

DESIGN & TECHNOLOGY

Purpose of Study: Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

KS1 Pupils should be taught:

Design

- 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

Make

- 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

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- 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

Cooking and Nutrition

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

KS2 Pupils should be taught:

Design

- 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

Make

- 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

Evaluate

- 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

Technical knowledge

- 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
- Cooking and Nutrition
- 🎯 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.

Intent

At St James', the intent of the DT Curriculum is to provide plenty of opportunities for the children to learn, apply and strengthen essential skills required in the designing, making and evaluating of an effective product for a given purpose. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Pupils learn how to take risks, becoming resourceful, innovative and enterprising.

Implementation

To ensure high standards of teaching and learning in design and technology, we implement a curriculum that is progressive throughout the whole school. Design and technology is generally taught as part of a half-termly topic, focusing on knowledge and skills stated in the National Curriculum. The teaching of DT should enable all children to gain 'real-life' experiences. Teachers plan lessons for their class using our progression of knowledge and skills documents. The progression document ensures the curriculum is covered and the skills/knowledge taught is progressive from year group to year group.

Impact

The high-quality teaching of DT at St James will enable learners to build a strong range of core skills as they progress through the school that will give them the opportunity to become resourceful, innovative, enterprising and capable citizens. All children will feel empowered to design and create a range of products as well as applying practical expertise to enable them to participate successfully in an increasingly technological world. Children will evaluate work by other designers and consider how resources may be adapted to suit the needs of others. They will learn to see the value of design in a variety of contexts and the scope of art to build towards different careers in the future.

Skills and knowledge

	YR	Y1	Y2	Y3	Y4	Y5	Y6
Key Concept: Design	To explore a variety of resources to create objects.	To begin to develop ideas for a set product.	To recognise the purpose of a product.	To start to generate own ideas for an item, considering its purpose and the user/s.	To generate ideas, considering current products and evaluations.	To generate own designs to solve a problem or suit a purpose, building on knowledge of existing	To generate, develop, model and communicate their ideas through discussion, annotated

	<p>To explore own ideas and thinking.</p> <p>To communicate and express discoveries and understanding.</p> <p>To share creations, explaining the process as they work.</p> <p>ELG: To share their creations, explaining the processes they have used.</p>	<p>To design products that have a clear purpose and an intended user.</p> <p>To explain verbally what they are going to make.</p> <p>To design by drawing a picture and begin to label with materials that you will use.</p> <p>To identify how parts will be joined.</p>	<p>To use knowledge of existing products to influence own design.</p> <p>To create a more detailed design by drawing a picture and labelling materials and tools to be used.</p> <p>To know how a design will be joined.</p> <p>To begin to recognise main stages required to make product.</p> <p>To explore the purpose of templates and mock ups of ideas in card or paper.</p> <p>To explain why materials are chosen by annotating.</p> <p>To explain verbally in greater depth what they are making.</p>	<p>To identify the main stages of making a product</p> <p>To establish criteria for a successful product.</p> <p>To make products by working efficiently (such as by cutting all pieces or attaching in a particular order).</p> <p>To review and refine work and techniques throughout.</p> <p>To make simple mock ups of ideas to test key features and skills.</p>	<p>To identify and consider more detailed success criteria when designing a product.</p> <p>To explore how to make labelled drawings from different viewpoints showing specific features.</p> <p>To develop a clear idea of what has to be done, planning how to use equipment, materials and processes</p> <p>To explore how software can be used to design and represent product designs.</p> <p>To make simple mock ups of ideas adjusting original design as needed.</p>	<p>products and consumer needs.</p> <p>To design with the user in mind, motivated by the service a product will offer.</p> <p>To present detailed designs showing sketches and cross-sectional imagery as well as multiple viewpoints of a product.</p> <p>To make products through stages of prototypes, making continual refinements.</p> <p>To gather feedback on an original design and use this to further refine ideas.</p> <p>To design products ensuring products have a high-quality finish, using art skills where appropriate.</p>	<p>sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <p>To design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user</p> <p>To consider the availability and costings of resources when planning out designs</p> <p>To work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment</p>
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Key Concept: Make	<p>To explore own ideas when creating.</p> <p>To explore different materials.</p>	<p>To explain why materials are chosen.</p> <p>To cut materials with some accuracy (paper, card, felt)</p>	<p>To follow a simple plan, with support</p> <p>To begin to select from a range of hand tools and equipment, such as scissors, rulers, hammers</p>	<p>Choose suitable techniques to construct products or to repair items</p> <p>To measure and mark out to the nearest cm independently</p>	<p>To carefully select from a range of tools and equipment, explaining their choices</p> <p>To select from a given range of materials and components according</p>	<p>To learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures</p>	<p>To show an understanding of the qualities of materials to choose appropriate tools to cut and shape (e.g. sharper scissors for fabric than paper)</p> <p>To independently plan by suggesting what to do next;</p>

