 Design & Technology: Skills Progression Year Three

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|  | **Autumn** | **Spring** | **Summer 1** | **STEM Week** | **Additional projects** |
| **Year 3** | **Will your party hat be funny or fantastic?** | **What display will your class share?** | **How cool is your drink?** | **What music would you like to make?** |  |
| **BIG task details** | The big task is to design and make a decorated paper party hat that they will wear at a party they have helped to organise. | The big task is to design and produce a classroom display about a current topic in another subject. The children will work in  groups and as a whole class. The display should be useful in the classroom, durable, re-usable and look attractive. | The big task is a healthy cold drink will be designed and made for another class member. Each  child will have to find out the preferences and needs of the consumer, and will  include feedback from that person as part of the evaluation process. | The big task is to design and make a  simple musical instrument and use it to play a part in a piece for four players. |  |
| **Small tasks** | **Focused practical tasks**  1 Thinking about parties  2 Making a simple headpiece  3 Finding shapes for hats  4 Learning potato printing  5 Learning simple appliqué | **Focused practical tasks**  1 Exploring displays  2 Making and hanging frames  3 Exploring display panel layout  4 Exploring the display of objects  5 Writing the specification | **Focused practical tasks**  1 Investigating cold drinks  2 Evaluating drinks  3 Using tools and combining ingredients  4 Identifying consumer preferences  5 Writing the specification | **Focused practical tasks**  1 Looking at musical instruments  2 Exploring stretched strings  3 Exploring stretched skins  4 Exploring rattles  5 Exploring sounding blocks  6 Composing a short piece for four  players |  |
| **Vocab** | party, birthday, headpiece, stapler, shape, size, **template, printing**, **pattern, appliqué**,  celebration scissors, **strip, join**, **specifiation, evaluation**  **best fit** | **display,** information, **advertisement**, peg board, **label, caption**, tray, arrangement  timetable **frame, dowel, font, type, style** | **consumer, market research**, taste, texture, peeler, sieve, grater, whisk, **questionnaire, interview**, allergy,  **tasting panels, advertising**, healthy water, fizzy water, milk, **design specification,** labelled  **ingredients**, cost, yoghurt, fruit, fruit juice drawing, **evaluation.** | maracas, drum, xylophone, guitar, **stretched string** **stretched skin** rattle, **composition**,  musical note, vibrates, rhythm, tune **compose,** **amplify** |  |
| **Tools** | pencils, scissors, potatoes, poster/powder paint, ,canteen dinner knives, paper, mixing palettes, brushes, stapler, glue-sticks, adhesive tape, PVA glue, staples wet sponges | junior hacksaws, pencils, felt tip  pens, rulers, scissors, computer, PVA glue, printer and digital camera | knife, fork, spoon, peeler,  sieve, grater, whisk , cups,  spoons, pencils | scissors, pencils, hacksaws, sawing, paper clips, wooden boards, brushes, pin  strip of different lengths and cross tins, computer, microphone, ‘Musical ’ plus software such as  instruments Soundlab |  |
| **Skills: Design, Make , Evaluate** | **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 and prototypes  **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, according to their functional properties and aesthetic qualities  **Evaluate**     evaluate their ideas and products against their own design criteria and consider the views of others to improve their work  **Technical knowledge**   apply their understanding of how to strengthen, stiffen and reinforce more complex structures | **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 | **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   select from and use a wider range of materials and components, incl 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  **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. | **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, 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 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 |  |
| **Learning purposes** | t to consider reasons for parties;  t to construct a basic headpiece from paper strip using a stapler, scissors and a “best fit” approach;  t to develop their ideas through  observation and simple sketching  t to carry out two simple ‘on to paper’ decoration techniques – potato printing and appliqué;  t to use simple templates;  t to use scissors, staples, adhesive tape and PVA glue to construct simple 3D forms from sheets of paper. | t about displays and their functions;  t how to make and hang frames  t how to produce attractive flat display panels;  t how to display objects;  t to work in a team in deciding on the design of the display. | about the ingredients used in cold  drinks, their nutritional values, and how they are presented commercially,  including cost;  t to evaluate a food product and record the evaluation in a meaningful way;  t to use a range of food preparation tools  safely and effectively;  t to combine ingredients to change the appearance/taste/texture of a drink;  t to find out and record a consumer’s needs and preferences. | t how simple musical instruments work;  t to make simple music from stretched strings;  t to make simple music from stretched skins;  t to make simple music from tiny  particles;  t to make simple music from blocks;  t to compose a short piece of music for four players. |  |