Key Stage 1	Autumn 2	Spring 1	Summer 2
Year 1 Topic	Mechanisms - Moving Pictures Great Fire of London	Food – Fruit Kebabs Growth and Green fingers	Structures Robots
Design: -Use pictures and words to describe their design. -Propose more than one idea. -Use kits/reclaimed materials to develop more ideas. -Model ideas with kits. -Select an appropriate technique First…Next…Last… -Explore rearranging materials. -Select pictures to help ideas -Record ideas using drawings and notes. **Make:** -Discuss work as they progress. -Select materials from a limited range that will meet the design criteria. -Select and use the correct vocabulary of the tools and equipment being used. -Explain what they are making. -Describe what they need to do next. **Evaluate:** -Explore existing products and investigate how they've been made. -Decide how existing products do/do not achieve their purpose. -Talk about their designs as they develop and identify good and bad points. -Note changes made during the making process as annotation to drawings. -Say what they like and do not like about their product and why. -Discuss how closely their finished product meets their design criteria and the needs of the user.	**Mechanisms:** Experiment with levers and sliders to find different ways of making things move in a 2D plane. Insert paper fasteners for card. Fold, tear, and cut paper and card. Cut along lines, straight and curved. Appropriately join different materials. Use a hole punch.	**Food:** Develop food vocabulary using taste, smell, texture and feel. Group familiar products e.g. fruit and vegetables. Explain where food comes from. Cut and chop a range of ingredients. Work safely and hygienically. Understand the need for a variety of foods in a diet.	**Structures:** Explore how to make structures stronger. Investigate different techniques for stiffening a variety of materials. Test different methods of enabling structures to remain stable. Join appropriately for different materials and situations. Mark out materials to be cut using a template. Roll paper to create tubes.
Year 1 General vocab: **Design, Evaluate, Criteria, Product, Purpose, Function, User, Choose, Plan, Mock up, Template, Measure, Join, Decorate**	**Mechanism, lever, linkage, pivot, slot.** **Strong/weak, stiffer, stable, structure, shape vocabulary (maths), base, top, edge, side, surface, face, corner, point, straight, curved.** **Names of tools and materials used.**	**Taste, smell, texture, feel, names of fruit and vegetables. Names of parts of fruit and veg e.g. peel.** **Verbs related to prep methods.**	**Strong/weak, stiffer, stable, structure, shape vocabulary (maths), base, top, edge, side, surface, face, corner, point, straight, curved.** **Names of tools and materials used.**

Key stage 1	Autumn 2	Spring 1	Summer 2
Year 2 Topic	Food – Pizza Pitta Food for an audience	Mechanisms – Space Buggies Explorers	Textiles Moroccan cushion
Design: -Use pictures and words to describe their design. -Propose more than one idea. -Use kits/reclaimed materials to develop more ideas. -Model ideas with kits. -Select an appropriate technique First…Next…Last… -Explore rearranging materials, -Select pictures to help ideas -Record ideas using drawings and notes. **Make:** -Discuss work as they progress. -Select materials from a limited range that will meet the design criteria -Select and use the correct vocabulary of the tools and equipment being used. -Explain what they are making. -Describe what they need to do next. **Evaluate:** -Explore existing products and investigate how they've been made. -Decide how existing products do/do not achieve their purpose. -Talk about their designs as they develop and identify good and bad points. -Note changes made during the making process as annotation to drawings. -Say what they like and do not like about their product and why. -Discuss how closely their finished product meets their design criteria and the needs of the user.	**Food:** Develop food vocabulary using taste, smell, texture and feel. Group familiar products e.g. fruit and vegetables. Explain where food comes from. Cut peel, grate and chop a range of ingredients. Work safely and hygienically. Understand the need for a variety of foods in a diet. Measure and weigh food items, non-statutory measures e.g. spoons or cups.	**Mechanisms:** Appropriately join different materials. Experiment with different axle fixing and evaluate their strengths and weaknesses. Make vehicles with construction kits using free running wheels. Use a range of materials to create models with wheels and axles e.g. tubes, dowel cotton reels. Cut dowel using a hacksaw and bench hook. Attach wheels to a chassis using an axle. Fold, tear, and cut paper and card. Cut along lines, straight and curved.	**Textiles:** Cut out shapes, which have been created by drawing round a template onto the fabric. Join fabrics by using a running stitch, glue, staples, over-sewing and tape for example. Decorate fabrics with attached items e.g. buttons, beads, sequins, braids, ribbons. Colour fabrics using a range of techniques e.g. fabric paints, printing, or painting.