	<p>To explore different tools safely.</p> <p>To explore ways to attach materials.</p> <p>To improve designs using different materials.</p> <p>ELG: To safely use and explore a variety of materials, tools and techniques, design, texture, form and function.</p>	<p>To understand the need to measure and mark out</p> <p>To follow instructions to assemble, join and combine materials, components or ingredients</p> <p>To attach simple decorations to improve the appearance of their product</p>	<p>To select from a range of materials, textiles and components according to their characteristics</p> <p>To cut and shape a range of materials (fabric, thin plastic, polystyrene, thick cardboard) with some accuracy</p> <p>To assemble, join and combine materials, components or ingredients</p> <p>To begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations</p> <p>To select appropriate joining techniques for different materials and situations e.g. glue, tape</p> <p>To measure independently to the nearest cm and mark out with support</p>	<p>To place the main stages of making in a systematic order</p> <p>To score materials with support</p> <p>To begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics</p>	<p>to their functional properties or aesthetic qualities</p> <p>To learn to use a limited range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures</p> <p>To cut, shape and score materials with increasing accuracy</p> <p>To measure and mark out to the nearest millimetre</p> <p>To assemble, join and combine material and components with some degree of accuracy</p> <p>To strengthen materials using suitable techniques</p>	<p>To shape and score materials with precision and accuracy</p> <p>To assemble, join and combine materials and components with accuracy</p> <p>To select from a range of materials and components according to their functional properties or aesthetic qualities</p> <p>To cut, shape and score materials with precision and accuracy (paper, card, fabric)</p> <p>To assemble, join and combine materials and components with increasing accuracy</p> <p>To refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape</p>	<p>To select from a range of materials and components according to their functional properties <u>and</u> aesthetic qualities, giving clear reasons for their choices</p> <p>To create step-by-step plans as a guide to making;</p> <p>To independently use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures;</p> <p>To independently take exact measurements and mark out, to within 1 millimetre</p> <p>To use a full range of materials and components, including construction materials and kits, textiles, and mechanical components</p> <p>To cut, shape and score a range of materials with precision and accuracy (wood, wire, stretchy fabric)</p> <p>To independently assemble, join and combine materials and components with accuracy</p>
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Key Concept: Evaluate	<p>To share their ideas and creations.</p> <p>To explain the process that has been used.</p> <p>To return and build on previous learning.</p>	<p>To explore existing objects and designs to identify own likes and dislikes.</p> <p>To explore pictures/objects</p>	<p>To evaluate their products and ideas against purpose (simple design criteria).</p> <p>To identify strengths and possible changes they</p>	<p>To explore existing designs and improve upon, giving reasons for choices.</p> <p>To recognise how products have been designed to fill a gap in</p>	<p>To disassemble products to understand how they work</p> <p>To gather feedback from others.</p> <p>To explore and evaluate existing products,</p>	<p>To create own design criteria to improve upon existing products</p> <p>To evaluate the quality of design, manufacture and fitness for purpose</p>	<p>To create own design criteria based on analysis of existing products and purpose of product</p> <p>To complete detailed competitor analysis of</p>

