

Durham Lane Primary School Progression of Skills- Design and Technology

| Topic Key: | IGTBM = It's Good to be Me. TT = Traditional Tales. H = Holidays. S =Space. HH = Heroes and Heroines D = Dinosaurs C = Celebrations YSMT =Yummy Scrummy in my Tummy CC = Creepers and Crawlers | FFA : Far, Far Away LB : London's Burning TOP : Take One Picture HM : Healthy Me A : Author Study SG : Secret Garden HJB : House that Jack Built FM : Florence and Mary NA : Noah's Ark TI : Treasure Island L : Locomotion | E = Egyptians V = Vikings SOC = Sounds of Xmas GMM = George's Marvellous Medicine R = Robots P = Plants RO = Romans/Saxons LA = Local Area | V = Victorians/Street Child R = Rainforests / Kensuke's Kingdom G = Greece N = Natural Disasters M = Mayan S = Skara Brae- Stone Age to Iron Age H = Healthy me and where I live SH/ES = Superheroes/Earth and Space |
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| | EYFS | KS1 | LKS2 | UKS2 |
| Design | <ul style="list-style-type: none"> *Safely use and explore a variety of materials, tools and techniques, experimenting with design, texture, form and function. (C, HH, D, TT, S, CC) *Explore different materials freely, in order to develop their ideas about how to use them and what to make. (C, HH, D, TT, S, CC) *Develop ideas and decide which materials to use to express them. (C, HH, D, TT, S, CC) Make imaginative and complex "small worlds" with blocks and construction kits, such as a city with different buildings and a park. (IGTBM, C, HH, D, TT, S, CC) | <ul style="list-style-type: none"> * have own ideas and plan what to do next (HJB, L) * explain what I want to do and describe how I may do it (HJB, L) * explain purpose of product, how it will work and how it will be suitable for the user (HJB, L) * describe design using pictures, words, models, diagrams (HJB, L) * design products for myself and others following design criteria (HJB, L) * choose best tools and materials, and explain choices (HJB, L) * research and use knowledge of existing products to produce ideas (HJB, L) | <ul style="list-style-type: none"> * use research for design ideas E, V, GMM, R, P, RO, LA * describe purpose of product E, V, SOC, GMM, R, P, RO, LA * show design meets a range of requirements and is fit for purpose E, V, SOC, GMM, R, P, RO, LA *follow a given design criteria and then begin to create own design criteria GMM, R *have at least one idea about how to create product and suggest improvements for design. E, V, SOC, GMM, R, P, RO, LA * produce a plan which shows order, equipment and tools and explain it to others E, V, SOC, GMM, R, P, RO, LA *include an annotated sketch E, GMM, R *make and explain design decisions considering availability of resources E, V, SOC, GMM, R, P, RO, LA *explain how product will work GMM, R, LA, RO * make a prototype E, V, SOC, GMM, P *begin to use computers to show design. GMM | <ul style="list-style-type: none"> *use internet, questionnaires and market research for research and to inform design V,N,S,H SH * use research of user's individual needs, wants, requirements for design to ensure product is fit for purpose V, R,N,M,S,H SH *create own design criteria and specification V, R,N,M,H SH * come up with innovative design ideas V, R,N,M,S,H SH *produce a logical, realistic plan and explain it to others; be willing to refine. V, R,N,M,S,H SH *use annotated sketches, cross-sectional planning and exploded diagrams V, R,N,M,H SH * make design decisions, considering, resources (and cost Y6) V, R,N,M,S,H SH * clearly explain how parts of design will work, and how they are fit for purpose V, R,N,M,H SH *model and refine design ideas by making prototypes and using pattern pieces, with increasing independence V, R,N,M,H SH *use computer-aided designs M, SH |
| Make | <ul style="list-style-type: none"> *Explore different materials freely, in order to develop their ideas about how to use them and what to make. (IGTBM, C, HH, D, TT, S, CC) *Develop ideas and decide which materials to use to express them. (IGTBM, C, HH, D, TT, S, CC) *Join different materials and explore different textures. (IGTBM, C, HH, D, TT, S, CC) *Create collaboratively sharing ideas,resources and skills (IGTBM, C, HH, D, TT, S, CC) | <ul style="list-style-type: none"> *explain what I am making and why it fits the purpose (HJB, L) *make suggestions as to what I need to do next. (HJB, L) *join materials/components together in different ways (HJB, NA, L) *measure, mark out, cut and shape materials and components, with support. (HJB, NA, L) *describe which tools