Year 2 **General vocab:** **Design, Evaluate, Criteria, Product, Purpose, Function, User, Choose, Plan, Mock up, Template, Measure, Join, Decorate**	**Taste, smell, texture, feel, names of fruit and vegetables, names of parts of fruit and veg e.g. peel. Verbs related to preparation methods e.g. peel, slice, cut etc.**	**Vehicle, axle, wheel, chassis, dowel, tube, direction, straight/curved, forwards/backwards and the names of tools and materials used.**	**Names of fabrics (felt), names of components (buttons, sequins, wool and thread), names of tools used, and names of stitches learned, pattern and finish.**

Lower Key Stage 2	Autumn 2	Spring 2	Summer 2
Year 3	Food for a purpose Savoury Scones	Mechanisms Iron Man Moving Storyboard	Structures Greenhouses
Design: -Develop more than one design or adapt an initial design. -Plan a sequence of steps to make a product. -Record the plan by drawing using annotated sketches. -Begin to use cross-sectional and exploded diagrams. -Use prototypes to develop and share ideas. -Decide the materials and tools they will need. -Propose realistic suggestions to achieve their design ideas. -Consider aesthetic qualities of materials chosen. **Make:** -Prepare pattern pieces as templates for their design. -Cut slots. -Cut internal shapes. -Select from a range of tools for cutting shaping joining and finishing. -Use tools with accuracy. -Select different techniques for different parts of the process. -Select from materials according to their functional properties. -Plan the stages of the making process. -Use appropriate finishing techniques. **Evaluate:** Investigate similar products to the ones to be made to give starting points for a design. Draw/sketch products to help analyse and understand how products are made. Research needs of user. Identify the strengths and weaknesses of their design ideas in relation to purpose/user. Decide which design idea to develop. Key events and individuals in Design and Technology.	**Food:** Develop sensory vocabulary/knowledge using smell, taste, texture and feel. Analyse the taste, texture smell and appearance of a range of foods. Follow instructions/recipes. Join and combine a range of ingredients.	**Mechanical systems:** Develop vocabulary related to the project. Use mechanical systems such as gears, pulleys, levers and linkages. Use linkages to make movement larger or more varied. Use lolly sticks/card to make levers and linkages.	**Structures:** Develop vocabulary related to the project. Create shell or frame structures. Strengthen frames with diagonal struts. Make structures more stable by giving them a wider base. Measure and mark square section, strip and dowel accurately to 1cm.
Year 3 General vocab: **Design Criteria, Design Brief, Annotation, Sketch, Prototype, Innovation, Graphics, Font, Lettering, Text, Logo, Finish, Evaluation.** **Names of materials and tools used in each unit.**	**More advanced vocab linked to texture, taste and appearance. Names of equipment, utensils. Verbs for preparation techniques, names of food products met in the project. Language related to food sourcing and production- process, seasonal, reared, harvested, grown, caught, hygiene, variety.**	**Mechanism, lever, linkage, pivot, slot, guide, linear, rotary, oscillating, reciprocating, shell 3D, measure, mark, cutting, shaping, joining, assembling, strengthen.**	**Shell 3D, mathematical 3D terms/names, measure, mark, scoring, cutting, shaping, joining, assembling, adhesive, strengthen, ribbing, corrugated, laminated.**

Lower Key Stage 2	Autumn 1	Spring 2	Summer 1
Year 4 Topic	Electrical Circuits Torches	Passport Covers	Food Vegetable Curry
Design: -Develop more than one design or adapt an initial design. -Plan a sequence of steps to make a product. -Record the plan by drawing using annotated sketches. -Begin to use cross-sectional and exploded diagrams. -Use prototypes to develop and share ideas. -Decide the materials and tools they will need. -Propose realistic suggestions to achieve their design ideas. -Consider aesthetic qualities of materials chosen. -Use CAD (Computer aided design) where appropriate. **Make:** -Prepare pattern pieces as templates for their design. -Cut slots. -Cut internal shapes. -Select from a range of tools for cutting shaping joining and finishing. -Use tools with accuracy. -Select different techniques for different parts of the process. -Select from materials according to their functional properties. -Plan the stages of the making process. -Use appropriate finishing techniques. **Evaluate:** -Investigate similar products to the ones to be made to give starting points for a design. -Draw/sketch products to help analyse and understand how products are made. -Research needs of user. -Identify the strengths and weaknesses of their design ideas in relation to purpose/user. -Decide which design idea to develop. -Key events and individuals in Design and Technology.	