The following progression maps were developed by headteachers and senior leaders attending the Education Durham, Ensuring and Assuring the Curriculum training

Each table were given a finished Design and Technology product and asked to map out what key knowledge and skills pupils needed to build up overtime across the school to be able to create this end product.

This progression document is the result of that 10 minutes activity which could be developed further within your own school.

REMEMBER TO FOCUS ON THE PROCESSES WHICH PUPILS NEED TO KNOW RATHER THAN THE FINISHED PRODUCTS!

**Design and Technology Progression:** Component knowledge pupils need to design and make a greenhouse for a small plant. (STRUCTURES)

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|  | **EYFS** | **KS1** | **LKS2** | **UKS2** |
| **Designing** | * Talk about model they’re building in construction. * Discuss adaptations within models – additions and changes * Simple drawings / photos of ideas | * Drawing and labelling * Explore products * Begin to identify steps to make before making with support to generate design criteria |  |  |
| **Making** | * Simple joining (construction kits, exploring glue – runny, Pritt and different tapes * Explore different materials * Card, cardboard * Cutting – safe use of scissors * Snipping > more accurate cutting > straight > curves > corners | * Greater understanding of suitability of materials – science -properties of materials |  |  |
| **Evaluating** | * Discussion with prompting questions with adults * Simple drawings / photos of ideas | * With support and scaffolding, evaluate against design criteria |  |  |
| **Technical Knowledge** | * Glue is sticky and can be used to join eg. paper * It goes hard when set * Tape – sticky but sticks immediately; an still see it * Scissors used to cut – finger hold, cut away from body, safety carrying | * Use a saw for wood, not scissors * Safe use of a saw   + Bench press   + Starter cuts |  |  |

**Design and Technology Progression:** Component knowledge pupils need to design and make a 3D printed key ring phone stand (C.A.D)

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| --- | --- | --- | --- | --- |
|  | **EYFS** | **KS1** | **LKS2** | **UKS2** |
| **Designing** | * Understanding that items have a purpose (why) * Experience playing with moving toys * How can you make toys move? – push / pull / twist * How can you change direction of moving toys? * Experience with remote control / programmable toys | * Know it is for other users (audience) * How effective are programmable toys – do they move how you want them to move in real life and on screen? | * Understand what purpose is. | * Understand what purpose is. * Variety of purposes (key ring and phone holder) |
| **Making** | * Fine motor skills * Experience with remote control / programmable toys * Experience constructing models with moving parts * Experience with pulleys; wheels; cogs | * Linked to computing curriculum * Experience with Roamer, Beebots, Code-a-Pillars * Ipad apps for programming | * Linked to computing curriculum * Refined use of Code-a-Pillars, etc * Ipad apps for programming | * Linked to computing curriculum * Writing a program * Debugging a program * Prototypes and then refine |
| **Evaluating** | * Coins / shapes (role play) * Discussion with prompting questions with adults * Simple drawings / photos of ideas | * Money * Recycling | * Link to maths – does it fit the purpose? Is it big enough to hold a phone? * Pricing – is it cost effective? * Reduce – Reuse - Recycle | * Precise measurements * Cost effective * Sustainability |
| **Technical Knowledge** | * Types of materials * Heavy and light | * Properties of materials * Balance * Program * Cause - effect | * Links to Computing – programming * Supportive structures | * Links to Computing – programming * Link to physics – if plastic is too thin it wouldn’t hold the weight of the phone. |

**Design & Tech Progression:** Component knowledge pupils need to design and make a healthy soup for a single person (FOOD & NUTRITION)

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| --- | --- | --- | --- | --- |
|  | **EYFS** | **KS1** | **LKS2** | **UKS2** |
| **Designing** | * Experience in role play * Creating play dough ‘food’ |  | * Identify ingredients * Where do they come from? * Food groups – healthy * Product research * Sources / sustain * Taste testing |  |
| **Making** | * Develop fine motor skills through threading, drawing, writing, etc * Chopping / cutting play dough * Begin to understand how to follow step by step instructions to make product. | * Chopping soft fruit – bananas, kiwi fruit * Chopping soft vegetables eg. courgette, tomatoes * Peeling fruit by hand * Peeling vegetables with a vegetable peeler * With support, follow a simple recipe / process | * Chopping hard vegetables * Peeling vegetables with a vegetable peeler * Using a tool to blend food * Using a hob to boil / cook vegetables * Follow a simple recipe / process |  |
| **Evaluating** | * Discussion with prompting questions with adults * Simple drawings / photos of ideas | * Quality / taste / consistency * How does it look? * Survey / taste test * Comparisons | * Quality / taste / consistency * Survey / taste test * Comparisons * Cost |  |
| **Technical Knowledge** | * How to chop | * Best tool to use | * Food groups * Chop * Slice * Grate |  |
| **Cooking and Nutrition** | * What is healthy * What are fruit and vegetables? * What is meat? * Where does food come from? | * Eat well wheel * What foods to use * How much – for 1 person or 10? | * Eat well plate * Hygiene * Where is food grown? | * Food in what seasons |

