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| **DESIGN** |
| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Use pictures and words to convey what they want to design/make.
* Propose more than one idea for their product.
* Use kits/reclaimed materials to develop more than one idea.
* Model ideas with kits, reclaimed materials.
* Select appropriate technique explaining: First… Next… Last….
* Explore ideas by rearranging materials.
* Select pictures to help develop ideas.
* Use drawings to record ideas as they are developed.
* Add notes to drawings to help explanations.
* Describe their models and drawings of ideas and intentions.
 | * Develop more than one design or adaptation of an initial design.
* Plan a sequence of actions 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.
* Think ahead about the order of their work and decide upon tools and materials.
* Propose realistic suggestions as to how they can achieve their design ideas.
* Consider aesthetic qualities of materials chosen.
* Use CAD where appropriate.
 | * 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.
* Combine modelling and drawing to refine ideas.
* Devise step by step plans which can be read / 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.
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| **MAKE** |
| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Discuss their work as it progresses.
* Select materials from a limited range that will meet the design criteria.
* Select and name the tools needed to work the materials.
* Explain what they are making.
* Explain which materials they are using and why.
* Name the tools they are using.
* Describe what they need to do next.
 | * 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 from 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.
 | * Make prototypes.
* Develop one idea in depth.
* Use researched information to inform decisions.
* Produce detailed lists of ingredients / components / materials and tools.
* Use a computer to model ideas.
* Select from and use a wide range of tools.
* 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 their product – review and rework/improve.
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| **EVALUATE** |
| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Explore existing products and investigate how they have been made.
* Decide how existing products do/do not achieve their purpose.
* Talk about their design as they develop and identify good and bad points.
* Note changes made during the making process as annotation to plans/drawings.
* Say what they like and do not like about items they have made and attempt to say why.
* Discuss how closely their finished product meets their design criteria and how well it meets the needs of the user.
 | * Investigate similar products to the one 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.
* Consider and explain how the finished product could be improved.
* Discuss how well the finished product meets the design criteria of the user.
* Investigate key events and individuals in Design and Technology.
 | * Research and evaluate existing products (including book 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 how the finished product could be improved related to 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.
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| **FOOD** |
| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Develop a food vocabulary using taste, smell, texture and feel.
* Group familiar food 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.
* Measure and weigh food items, non-statutory measures e.g. spoons, cups.
 | * 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 the *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.
 | * 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 the 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, H Fearnley-Whittingstall sustainable fishing etc.
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| **TEXTILES** |
| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Cut out shapes which have been created by drawing round a template onto the fabric.
* Join fabrics by using e.g. running stitch, glue, staples, over sewing, tape.
* Decorate fabrics with attached items e.g. buttons, beads, sequins, braids, ribbons.
* Colour fabrics using a range of techniques e.g. fabric paints, printing, painting.
 | * 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 pattern.
* Explore strengthening and stiffening of fabrics.
* Explore fastenings (inventors?) and recreate some.
* Sew on buttons and make loops.
* Use appropriate decoration techniques.
 | * 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, blanket stitch or machine stitching (closer supervision).
* Combine fabrics to create more useful properties.
* Make quality products.
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| **STRUCTURES** |
| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * 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 e.g. glue, tape.
* Mark out materials to be cut using a template.
* Use a glue gun with close supervision.
 | * Develop vocabulary related to the project.
* Create shell or frame structures.
* Strengthen frames with diagonal struts.
* Make structures more stable by giving them a wide base.
* Measure and mark square section, strip and dowel accurately to 1cm.
 | * 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.
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| **MECHANISMS, ELECTRICAL SYSTEMS, ICT** |
| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Join appropriately for different materials and situations e.g. glue, tape.
* Try out different axle fixings and their strengths and weaknesses.
* Make vehicles with construction kits which contain free running wheels.
* Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels.
* Roll paper to create tubes.
* Cut dowel using hacksaw and bench hook.
* Attach wheels to a chassis using an axle.
* 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.
 | * Develop vocabulary related to the project.
* Use mechanical systems such as gears, pulleys, levers and linkages.
* Incorporate a circuit into a model.
* Use electrical systems such as switches bulbs and buzzers.
* Use ICT to control products.
* Use lolly sticks/card to make levers and linkages.
* Use linkages to make movement larger or more varied.
 | * Develop a technical vocabulary appropriate to the project.
* Use mechanical systems such as cams, pulleys and gears.
* Use electrical systems such as motors.
* Program, monitor and control using ICT.
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