	<p>To refine ideas.</p> <p>To develop an ability to represent ideas.</p> <p>ELG: To share their creations and explain the process they have used.</p>	<p>focusing on how they have been made.</p> <p>To suggest improvements to existing designs.</p> <p>To share own product with others and to say what went well and what could be done better/ differently next time.</p>	<p>might make to improve their products.</p> <p>To talk confidently about their ideas, saying what they like and dislike.</p> <p>To explore products to see how they have been made and how this can be used to make own design.</p> <p>To understand that products have been designed and made for a purpose</p>	<p>the market/to support a particular need.</p> <p>To explore what materials/ingredients products are made from and suggest reasons for this;</p> <p>To consider their design criteria as they make their product</p> <p>To evaluate their final product based on their own design criteria.</p> <p>To know some key events, including technological developments, and designs of individuals in design and technology that have heled shape the world</p> <p>To identify some of the great designers in all of the areas of study to generate ideas for designs (textiles, mechanics)</p>	<p>explaining the purpose of the product and whether it is designed well to meet the intended purpose;</p> <p>To consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product</p> <p>To evaluate their product against their original design criteria suggesting changes they would make if repeating</p> <p>To evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.</p> <p>To identify some of the great designers in all of the areas of study to generate ideas for designs (electronics, food)</p>	<p>of products as they design and make</p> <p>To respond to the feedback of others to make improvements</p> <p>To combine elements of design from a range of inspirational designers throughout history</p>	<p>other products on the market</p> <p>To continually evaluate the quality of design, manufacture and fitness for purpose of products as they design and make and make ongoing adjustments and refinements</p> <p>To combine elements of design from a range of inspirational designers throughout history, giving reasons for choices</p>
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Skill: Textiles	<p>To explore a range of different fabrics.</p> <p>To develop knowledge- and understanding of different materials.</p> <p>To develop own ideas through</p>	<p>To develop sewing techniques using a range of different materials such as card and hole punching and binca</p> <p>To use a prepared template.</p>	<p>To join fabrics by using running stitch with more precision (I.e. straight lines and recognising where to start so knot isn't visible).</p> <p>To <u>design</u>, make and use their own template.</p>	<p><i>Hunter/Gatherer bag</i></p> <p>To use sewing techniques to join fabrics by using running and over stitch.</p>		<p>To decide which stitches are most suitable for design and complete these proficiently.</p> <p>To design a product using multiple pattern pieces and cut this from</p>	

	<p>experimentation with diverse materials e.g. loose parts.</p> <p>To express discoveries.</p> <p>To explore different texture.</p> <p>To explore the use of materials for joining.</p> <p>To explore making improvements to models.</p> <p>To explore weaving.</p> <p>ELG: To use a range of small tools.</p> <p>ELG: To safely use and explore a variety of materials, tools and techniques, design, texture, form and function.</p>	<p>To make a template following instructions and cut out fabric to make design.</p> <p>To join 2 pieces of fabric glue and staples.</p> <p>To begin to join 2 pieces of fabric using running stitch, with support.</p> <p>To develop a product by adding decoration with buttons, beads, ribbons and sequins, by joining with glue.</p>	<p>To explore ways of making and using more than one template at a time.</p> <p>To develop a product by sewing on decoration such as buttons, beads, sequins, braids, ribbons.</p> <p>To explore ways to colour textiles to suit purpose of design (fabric pens, batik and dye etc)</p>	<p>To independently pin two pieces of fabric together and then join</p> <p>To develop a product by adding fastenings</p> <p>To sew using a range of different stitches (e.g. blanket stitch, back stitch.</p> <p>To demonstrate how to measure, tape or pin, cut and join fabric with some accuracy to make a simple product</p> <p>To understand the need for and include a seam allowance when designing and measuring fabrics.</p> <p>To select the most appropriate techniques to decorate textiles</p>		<p>fabric considering wastage.</p> <p>To create and sew products employing a seam allowance.</p> <p>To use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles – such as a soft decorative feature on cushion.</p> <p>To select from and use a wide range of materials according to their functional properties and aesthetic qualities.</p> <p>To join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch;</p>	
	YR	Y1	Y2	Y3	Y4	Y5	Y6
<p>Technical knowledge:</p> <p>Construction, Mechanics and Electrical Systems</p>	<p>To explore cutting, following lines.</p> <p>To explore different types of paper e.g. tissue, crepe</p> <p>To explore a variety of tools to manipulate</p>	<p><i>Paper & Card – moving pictures</i></p> <p>To cut materials safely using tools provided (scissors)</p> <p>To demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).</p>	<p><i>Paper & Card – structures (e.g. castle)</i></p> <p>To demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen) independently.</p>	<p>To cut materials accurately and safely by selecting appropriate tools (scissors, craft knife)</p> <p>Mechanics: <i>Link to Forces of Nature – dams and harnessing the power of water.</i></p>	<p>To apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).</p> <p>Electricals and electronics:</p>	<p>To cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).</p>	<p>Electricals and electronics:</p> <p>To create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).</p>