I'm using and why (HJB, NA, L) *choose suitable materials and explain choices depending on characteristics. (HJB, L) *use finishing techniques to make product look good (HJB, NA, L) *work safely and hygienically (HJB, NA, L) | <ul style="list-style-type: none"> * select suitable tools and equipment, explain choices in relation to required techniques and use accurately E, V, SOC, GMM, R, P, RO, LA *select appropriate materials, fit for purpose; explain choices E, V, SOC, GMM, R, P, RO, LA * work through plan in order. E, V, SOC, GMM, R, P, RO, LA * realise if product is going to be good quality E, V, SOC, GMM, R, P, RO, LA * measure, mark out, cut and shape materials/components with some accuracy E, V, SOC, GMM, R, P, RO, LA *assemble, join and combine materials and components with some accuracy E, V, SOC, GMM, R, P, RO, LA *apply a range of finishing techniques with some accuracy E, V, SOC, GMM, R, P, RO, LA | <ul style="list-style-type: none"> * use tools/equipment with good level of precision V, R,N,M,S,H SH * produce suitable lists of tools, eqpt/materials neededV,R,N,M,S,H SH * select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics V, R,N,M,S,H SH * create, follow, and adapt detailed step-by-step plans V, R,N,M,S,H SH * explain how product will appeal to an audience V, R,N,M,S,H SH * accurately measure, mark out, cut and shape components V,R,N,M,S,H SH * accurately assemble, join and combine componentsV, R,N,M, SH * apply a range of finishing techniques, with inc accuracy R,N,M,SH * use techniques that involve a number of steps V, R,N,M,S,H SH * begin to be resourceful with practical problems V, R,N,M,S,H SH |
| Evaluate | <ul style="list-style-type: none"> *Return to and build upon previous learning, refining ideas and developing the ability to represent them. (IGTBM, C, HH, D, TT, S, CC) *Share their creations, explaining the proceses used. (IGTBM, C, HH, D, TT, S, CC) | <ul style="list-style-type: none"> * describe what went well, thinking about design criteria (HJB, L) * talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion (HJB, L) *evaluate how good existing products are (HJB, L) *talk about what I would do differently if I were to do it again and why (HJB, L) | <ul style="list-style-type: none"> *refer to design criteria while designing and making E, V, SOC, GMM, R, P, RO, LA *use criteria to evaluate product E, V, SOC, GMM, R, P, RO, LA * begin to explain how I could improve original design E, V, SOC, GMM, R, P, RO, LA *evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose E, V, SOC, GMM, R, P, RO, LA * discuss by whom, when and where products were designed E, V, SOC, GMM, R, P, RO, LA * research whether products can be recycled or reused R, LA * know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products R, SOC, LA, P | <ul style="list-style-type: none"> *evaluate quality of design while designing and making V, R,N,M,S,H SH * keep checking design is best it can be. V, R,N,M,S,H SH *evaluate ideas and finished product against specification, considering purpose and appearance (stating if fit for purpose Y6) V, R,N,M,S,H SH *test and evaluate final product; explain what would improve it and the effect different resources may have had V, R,N,M,S,H SH * evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose V, R,N,M,SH * Evaluate how much products cost to make and how innovative they are V, R,N,M,S,H SH *research how sustainable materials are V, R,N,M,S,H SH *talk about some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products V, R,N,M, SH |

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| Technical knowledge - Materials/textile/structures | <p>* Explore different materials freely, in order to develop their ideas about how to use them and what to make. (IGTBM, C, HH, D, TT, S, CC)</p> <p>*Safely use and explore a variety of materials, tools and techniques, experimenting with design, texture, form and function. (C, HH, D, TT, S, CC)</p> <p>*Make imaginative and complex “small worlds” with blocks and construction kits, such as a city with different buildings and a park. (IGTBM, C, HH, D, TT, S, CC)</p> | <p>*choose and measure materials/textiles (HJB, L)</p> <p>*describe some different characteristics of materials (HJB, L)</p> <p>*join materials/textiles together in different ways and explain how it was done (HJB, L)</p> <p>*use joining, rolling or folding to make it stronger (HJB, NA)</p> <p>*understand that a 3D textile structure can be made from two identical fabric shapes. (HJB)</p> <p>*use own ideas to try to make