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| C:\Users\tineke\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\3E53BEBE.tmp | **D.T Progression Map** |
|  | **EYFS** | **Year One** | **Year Two** | **End of KS****expectations** | **Year Three** | **Year Four** | **Year Five** | **Year Six** | **End of KS****expectations** |
| **Design** | \*Select appropriate resources\*Use gestures, talking and arrangements of materials and components to show design\* Use contexts set by the teacher and myself\*Use language of designing and making (join, build, shape, longer, shorter, heavier etc.) | * have own ideas
* explain what I want to do

\*explain what my product is for, and how it will work* use pictures and words to plan, begin to use models
* design a product for myself following design criteria

\*research similar existing products | * have own ideas and plan what to do next
* explain what I want to do and describe how I may do it
* explain purpose of product, how it will work and how it will be suitable for the user
* describe design using pictures, words, models, diagrams, begin to use ICT
* design products for myself and others following design criteria
* choose best tools and materials, and explain choices
* use knowledge of existing products to produce ideas
 | \*Design purposeful, functional, appealing products for themselves and other users based on design criteria\*Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology | \*begin to research others’ needs* show design meets a range of requirements
* describe purpose of product
* follow a given design criteria
* have at least one idea about how to create product
* create a plan which shows order, equipment and tools

\*describe design using an accurately labelled sketch and words* make design decisions

\*explain how product will work* make a prototype
* begin to use computers to show design
 | * use research for design ideas
* show design meets a range of requirements and is fit for purpose

\*begin to create own design criteria\*have at least one idea about how to create product and suggest improvements for design.* produce a plan and explain it to others

\*say how realistic plan is.\*include an annotated sketch\*make and explain design decisions considering availability of resources\*explain how product will work* make a prototype

\*begin to use computers to show design. | \*use internet and questionnaires for research and design ideas\*take a user’s view into account when designing* begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose

\*create own design criteria* have a range of ideas

\*produce a logical, realistic plan and explain it to others.\*use cross-sectional planning and annotated sketches* make design decisions considering time and resources.

\*clearly explain how parts of product will work.\*model and refine design ideas by making prototypes and using pattern pieces.\*use computer-aided designs | * draw on market research to inform design
* use research of user’s individual needs, wants, requirements for design
* identify features of design that will appeal to the intended user
* create own design criteria and specification
* come up with innovative design ideas

\*follow and refine a logical plan.\*use annotated sketches, cross- sectional planning and exploded diagrams* make design decisions, considering, resources and cost
* clearly explain how parts of design will work, and how they are fit for purpose
* independently model and refine design ideas by making prototypes and using pattern pieces
* use computer-aided designs
 | *\*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** | \*Construct with a purpose, using a variety of resources\*Use simple tools and techniques\*Build / construct with a wide range of objects\*Select tools & techniques to shape, assemble and join\*Replicate structures with materials / components\*Discuss how to make an activity safe and hygienic\*Record experiences by drawing, writing, voice recording\*Understand different media can be combined for a purpose | \*explain what I’m making and why\*consider what I need to do next\*select tools/equipment to cut, shape, join, finish and explain choices\*measure, mark out, cut and shape, with support\*choose suitable materials and explain choices\*try to use finishing techniques to make product look good\*work in a safe and hygienic manner | \*explain what I am making and why it fits the purpose\*make suggestions as to what I need to do next.\*join materials/components together in different ways\*measure, mark out, cut and shape materials and components, with support.\*describe which tools I’m using and why\*choose suitable materials and explain choices depending on characteristics.\*use finishing techniques to make product look good\*work safely and hygienically | \*Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]\*Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics | \*select suitable tools/equipment, explain choices; begin to use them accurately* select appropriate materials, fit for purpose.
* work through plan in order

\*consider how good product will be* begin to measure, mark out, cut and shape materials/components with some accuracy
* begin to assemble, join and combine materials and components with some accuracy
* begin to apply a range of finishing techniques with some accuracy
 | * select suitable tools and equipment, explain choices in relation to required techniques and use accurately

\*select appropriate materials, fit for purpose; explain choices* work through plan in order.
* realise if product is going to be good quality
* measure, mark out, cut and shape materials/components with some accuracy

\*assemble, join and combine materials and components with some accuracy\*apply a range of finishing techniques with some accuracy | * use selected tools/equipment with good level of precision
* produce suitable lists of tools, equipment/materials needed

\*select appropriate materials, fit for purpose; explain choices, considering functionality* create and follow detailed step- by-step plan
* explain how product will appeal to an audience
* mainly accurately measure, mark out, cut and shape materials/components