**Food:** Develop sensory vocabulary/ knowledge using, smell, taste, texture **Electrical systems:** Develop vocabulary related to the project. Incorporate a circuit into a model. Use electrical systems such as switches bulbs and buzzers. Use ICT to control products.	Textiles: Develop vocabulary for tools materials and their properties. Understand seam allowance. Join fabrics using running stitch, over sewing, blanket stitch. Prototype a product using J cloths. Use prototype to make a pattern. Explore strengthening and stiffening of fabrics. Explore fastenings (inventors?) and recreate some. Sew on buttons and make loops. Use appropriate decoration techniques.	**Food:** Develop sensory vocabulary/ knowledge using, smell, taste, texture and feel. Analyse the taste, texture, smell and appearance of a range of foods (predominantly savoury). Follow instructions/ recipes. Make healthy eating choices- use *Eatwell plate.* Join and combine a range of ingredients. Explore seasonality of vegetables and fruit. Find out which fruit and vegetables are grown in countries/continents studied in Geography. Develop understanding of how meat/ fish are reared/ caught.
Y4 General vocab: **Design Criteria, Design Brief, Annotation, Sketch, Prototype, Innovation, Graphics, Font, Lettering, Text, Logo, Finish, Evaluation.** **Names of materials and tools used in each unit.**	**More advanced vocab linked to texture, taste and appearance, names of equipment and utensils used. Verbs for preparation techniques, names of food products met in the project. Language related to food sourcing and production- process, seasonal, reared, harvested, grown, caught, hygiene, variety. Circuit, battery, series, connection, insulation, conductor, crocodile clip, control, program system, input, output.**	**Names of fabrics (e.g. hessian, binca), Names of components (e.g. zip, Velcro), Names of tools used, names of stitches learned, Template, pattern, Seam, Seam allowance, Finish, Applique, Decorative, Functional.**	**More advanced vocab linked to texture, taste and appearance, names of equipment and utensils used. Verbs for preparation techniques, names of food products met in the project. Language related to food sourcing and production- process, seasonal, reared, harvested, grown, caught, hygiene, variety.**

Upper Key Stage 2	Autumn 2	Spring 2	Summer 1
Year 5 Topic	Anglo Saxons Apple Pastries	Mechanisms CAMs linked to Space Unit	Textiles Amazon Utility Jacket
Design: -List tools needed before starting the activity. -Plan the sequence of work e.g. using a storyboard. -Record ideas using annotated diagrams. -Use models, kits and drawings to help formulate design ideas. -Devise step by step plans which can be read or followed by someone else. -Use exploded diagrams and cross-sectional diagrams to communicate ideas. -Sketch and model alternative ideas. -Decide which design idea to develop. **Make:** -Make a prototype. -Develop one idea in depth. -Use research information to inform decisions. -Produce detailed lists of ingredients/ components/ materials and tools required. -Cut accurately and safely to a marked line. -Select from and use a wide range of materials. -Use appropriate finishing techniques for the project. -Refine product- review and rework to improve. **Evaluate:** -Research and evaluate existing products (including books and web-based research). -Consider user and purpose. -Identify the strengths and weaknesses of their design ideas. -Give a report using correct technical vocabulary. -Consider and explain ow the finished product could be improved further linked to the design criteria. -Discuss how well the finished product meets the design criteria of the user. Test on the user! -Understand how key people have influenced design.	**Food:** Prepare food products taking into account the properties of ingredients and sensory characteristics. Weigh and measure using scales. Select and prepare foods for a particular purpose. Work safely and hygienically. Show awareness of a healthy diet (using eatwell plate). Use a range of cooking techniques. Know where and how ingredients are grown and processed. Consider influence of chefs e.g. Jamie Oliver and school meals, Hugh Fearnley-Whittingstall and sustainable fishing etc.	Mechanism: Develop a technical vocabulary appropriate to the project. Use mechanical systems such as cams, pulleys and gears.	**Textiles:** Use the correct vocabulary appropriate to the project. Create 3D products using patterns pieces and seam allowance. Understand pattern layout. Decorate textiles appropriately (often before joining components). Pin and tack fabric pieces together. Join fabrics using over sewing, back stitch or blanket stitch. Combine fabrics to create more useful properties. Make quality products.
