I know what a greenhouse is and how they work. • I can explore a range of different greenhouses. • I know how greenhouses are used today. • I can explain how the shape of a structure affects its stability. • I know that the weight of the structure needs to be evenly spread on the base to make it secure. • I know that the wider a structure's base is, the more stable it will be. • I can use 3D nets to explore potential structures for a greenhouse, assessing their stability. • I can investigate ways of making a structure more stable, e.g. by inserting dowelling or adding triangles at the joins. • I can experiment with a range of materials to test which would be most appropriate for making the structure of a mini greenhouse. • I can design a mini greenhouse using specific design criteria. • I can select appropriate tools and materials to make a mini greenhouse. • I can follow my design to make a mini greenhouse. • I can evaluate my finished mini greenhouse for stability, effectiveness and visual appeal.
6	Spr	Building Bridges	bridge, beam bridge, arch bridge, suspension bridge, truss bridge, span, gap, deck, parapet, pillar, column, pier, foundation, beam, cross-section, truss, truss section, structural frame, arch, abutment, suspension cable, anchor, compression, tension, load, distribute load, weight, force, structural strength, stiffness, stability, reinforce, prototype, model, structure, design brief, design criteria, scale, dimension, measurement, plan, annotated design, construction, materials, testing, evaluate, improvement	• I know what beams and pillars are and how they are used in bridge construction. • I can predict which beams will be strongest from their cross-section. • I can test the strength of different beam shapes using paper and card. • I can explain what a truss is and how trusses make bridges stronger. • I can identify the three types of trusses commonly used in bridge design. • I can build a truss bridge spanning a width of 40cm using paper straws. • I can use a fair test to evaluate the strength of my truss bridge. • I can explain how arches work to make bridges stronger. • I can test the arch heights to see which can bear the most load. • I can make an arch frame. • I can explain how suspension bridges use tension forces to work. • I can design, make and evaluate a prototype suspension bridge using a scale of 1:100 according to specific design criteria.

Programming and Electrical Systems:

Year	Term	Scheme of Work	Vocabulary	Knowledge and Skills
3	Sum	Light-Up Signs	illuminated sign, signage, advertisement, information sign, decorative sign, light box, lightbox, enclosure, frame, cladding, lettering, silhouette lettering, transparent, translucent, opaque, circuit, electrical circuit, series circuit, component, electrical component, wire, crocodile clip, power supply, battery, cell, bulb, incandescent bulb, LED (light-emitting diode), resistor, switch, current, electricity, positive terminal, negative terminal, connection, temporary connection, permanent connection, strip wire, twist wire, solder, soldering iron, prototype, product design, design criteria, annotated design, measurement, dimension, marking out, cutting, assembling, gluing, construction, model, evaluation, improvement, microcontroller, microcomputer, Raspberry Pi, BBC micro:bit, Arduino, programming, code, algorithm	• I can explore and analyse illuminated signs. • I can create a simple circuit with incandescent bulbs and a switch. • I can describe the difference between an LED and an incandescent light bulb. • I can create a simple circuit with an LED bulb and a resistor. • I can make a circuit with a string of LED lights. • I can design an illuminated light box against a set of design criteria. • I can select materials, tools and components to create a free-standing structure. • I can make a stable, free-standing structure to house an electrical circuit. • I can strip, twist and join wire to make permanent connections. • I can insert an electrical circuit into a free-standing structure to create an illuminated light box. • I can evaluate the effectiveness of my finished product against the design criteria.
6	Aut	Programming Pioneers	computer system, computer program, programming, programmer, computer engineer, computer scientist, algorithm, flow chart, instruction, code, debugging, program error, software, hardware, microcontroller,	• I can explain how computers and computer programs are used in a variety of products. • I can explain how modern memory chips work to store information.

