Key Stage 1	Autumn 2	Spring 1	Summer 2
Year 1 Topic	Space- Moving vehicles	Weather- Investigating joins, windsocks	The Seaside- Food tech, foods for a picnic
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:** By the end of this unit children should be able to Appropriately join different materials. Experiment with different axel fixing and their strengths and weaknesses Make vehicles with construction kits using free running wheels. Use a range of materials to create models. Roll paper to create tubes. Cut dowel using hacksaw and bench hook. Attach wheels to a chassis using an axel. Mark out materials to be cut using a template. Fold, tear, and cut paper and card. Cut along lines, straight and curved. Use a hole punch. Insert paper fasteners for card. Experiment with levers and sliders to find different ways of making things move in a 2D plane	**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. Use a glue gun with close supervision.	**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, chop a range of ingredients. Work safely and hygienically. Understand the need for a variety of foods in a diet.
Year 1 General vocab: **Design, Evaluate, Criteria, Product, Purpose, Function, User, Choose, Plan, Mock up, Template, Measure, Join, Decorate**	**Vehicle, Axle, Wheel, Chassis, Dowel, Tube, Direction, Lever/Slider/pivot, Slot/Guide, Straight/Curved, Forwards/Backwards, Push/Pull, Up/Down.** **Names of tools and materials used.**	**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**

Key stage 1	Autumn	Spring	Summer
Year 2 Topic	People Who Help Us- Bread making	Lighthouse Keeper's Lunch- Moving pictures	Animals- Weaving and sewing animals
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, 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. Use a glue gun with close supervision.	**Textiles:** Cut out shapes which have been created by drawing round a template onto the fabric. Join fabrics by using…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.**	**Strong/Weak, Stiffer, Stable, Structure, Shape Vocabulary (maths), Base, Top, Edge, Side, Surface, Face, Corner, Point, Straight, Curved.** **Names of tools and materials used.**	**Names of fabrics (felt), Names of components (buttons, sequins, wool thread), Names of tools used, Names of stitches learned, Pattern, Finish.**

Lower Key Stage 2	Autumn 2	Spring 2	Summer 2
Year 3	Egypt- Gingerbread men	Tudors- Polymanders	Rainforests- Tribal homes
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 and feel. Analyse the taste, texture smell and appearance of a range of foods. Follow instructions/recipes Join and combine a range of ingredients.	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.	**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,**	**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.**	**Shell 3D, Mathematical 3D terms/names, Measure, Mark, Scoring, Cutting, Shaping, Joining, Assembling, Adhesive, Strengthen, Ribbing, Corrugated, Laminated**

	caught, hygiene, variety.		
Lower Key Stage 2	Autumn 2	Spring 2	Summer 2
Year 4 Topic	Lake District	Romans	Electricity and light
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.	**Mechanical systems and ICT:** 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.	**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.	**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.
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.**	**Mechanism, Lever, Linkage, Pivot, Slot, Guide, Linear, Rotary, Oscillating, Reciprocating, Shell 3D, Measure, Mark, Cutting, Shaping, Joining, Assembling, Strengthen.**	**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.**	**Circuit, Battery, Series, Connection, Insulation, Conductor, Crocodile Clip, Control, Program System, Input, Output**

Upper Key Stage 2	Autumn 1	Spring 2	Summer 2
Year 5 Topic	Around the world- Passport holders	Probing the past- World War II	Earth keepers- Moving toy
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.	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.	**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.
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.**	**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.**	**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, grate)**	**Gear, Cog, Ratio, Pulley, Belt, Drive, Axle, Cam, Diagram, Stiffen, Reinforce, Stabilise, Frame Structure, Triangular, Perpendicular, Vertices, Vertical, Shape vocabulary.**

Upper Key Stage 2	Autumn 1	Spring 2	Summer 2
Year 6 Topic	India- Indian cuisine	Victorians-	Ancient Greece- Greek temples
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.	Electrical system: Develop a technical vocabulary appropriate to the project. Use electrical systems such as motors. Program, monitor and control using ICT.	**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.
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, grate)**	**Circuit, Switch, Circuit Diagram, Symbol, Input, Output, Device, Program, Monitor, Control, Flowchart**	**Stiffen, Reinforce, Stabilise, Frame Structure, Shape Vocab, Apex, Base, Face, Edge, Vertices, Vertical, Perpendicular, Right Angles, Triangular**