Year 5 General Vocab list **Design Brief, Design Specification, Function, Innovation, Authenticity, Design decisions, System, Annotated drawing, Exploded diagram** **Names of equipment and tools used.**	**Technical vocab related to food ingredients (baking powder, names of herbs etc.)** **Names of equipment and utensils used, scientific vocabulary related to health and diet, verbs relating to preparation methods (whisk, fold, beat, mash and grate).**	**Gear, cog, ratio, pulley, belt, drive, axle, cam, diagram, stiffen, reinforce, stabilise, frame structure, triangular, perpendicular, vertices, vertical, shape vocabulary.**	**Gear, cog, ratio, pulley, belt, drive, axle, cam, diagram, stiffen, reinforce, stabilise, frame structure, triangular, perpendicular, vertices, vertical, shape vocabulary.**

Upper Key Stage 2	Spring 1	Summer 1	Summer 2
Year 6 Topic	India Food - Indian cuisine	Viking drawstring bags	Dioramas
Design: -List tools needed before starting the activity. -Plan the sequence of work e.g. using a storyboard. -Record ideas using annotated diagrams. -Use models, kits and drawings to help formulate design ideas. -Devise step by step plans which can be read or followed by someone else. -Use exploded diagrams and cross-sectional diagrams to communicate ideas. -Sketch and model alternative ideas. -Decide which design idea to develop. **Make:** -Make a prototype. -Develop one idea in depth. -Use research information to inform decisions. -Produce detailed lists of ingredients/ components/ materials and tools required. -Cut accurately and safely to a marked line. -Select from and use a wide range of materials. -Use appropriate finishing techniques for the project. -Refine product- review and rework to improve. **Evaluate:** -Research and evaluate existing products (including books and web-based research). -Consider user and purpose. -Identify the strengths and weaknesses of their design ideas. -Give a report using correct technical vocabulary. -Consider and explain ow the finished product could be improved further linked to the design criteria. -Discuss how well the finished product meets the design criteria of the user. Test on the user! -Understand how key people have influenced design.	**Food:** Prepare food products taking into account the properties of ingredients and sensory characteristics. Weigh and measure using scales. Select and prepare foods for a particular purpose. Work safely and hygienically. Show awareness of a healthy diet (using eatwell plate). Use a range of cooking techniques. Know where and how ingredients are grown and processed. Consider influence of chefs e.g. Jamie Oliver and school meals, Hugh Fearnley-Whittingstall and sustainable fishing etc.	**Textiles:** Use the correct vocabulary appropriate to the project. Create 3D products using patterns pieces and seam allowance. Understand pattern layout. Decorate textiles appropriately (often before joining components). Pin and tack fabric pieces together. Join fabrics using over sewing, back stitch or blanket stitch. Combine fabrics to create more useful properties. Make quality products.	**Structure:** Use the correct terminology for tools materials and processes. Use bradawl to mark hole positions. Use hand drill to drill tight and loose fit holes. Cut strip wood, dowel, square section wood accurately to 1mm. Join materials using appropriate methods. Build frameworks to support mechanisms. Stiffen and reinforce complex structures. **Electrical system:** Develop a technical vocabulary appropriate to the project. Use electrical systems such as motors. Program, monitor and control using ICT.
Y6 General Vocab list **Design Brief, Design Specification, Function, Innovation, Authenticity, Design decisions, System, Annotated drawing, Exploded diagram. Names of equipment and tools used.**	**Technical vocab related to food ingredients (baking powder, names of herbs etc.) Names of equipment and utensils used, scientific vocabulary related to health and diet, verbs relating to preparation methods (whisk, fold, beat, mash, and grate).**	**Names of fabrics used or investigated, components used and tools. Names of stitches learned, selvage, raw edge, woven, felted, knitted, bonded, gusset, seam allowance, hem.**	**Stiffen, reinforce, stabilise, frame structure, shape vocab, apex, base, face, edge, vertices, vertical, perpendicular, right angles, triangular. Circuit, switch, circuit diagram, symbol, input, output, device, program, monitor, control.**