**Design and Technology Progression:** Component knowledge pupils need to design and make a soft toy made in LK2 (TEXTILES)

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| --- | --- | --- | --- | --- |
|  | **EYFS** | **KS1** | **LKS2** | **UKS2** |
| **Designing** | Draw picture of toys they know   * Colour * Mark marking | Same as EYFS including   * Drawing * Labelling * Identifying suitable materials | Same as EYFS and KS1   * Research existing toys * Research existing toy designers * Consider the purpose of the toy and who it is for |  |
| **Making** | * Cutting * Sticking * Threading (beads etc) * Shape * Space * Measure | * Thread a needle * Practice making a stitch (use of binker) * Learn running stitch * Tie knots * Pattern making | Choose appropriate materials for the product (fit for purpose)   * Measure * Mark out * Cutting * Shaping * Combining materials * Stuffing |  |
| **Evaluating** | * Look at and talk about different types of toys | * Look at toys that have been made. * What works well/looks good? * What needs to be refined/improved? | * Look at toys that have been made. What works well/looks good? * What needs to be refined/improved? * Does it match the design brief (original intention) |  |
| **Technical Knowledge** | Materials   * Hard/Soft * Fluffy * Stretchy | * Join * Sew * Running Stitch * Thread and threading * Subject specific vocabulary | * Join * Sew * Different types of stitches * Thread and threading * Finishing techniques * Subject specific vocabulary |  |

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| --- | --- | --- | --- | --- |
|  | **EYFS** | **KS1** | **LKS2** | **UKS2** |
| **Designing** | Experiences of boxes   * Mark making * Drawing | Same as EYFS including   * Drawing * Labelling * Identifying suitable materials | Same as EYFS and KS1   * Research existing uses of boxes (sewing box included) * Research existing designers of different types of boxes | Same as EYFS, KS1 and LKS2   * Research different types of sewing boxes and similar structures. * Research existing sewing designers and the products they’ve made |
| **Making** | * Explore the use of a range of tools and equipment * Develop fine motor skills to use equipment * Weaving – paper, fabric, natural * Applique to decorate * Building models with “junk” boxes | * Select from a range of tools provided * Stitching to decorate * Sew fabric – stitches to connect fabrics * Cut and shape materials * Select a range of materials * Measure (Maths) | * Select tool and equipment appropriate to the task. * Stitching to join | * Range of stitches – stitches to join. * Select tools and equipment in relation to purpose. * Padding/stuffing * Techniques to make tassels/trim/decoration |
| **Evaluating** | * Look at and talk about different “items” made. * Talk about what it is, if it has a use, who it might be for. | * What have children made? Does it fit the purpose? * Does it fit the planned design? * What could be better? * How could structure be made stronger, stiffer, rigid, more stable, flexible? |  |  |
| **Technical Knowledge** | Materials   * Fluffy/Rough/Smooth * Stretchy/Stiff/Hard * Gluing and sticking * Cutting and tearing   String, wool, threads | * Glue * Sew * Straight Stitch * Threading needle * Starting with a knot * Vocabulary relating to item/project/D&T |  |  |

**Design** **and Technology Progression:** Component knowledge pupils need to design and make a fabric sewing box made in UK2 (STUCTURES)

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| **Designing** | * Experiences of use of wood * Mark making/carving into wood * Drawing | Same as EYFS including   * Discussion time * Exploring existing wooden products without moving parts | Same as EYFS and KS1   * Research existing wooden items with moving mechanisms * Research existing designers of different wooden products | Same as LKS2   * Research different types of mechanisms and their use within structures. * Research existing designers that have made wooden products with cams. |
| **Making** | * Using glue to stick wooden sticks together * Using Sellotape to join wooden sticks together. * Experiences of making things from wood in Forest Schools * Playing with toys where children hammer pieces into place. | * Select from a range of tools provided * Learn to saw wood safely * Learn to join wood safely (glue, glue guns, tacks, nails) |  |  |
| **Evaluating** | * Talk about what children have made * What do they like about it? * Who is it for? * What does it do? | * What has been made? * What would make the product better? * Is the structure sturdy? * How could we make it sturdy? * Select a range of materials * Measure (Maths) * Cut (apply fine motor skills) * Types of join (hinge) |  |  |
| **Technical Knowledge** | Materials   * The best ways to join wood | * Glue/stick * Nail/Tack * Hammer * How to join wood * Links to maths around strength in structure (triangles and squares) |  |  |

**Design & Techn Progression:** Component knowledge pupils need to design and make a moving wooden toy UKS2 (STUCTURES & MECHANISMS)