product stronger (HJB, L, FFA)</p> | <p>*work accurately to make cuts and holes V, GMM, R, RO, LA</p> <p>*think about user when choosing appropriate textiles considering appearance and functionality GMM</p> <p>*measure carefully to avoid mistakes V, GMM, R, RO</p> <p>*attempt to make product strong E, V, GMM, R, RO</p> <p>*continue working on product even if original didn't work E, V, GMM, R, RO</p> <p>*make a strong, stiff structure E, V, R, RO</p> <p>* begin to devise a template E, V</p> <p>*explain how to join things in a different way E, V, GMM, R, RO, LA</p> <p>*understand that a simple fabric shape can be used to make a 3D textiles project GMM</p> | <p>*select materials/textiles carefully, considering intended use of the product, the aesthetics and functionality. SH, N</p> <p>*explain how product meets design criteria SH, N</p> <p>*measure accurately enough to ensure precision SH, N</p> <p>*ensure product is strong and fit for purpose SH, N</p> <p>* reinforce and strengthen a 3D frame N</p> <p>*use own template SH,</p> <p>*think of and use a range of ways to join things SH, N</p> <p>*understand that a single 3D textiles project can be made from a combination of fabric shapes. SH,</p> |
| Technical knowledge - Mechanisms | <p>*Explore and talk about different forces they can feel. (D, TT, S)</p> | <p>*use levers or slides (FFA, NA, SG)</p> <p>*begin to understand how to use wheels and axles (L)</p> | <p>*select most appropriate tools / techniques R, LA</p> <p>*explain alterations to product after checking it R, LA</p> <p>*grow in confidence about trying new / different ideas. R, LA</p> <p>*use levers and linkages to create movement R, LA</p> <p>*use pneumatics to create movement R, LA</p> | <p>*refine product after testing considering aesthetics, functionality and purpose R</p> <p>*grow in confidence about trying new / different ideas R</p> <p>*begin to use cams, pulleys or gears to create movement R</p> |
| Technical knowledge - Electrical systems/IT Computer control and monitoring | | | <p>*use a number of components in circuit R</p> <p>*program a computer to control product R</p> | <p>* think of ways in which adding a circuit would improve product V</p> <p>*use different types of circuit in product V</p> <p>*incorporate switch into product V</p> <p>*confidently use number of components in circuit V</p> <p>* program a computer to monitor changes in environment and control product M</p> |
| Technical knowledge - Food and nutrition | | <p>*explain hygiene and keep hands and surfaces clean (HM).</p> <p>*think of interesting ways to decorate food (HM).</p> <p>*describe properties of ingredients and importance of varied diet (HM).</p> <p>*say where food comes from (animal, plant, underground etc.) (HM).</p> <p>*describe how food is farmed, home-grown, caught (HM).</p> <p>* describe differences between some food groups (i.e. sweet, vegetable etc.) (HM).</p> <p>*discuss how fruit and vegetables are healthy (HM).</p> <p>*describe “five a day” (HM).</p> <p>*cut, peel and grate with increasing confidence (HM).</p> | <p>*carefully select ingredients SOC, LA, P</p> <p>*explain how to be safe/hygienic when preparing and cooking some dishes SOC, LA, P</p> <p>*think about presenting product in interesting/ attractive ways SOC, LA, P</p> <p>*understand ingredients can be fresh, pre-cooked or processed SOC, LA, P</p> <p>*begin to understand about food being grown, reared or caught in the UK or wider world SOC, LA, P</p> <p>*describe eat well plate and how a healthy diet=variety / balance of food and drinks SOC, LA, P</p> <p>*explain importance of food and drink for active, healthy bodies SOC, LA, P</p> <p>*prepare and cook some dishes safely and hygienically SOC, LA, P</p> <p>*use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking SOC, LA, P</p> | <p>*explain how to be safe / hygienic and follow own guidelines H,S</p> <p>*explain seasonality of foods H,S</p> <p>*learn about food processing methods H,S</p> <p>*understand that food can be grown, reared or caught in the UK or wider world and talk about examples H,S</p> <p>* talk about how to adapt recipes to change appearance, taste, texture or aroma and carry out adaptations with increasing confidence H,S</p> <p>*present product well - interesting, attractive, fit for purpose H,S</p> <p>*describe some of the different substances in food and drink, and how they can affect health H,S</p> <p>*prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. H,S</p> <p>*use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. H,S</p> |