			embedded system, electronics, electrical system, circuit, component, input, output, sensor, motion sensor, switch, push button, LED light, buzzer, motor, signal, monitoring, control system, traffic light system, pelican crossing, prototype, prototyping, model, prototype model, design brief, design idea, annotated sketch, schematic, wiring, breadboard, Raspberry Pi, Arduino, micro:bit, Scratch programming, test, evaluation, improvement, innovation, product development	• I can write an algorithm to suggest how various appliances might work. • I know what a computer engineer is and what they do. • I can describe some examples of how computer hardware and software specialists work together to create new products. • I can develop and build a prototype pedestrian crossing using computer programming. • I can develop, model and communicate ideas for an embedded system which monitors and controls a door, room or both. • I can describe the typical design process for computer-controlled electronic products. • I can debug errors in an algorithm. • I can suggest ways to change an algorithm to improve a system. • I can select and use electronic components to construct a prototype of an embedded computer-controlled room system. • I can evaluate my design for a computer-controlled system and consider the views of others to improve my work.
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Mechanical Systems:

Year	Term	Scheme of Work	Vocabulary	Knowledge and Skills
1	Spr	Moving Minibeasts	sliding mechanism, lever, pivot, fixed point, wheel mechanism, mechanism, moving picture, slot, arc, handle, background scene, design, design sheet, plan, equipment, order of work, evaluate, evaluation, improve, join, attach, combine, components, materials, tools, scissors, ruler, card, paper fastener, split pin, sticky tack, glue, tape, hole, cut, join, assemble, construct, moving parts, rotate, movement, design idea, mechanism choice, minibeast, appearance, disappear, moving image	• I can make a sliding mechanism out of card. • I know what a pivot and lever are. • I can use a pivot and lever mechanism using card and a split pin. • I can make a wheel mechanism using card and a split pin. • I can match a mechanism to the type of movement they produce. • I can design a moving minibeast picture to include a variety of moving mechanisms. • I can follow a design to create a moving minibeast picture for a particular purpose. • I can evaluate my finished moving minibeast picture by identifying things that worked well and things that could be improved.
2	Spr	Vehicles	vehicle, wheels, axle, axles, chassis, wheel mechanism, rotate, movement, fixed axle, rotating axle, body, structure, components, materials, tools, cardboard, card, box, carton, plastic bottle, straw, dowel, glue, tape, masking tape, scissors, attach, join, combine, construct, assemble, decorate, logo, design, design idea, design sheet, design criteria, plan,	• I can investigate a range of vehicles, identifying and labelling their features. • I know what an axle is. • I know what a chassis is. • I can explore different ways of using axles, chassis and wheels to create

			sketch, labelled diagram, features, purpose, function, compare, investigate, experiment, order of work, safety, evaluate, evaluation, improve, finished product	a moving base. • I can design a vehicle with wheels, axles and chassis, as well as a body. • I can follow a design to make a moving vehicle. • I can evaluate my finished moving vehicle.
3	Aut	Moving Monsters	pneumatic system, pneumatics, air pressure, movement, force, control, inflate, deflate, syringe, tubing, balloon, air, pump, mechanism, moving part, system, components, materials, tools, card, plastic bottle, straw, masking tape, scissors, craft knife, elastic band, join, fix, attach, assemble, construct, structure, design, design idea, annotated diagram, labelled diagram, plan, design sheet, monster, moving monster, design criteria, investigate, experiment, technique, combine materials, prototype, effectiveness, order of work, evaluate, evaluation, improve, finished product, construction, decoration	• I know that some products use air to make them work. • I understand that a pneumatic system uses air pressure to create movement. • I can investigate and describe how simple pneumatic systems work. • I can explore different ways of using pneumatic systems with a range of materials. • I can generate ideas for a product that uses a pneumatic system to create movement. • I can design a monster with a moving part controlled by a pneumatic system. • I can make a product by constructing a working pneumatic system using appropriate materials and tools. • I can evaluate my finished product and suggest improvements to the design.
5	Aut	Fairground	fairground ride, mechanism, rotation, rotating part, movement, electric motor, electrical circuit, wires, switch, power source, motor, pulley, belt, pulley and belt system, axle, transfer of movement, speed, direction, control, framework, structure, stable structure, stability, reinforcement, strengthening, triangle support, diagonal support, prototype, model, components, materials, card, dowelling, straw, string, elastic band, cotton reel, joining, fixing, assembling, construction, tools, scissors, craft knife, glue, tape, design, design idea, design sheet, CAD design, circuit design, annotated diagram, labelled diagram, design process, planning, making process, order of work, testing, evaluate, evaluation, improvement, finished product, accuracy, safety	• I know that many fairground rides use electric motors to create rotating movement. • I can identify and describe the moving parts and mechanisms used in fairground rides. • I understand how electrical circuits with motors can be used to create rotating parts. • I understand that pulley and belt systems can transfer movement between components. • I can investigate and prototype structures to create stable frameworks for a product. • I can design a fairground ride that includes a rotating part powered by an electrical motor. • I can make a model fairground ride by constructing a stable structure and creating a working electrical circuit. • I can evaluate my finished product and suggest improvements to the design and construction.
5	Spr	Chinese Inventions	machine, mechanism, movement, motion, rotation, circular motion, linear motion, transmission, gear, cog, gear system, driver gear, follower gear, gear ratio, gearing up, gearing down, crank, lever, pulley, pulley system, water wheel, water-powered machine, water clock, axle, turning force, speed, direction, control, magnetic needle, magnet, magnetism, compass, floating compass, hanging compass	I explore how different transmissions create different movements. • I can use a crank to change the motion on a transmission from circular to linear motion.