	<p>materials by cutting, fringing, hole punching.</p> <p>To explore different materials for attaching.</p> <p>To explore and develop an understanding of how to create.</p> <p>To explore a variety of construction resources.</p> <p>To explore different techniques in joining materials e.g. stacking both vertically and horizontally, balancing.</p> <p>To explore making construction resources to make enclosures and creating spaces.</p> <p>To develop a representation of objects based on imagination, observation and experience.</p> <p>ELG: To use a range of small tools, including, scissors and cutlery.</p>	<p>To identify and use materials to join e.g. split pins, masking tape, treasury tags</p> <p>To cut along lines, straight and curved</p> <p>To explore moving mechanisms and design (pop up, slider, spring)</p> <p>To make a moving picture with at least one moving mechanism (e.g. pop up/slider etc)</p> <p><i>E.G. Homes</i></p> <p>To build structures using a range of different construction materials (duplo, lego etc)</p> <p>To explore how to join appropriately for different materials and situations e.g. glue, tape</p> <p>To use a glue gun with adult support.</p> <p>To use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.</p>	<p>To investigate ways to make structures more stable (legs, flanges etc)</p> <p>To investigate and use joining techniques: temporary, fixed and moving – slits, folds, flaps.</p> <p>To investigate strengthening sheet materials</p> <p><i>E.G. Rainforest Explorer Jeep/cart</i></p> <p>To build structures, exploring how they can be made stronger, stiffer and more stable including rolling paper.</p> <p>To make vehicles with construction kits which contain free running wheels</p> <p>To use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels.</p> <p>To attach wheels to a chassis using an axle</p>	<p>To understand mechanical systems in existing products e.g. gears, pulleys and levers.</p> <p>To consider how a mechanical system could be used in product of own design (link to science – forces).</p> <p>To create a product that uses appropriate mechanisms (such as levers, winding mechanisms, pulleys and gears)</p>	<p>To create series and parallel circuits.</p> <p>To recognise how bulbs, switches, buzzers and motors can be used in a product.</p> <p>To design and make a product containing switches, bulbs, buzzers or motors.</p> <p>Computing:</p> <p>To control and monitor models using software designed for this purpose (e.g. Lego sets)</p>	<p>Develop a range of practical skills to create products (e.g. cutting, drilling and screwing, nailing, gluing, filling and sanding).</p> <p>Mechanics:</p> <p>To convert rotary motion to linear using cams and cranks.</p> <p>To use innovative combinations of electronics (or computing) and mechanics in own product designs</p>	<p>Computing:</p> <p>To write code to control and monitor models or products.</p>
	YR	Y1	Y2	Y3	Y4	Y5	Y6
Cooking & Nutrition	<p>To explore food products.</p> <p>To begin to explore which foods are healthy and unhealthy.</p>	<p>To know which foods are healthy and unhealthy.</p> <p>To understand that all food comes from plants or animals</p> <p>To cut ingredients safely and hygienically.</p>	<p>To understand the need for a variety of foods in a diet</p> <p>To know that food has to be farmed, grown, or caught</p>	<p><i>To name the five food groups and how they benefit our health (Link to PHSE)</i></p> <p><i>To know the term “balanced diet” and give examples of a balanced healthy meal (link to PHSE)</i></p>	<p><i>Plan a meal which gives a healthy balance of foods from across the food groups (link to PHSE)</i></p> <p>To identify that foods can be grown, reared, caught or processed.</p>	<p><i>Plan a day’s menu which gives a healthy balance of foods from across the food groups</i></p> <p>To know how global foods are harvested and processed for transport.</p>	<p>Plan and cook a healthy menu identifying and using seasonal, local produce (link to History and rationing)</p> <p>To know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as</p>