\*mainly accurately assemble, join and combine materials/components* mainly accurately apply a range of finishing techniques
* use techniques that involve a small number of steps
* begin to be resourceful with practical problems
 | * use selected tools and equipment precisely

\*produce suitable lists of tools, equipment, materials needed, considering constraints* select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics
* create, follow, and adapt detailed step-by-step plans

\*explain how product will appeal to audience; make changes to improve quality* accurately measure, mark out, cut and shape materials/components
* accurately assemble, join and combine materials/components
* accurately apply a range of finishing techniques
* use techniques that involve a number of steps
* be resourceful with practical problems
 | \*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* |

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| **Evaluate** | \*Adapt work if necessary\*Dismantle, examine, talk about existing objects/structures\*Consider and manage some risks\*Practise some appropriate safety measures independently\*Talk about how things work\*Look at similarities and differences between existing objects / materials / tools\*Show an interest in technological toys\*Describe textures | \*talk about my work, linking it to what I was asked to do* talk about existing products considering: use, materials, how they work, audience, where they might be used

\*talk about existing products, and say what is and isn’t good* talk about things that other people have made

\*begin to talk about what could make product better | * describe what went well, thinking about design criteria
* talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion

\*evaluate how good existing products are\*talk about what I would do differently if I were to do it again and why | \*Explore and evaluate a range of existing products\*Evaluate their ideas and products against design criteria | * look at design criteria while designing and making

\*use design criteria to evaluate finished product* say what I would change to make design better

\*begin to evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose* begin to understand by whom, when and where products were designed
* learn about some inventors/designers/ engineers/chefs/ manufacturers of ground- breaking products
 | \*refer to design criteria while designing and making\*use criteria to evaluate product* begin to explain how I could improve original design

\*evaluate existing products, considering: how well they’ve been made, materials, whether they work, how they have been made, fit for purpose* discuss by whom, when and where products were designed
* research whether products can be recycled or reused
* know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products
 | \*evaluate quality of design while designing and making\*evaluate ideas and finished product against specification, considering purpose and appearance.\*test and evaluate final product* evaluate and discuss existing products, considering: how well they’ve been made, materials,

whether they work, how they have been made, fit for purpose* begin to evaluate how much products cost to make and how innovative they are

\*research how sustainable materials are\*talk about some key inventors/designers/ engineers/ chefs/manufacturers of ground- breaking products | \*evaluate quality of design while designing and making; is it fit for purpose?\* keep checking design is best it can be.\*evaluate ideas and finished product against specification, stating if it’s fit for purpose\*test and evaluate final product; explain what would improve it and the effect different resources may have had\*do thorough evaluations of existing products considering: how wellthey’ve been made, materials,whether they work, how they’ve been made, fit for purpose\*evaluate how much products cost to make and how innovative they are\*research and discuss how sustainable materials are\*consider the impact of products beyond their intended purpose\*discuss some key inventors/designers/ engineers/ chefs/manufacturers of ground- breaking products | *\*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* |