Textiles:

Year	Term	Scheme of Work	Vocabulary	Knowledge and Skills
2	Aut	Puppets	puppet, finger puppet, glove puppet, marionette, character, features, movement, design, design idea, design criteria, labelled diagram, template, pattern, fabric, felt, material, decoration, button, sequin, ribbon, wool, glue, fabric glue, join, seam, stitch, sewing, running stitch, over stitch, needle, thread, knot, cut, attach, assemble, decorate, component, tool, scissors, design process, plan, make, evaluate, finished product, improve	• I can explore a variety of puppets, identifying and labelling their features. • I can cut out felt using a simple template. • I can stick pieces of felt together to make a finger puppet. • I can add pieces of felt and other materials to a finger puppet to create features, such as eyes, hats and mouths. • I can use running stitch to join two pieces of fabric together. • I can use over stitch to join two pieces of fabric together. • I can sew a button onto a piece of fabric. • I can design a glove puppet for a particular purpose. • I can follow a design to make a glove puppet by sewing two pieces of fabric together and adding decorations. • I can evaluate my finished glove puppet by identifying what went well and what could be improved.

4	Aut	Pencil Cases	pencil case, product, design, function, functionality, visual appeal, feature, success criteria, design idea, labelled diagram, plan, order of work, prototype, finished product, evaluation, improve, material, fabric, felt, textile, waterproof, durable, lightweight, rigid, flexible, stitch, sewing, running stitch, whipstitch, backstitch, seam, join, edge, knot, thread, needle, pin, fastening, zip, button, buttonhole, popper, toggle, clasp, measure, measurement, ruler, shape, size, template, cut, attach, assemble, decorate, decoration, decorative technique, embroidery, appliqué, embellishment, bead, sequin, ribbon, tool, scissors	• I can investigate and describe the features of different pencil cases, including materials, fastenings and shape. • I understand that products need to be both functional and visually appealing. • I can use sewing stitches to join pieces of fabric together securely. • I can attach and compare different fastenings, such as buttons and poppers. • I can use decorative techniques such as embroidery, appliqué and adding embellishments to fabric. • I can design a pencil case that meets success criteria and includes suitable stitches, fastenings and decorative features. • I can follow my design to make a pencil case using appropriate tools, materials and techniques. • I can evaluate my finished product against the success criteria and suggest improvements.
5	Sum	Fashion and Textiles	textiles, fabric, cloth, cotton, fibre, synthetic fibre, woven fabric, textile properties, flexible, strong, stretchy, durable, fashion designer, product, garment, clothing, construction, design, design criteria, sketch, design idea, annotated design, pattern piece, pattern, template, seam allowance, measurement, mark, dressmaker's chalk, cut, transfer design, wrong side of fabric, join, seam, stitch, sewing, hand sewing, running stitch, straight stitch, whip stitch, back stitch, hem, hemming, pin, needle, thread, double-threaded needle, knot, fastener, button, zip, popper, buckle, Velcro, drawstring, cord, eyelet, channel, decoration, decorative stitch, embellishment, embroidery, sequin, iron-on transfer, fabric pen, dye, finished product, evaluate, improvement	• I can explain the process of turning raw cotton into cloth. • I know that products that are woven together are called textiles. • I know that different textiles have different properties, and can match these to their purpose. • I can identify straight stitch, zigzag stitch, whip/blanket stitch, blind stitch, buttonhole stitch and overlock stitch on a variety of ready-made garments. • I can describe what the job of a fashion designer entails. • I can sew a basting stitch. • I can sew a whip stitch. • I can sew a hem. • I can sew back stitch. • I can sew an appliqué decoration. • I can use back stitch to embroider. • I know what a pattern piece is and why they are important when designing a garment. • I can design a drawstring bag, including the necessary pattern pieces. • I can use pattern pieces to measure, mark, cut and sew fabric. • I can sew design elements according to design criteria. • I can join two pieces of fabric by hand sewing, using an appropriate stitch. • I can evaluate my finished product against a set of design criteria.