<p>To explore the use of tools when preparing food.</p> <p>To explore how to use a variety of tools safely.</p> <p>ELG: To use a range of small tools, including cutlery</p> <p>ELG(PSED): To understand the importance of healthy food choices</p>	<p>(fruit kebabs)</p>	<p>To cut, peel and grate a range of ingredients safely and hygienically</p> <p>To prepare simple dishes safely and hygienically, without using a heat source (sandwiches)</p> <p>To measure and weigh food items according to a simple recipe, e.g. spoons, cups, electronic scales (with support) E.g. jam tarts, fairy cakes</p>	<p>To use a range of techniques such as mashing, whisking, crushing to prepare ingredients safely and hygienically (Greek Salad, dressings, potato salad...)</p> <p>To follow a simple recipe with support.</p> <p>To understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;</p>	<p>To start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world;</p> <p>To begin to use techniques such as mixing, kneading and baking to assemble or cook ingredients. (biscuits?)</p> <p>To use a heat source, with support, to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;</p> <p>To begin to measure and weigh ingredients in grams and millilitres</p> <p>To follow a simple recipe independently.</p> <p>To begin understand seasonality.</p>	<p>To know how different foods need to be stored (knowledge of microorganisms)</p> <p>To use a range of cooking techniques to assemble or cook ingredients bread</p> <p>To accurately measure ingredients to the nearest gram, millilitre's etc</p>	<p>fish) in the UK, Europe and the wider world;</p> <p>To know how the global food industry has developed since "Grow your Own" during WW2</p> <p>To investigate different storage techniques</p> <p>To prepare ingredients hygienically choosing the most appropriate method and utensils for the purpose (meal)</p> <p>To understand how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;</p> <p>To measure accurately and calculate ratios of ingredients to scale up or down from recipe.</p> <p>To create, adapt and refine recipes focusing on ingredients e.g. adding or substituting one or more ingredients to change the appearance, taste, texture and aroma;</p> <p>To alter methods, cooking times and temperatures</p>
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Key Vocabulary

	YR	Y1	Y2	Y3	Y4	Y5	Y6
Design	Idea	Product, user, materials, label, part,	purpose, design, stages, equipment, plan, designer	Efficient, technique, criteria, features, design brief, adapt, labelled drawings,	Success criteria, annotated sketch, viewpoints, process,	Consumer, service, cross section, specification, finish, procedures,	Annotations, exploded diagram, pattern pieces, costings,

					engineer, represent, original, sketch		
Make	Make, made, join, cut	measure, mark, instructions, decorate	Shape, combine, assemble, test	Attach, pieces, techniques, construct, repair, systematic, score, centimetre, prototype	Components, functional, aesthetic, appearance, millimetre, accuracy, reinforce,	Assemble, refine, Fill, sand,	
Evaluate		Like, dislike,	Strengths, changes,	Improvements, market, designer, technology, function	Disassemble, feedback, modify	Manufacture, alterations, analysis	Adjustment, refinement, sustainability, energy efficient, human impact,
Textiles	Fabric, texture, smooth, rough, weaving,	Sew, template, needle, thread, knot	Running stitch, textiles, decorate, batik, tie dye	Hemming, tie-dye, over stitch, pin (verb), fastening, blanket stitch, back stitch, seam allowance,		Wastage, whip stitch, embellish, scale, fibres, natural, synthetic,	
Construction, mechanics and electrical systems	Stacking, scissors, hole punch,	Tear, fold, curl, split pin, masking tape, treasury tag, straight, curved, slider, spring, pop-up, structure, glue, strengthen, drill, screw	Hinges, stable, legs, flanges, strong, stiff, wheel, axle, tube, dowel, cotton reel, chassis, , nail	Mechanism, mechanical system, gears, pulleys, lever, linkage, pivot, input, output, loose, fixed, guide, bridge	Electronics, parallel circuit, series circuit, bulb, switch, buzzer, motor, control, monitor, software, program	rotary, linear, cam, cranks, follower, convert, motion, guide, off centre, offset, ellipse, eccentric, shaft,	LEDs, resistors, transistors, chips, code
Cooking and nutrition	Healthy, unhealthy, knife, fork, spoon, food, water, taste,	Ingredients, fruit, vegetable, dairy, oil, spread, beans, pulses, eggs, fish, meat, protein, potato, rice, bread, pasta, starchy carbohydrate, safe, clean	Variety, diet, farm, grow, catch, cut, peel, grate, measure, weigh, recipe, spoons, cups, scales	Meal, balanced, mash, whisk, crush, hygiene, nutrition, energy, appearance, texture	Reared, processed, mix, knead, bake, temperature, oven, hob, grams, millilitres, seasonal	Menu, global, harvest, microorganisms, storage	Seasonal, food industry, utensils, griddle, grill, fry, boil, scale, ratio, substitute, temperature, aroma