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| **Technical knowledge – Materials/structures** |  | \*begin to measure and join materials, with some support\*describe differences in materials\*suggest ways to make material/product stronger | \*measure materials\*describe some different characteristics of materials\*join materials in different ways\*use joining, rolling or folding to make it stronger\*use own ideas to try to make product stronger | \*Build structures, exploring how they can be made stronger, stiffer and more stable | \*use appropriate materials\*work accurately to make cuts and holes\* join materials\*begin to make strong structures | **\***measure carefully to avoid mistakes\*attempt to make product strong\*continue working on product even if original didn’t work\*make a strong, stiff structure | **\***select materials carefully, considering intended use of product and appearance\*explain how product meets design criteria\*measure accurately enough to ensure precision\*ensure product is strong and fit for purpose\*begin to reinforce and strengthena 3D frame | **\***select materials carefully, considering intended use of the product, the aesthetics and functionality.\*explain how product meets design criteria\* reinforce and strengthen a 3D frame | \*Apply their understanding of how to strengthen, stiffen and reinforce more *complex structures* |
| **Technical knowledge****- Mechanisms** |  | \*begin to use levers or slides | \*use levers or slides\*begin to understand how to use wheels and axles | \*Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. | \*select appropriate tools / techniques\*alter product after checking, to make it better\*begin to try new/different ideas\*use simple lever and linkages to create movement | **\***select most appropriate tools/ techniques\*explain alterations to product after checking it\*grow in confidence about trying new / different ideas.\*use levers and linkages to create movement\*use pneumatics to createmovement | **\***refine product after testing\*grow in confidence about trying new / different ideas\*begin to use cams, pulleys or gears to create movement | **\***refine product after testing, considering aesthetics, functionality and purpose\*incorporate hydraulics and pneumatics\*be confident to try new / different ideas\*use cams, pulleys and gears to create movement | \**Understand* and use mechanical systems in their products [for example, *gears, pulleys, cams,* levers and *linkages*] |
| **Technical knowledge - Textiles** |  | \*measure, cut and join textiles to make a product, with some support\*choose suitable textiles | \*measure textiles\*join textiles together to make a product, and explain how I did it\*carefully cut textiles to produce accurate pieces\*explain choices of textile\*understand that a 3D textile structure can be made from two identical fabric shapes. |  | **\***join different textiles in different ways\*choose textiles considering appearance and functionality\*begin to understand that a simple fabric shape can be used to make a 3D textiles project | **\***think about user when choosing textiles\*think about how to make product strong\* begin to devise a template\*explain how to join things in a different way\*understand that a simple fabric shape can be used to make a 3D textiles project | **\***think about user and aesthetics when choosing textiles**\***use own template\* think about how to make product strong and look better\*think of a range of ways to join things\*begin to understand that a single 3D textiles project can be made from a combination of fabric shapes. | **\***think about user’s wants/needs and aesthetics when choosing textiles\*make product attractive and strong\*make a prototype\*use a range of joining techniques\*think about how product might be sold\*think carefully about what would improve product\*understand that a single 3D textiles project can be made from acombination of fabric shapes. |  |
| **Technical knowledge – Food and nutrition** | \*Begin to understand some food preparation tools, techniques and processes\*Practise stirring, mixing, pouring, blending\*Discuss how to make an activity safe and hygienic\*Discuss use of senses\*Understand need for variety in food\*Begin to understand that eating well contributes to good health | \*describe textures\*wash hands & clean surfaces\*think of interesting ways to decorate food\*say where some foods come from, (i.e. plant or animal)\*describe differences between some food groups (i.e. sweet, vegetable etc.)\*discuss how fruit and vegetables are healthy\*cut, peel and grate safely, with support | \*explain hygiene and keep a hygienic kitchen\*describe properties of ingredients and importance of varied diet\*say where food comes from (animal, underground etc.)\*describe how food is farmed, home-grown, caught\*draw eat well plate; explain there are groups of food\*describe “five a day”\*cut, peel and grate with increasing confidence | \*Use the basic principles of a healthy and varied diet to prepare dishes\*Understand where food comes from. | **\***carefully select ingredients\*use equipment safely\*make product look attractive\*think about how to grow plants to use in cooking\*begin to understand food comes from UK and wider world\*describe how healthy diet= variety/balance of food/drinks\*explain how food and drink are needed for active/healthy bodies.\*prepare and cook some dishes safely and hygienically\*grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking | **\***explain how to be safe/hygienic\*think about presenting product in interesting/ attractive ways\*understand ingredients can be fresh, pre-cooked or processed\*begin to understand about food being grown, reared or caught in the UK or wider world\*describe eat well plate and how a healthy diet=variety / balance of food and drinks\*explain importance of food and drink for active, healthy bodies\*prepare and cook some dishes safely and hygienically\*use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking | **\***explain how to be safe / hygienic and follow own guidelines\*present product well - interesting, attractive, fit for purpose\*begin to understand seasonality of foods\*understand food can be grown, reared or caught in the UK and the wider world\*describe how recipes can be adapted to change appearance, taste, texture, aroma\*explain how there are different substances in food / drink needed for health\*prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source\* use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. | **\***understand a recipe can be adapted by adding / substituting ingredients\*explain seasonality of foods\*learn about food processing methods\*name some types of food that are grown, reared or caught in the UK or wider world\*adapt recipes to change appearance, taste, texture or aroma.\*describe some of the different substances in food and drink, and how they can affect health\*prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source.\*use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. | \**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.* |
| **Technical knowledge – Electrical systems** |  |  |  |  | \*use simple circuit in product\*learn about how to program a computer to control product. | \*use number of components in circuit\*program a computer to control product | \*incorporate switch into product\*confidently use number of components in circuit**\***begin to be able to program a computer to monitor changes in environment and control product | \*use different types of circuit in product* think of ways in which adding a circuit would improve product
* program a computer to monitor changes in environment and control product
 | *\*Understand and use electrical systems in their products [for example, series circuits* |