Inventions and Achievements:

Year	Term	Scheme of Work	Vocabulary	Knowledge and Skills
3	Spr	British Inventors	invention, inventor, innovation, technology, design, design idea, design criteria, problem, solution, evaluate, evaluation, improvement, product, prototype, influence, impact, telephone, communication, microphone, speaker, sound, vibration, signal, copper wire, string telephone, internet, network, computer network, World Wide Web, webpage, website, hyperlink, information sharing, reinforced, reinforcement, reinforced concrete, concrete, steel rod, structure, strength, weight, load, crack, material, material properties, waterproof, water-resistant, flexible, lightweight, durable, fabric, rubber, waterproof fabric, mackintosh, layer, coating, testing, investigation, prediction, result	• I can explain about the invention of the mackintosh. • I can investigate ways of making fabric waterproof. • I can explain about the invention of the world wide web. • I can describe how the invention of the internet has changed the world.

5	Spr	Chinese Inventions	invention, innovation, technology, achievement, ancient China, Chinese civilisation, four great inventions, paper, papermaking, moveable-type printing, printing press, gunpowder, compass, navigation, magnetism, magnetic needle, recording information, communication, knowledge sharing, trade, exploration, warfare, industry, society, global impact, historical development, engineering, design solution, problem solving	• I can explain how the invention of paper helped shape the world. • I can explain the traditional method for making paper. • I can test a variety of types of paper for strength, absorbency, opacity, etc. • I can make recycled paper. • I know how gunpowder was invented. • I can explain how the invention of gunpowder helped shape the world. • I can explain how the invention of the compass changed the world. • I can make a hanging/floating compass. • I can design and label my own compass. • I can explain what water-powered machines are and how they helped change the world. • I can explain why kites were first invented and how they were made. • I can make a variety of kite prototypes and test their effectiveness. • I can design, make and evaluate a kite according to specific design criteria.
6	Aut	Programming Pioneers	computer system, computer program, programming, programmer, computer engineer, computer scientist, algorithm, flow chart, instruction, code, debugging, program error, software, hardware, microcontroller, embedded system, electronics, electrical system, circuit, component, input, output, sensor, motion sensor, switch, push button, LED light, buzzer, motor, signal, monitoring, control system, traffic light system, pelican crossing, prototype, prototyping, model, prototype model, design brief, design idea, annotated sketch, schematic, wiring, breadboard, Raspberry Pi, Arduino, micro:bit, Scratch programming, test, evaluation, improvement, innovation, product development	• I know that Charles Babbage created the first mechanical computer. • I know that Ada Lovelace is referred to as the world's first computer programmer. • I know that Steve Jobs and Steve Wozniak co-founded Apple, Inc. to make the first Apple computers.