Design Technology Progression Grid

Domain	EYFS	KS1		LKS2		UKS2	
Developing, Planning and Communicating ideas	• Explain choices of materials and joining for a specific job. • Accurately use a range of small tools • Use correct vocabulary to describe processes • Make decisions about what to do	• Follow verbal instructions • Explain what they are making and which materials they are using • Name the tools they are using • Describe what they need to do next • Select materials from a limited range • Select and name the tools • Select appropriate technique explaining First, Next, Last • Model ideas with kits, reclaimed materials • Use pictures and words to convey what they want to design and make • Describe their models and drawings • Use kits/reclaimed materials to develop an idea • Discuss their work as it progresses	•Follow verbal instructions • Explain what they are making and which materials they are using • Name the tools they are using • Describe what they need to do next • Select materials from a limited range that will meet the design criteria • Select and name the tools needed to work the materials • Select appropriate technique explaining First, Next, Last • Explore ideas by rearranging materials • Model ideas with kits, reclaimed materials • Select pictures to help develop ideas • Use pictures and words to convey what they want to design and make	•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 • Think ahead about the order of their work and decide upon tools and materials • Plan a sequence of actions to make a product	• 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 • Think ahead about the order of their work and decide upon tools and materials • Plan a sequence of actions to make a product • Record the plan by drawing (labelled sketches) or writing • Develop more than one design or adaptation of an initial design • Propose realistic suggestions as to how they can achieve their design ideas • Add notes to drawings to help explanations	• Investigate products/images to collect ideas • Sketch and model alternative ideas • Develop one idea in depth • Plan the sequence of work using a storyboard • Record ideas using annotated diagrams • Use models, kits and drawings to help formulate design ideas	• Investigate products/images to collect ideas • Sketch and model alternative ideas • Develop one idea in depth • Combine modelling and drawing to refine ideas • Plan the sequence of work using a storyboard • Record ideas using annotated diagrams • Use models, kits and drawings to help formulate design ideas • Make prototypes •Use found information to inform decisions • Use a computer to model ideas • Draw plans which can be read/followed by someone else • Give a report using correct technical vocabulary

				• Describe their models and drawings of ideas and intentions • Use kits/reclaimed materials to develop an idea • Use drawings to record ideas as they are developed • Discuss their work as it progresses • Add notes to drawings to help explanations			

Domain	EYFS	KS1		LKS2		UKS2	
DT progression of skills – Food	• Begin to use cutlery accurately	• Group familiar food products e.g. fruit and vegetables • Cut and chop a range of ingredients • Understand the need for a variety of foods in a diet • Measure and weigh food items, using spoons, cups • Use equipment and utensils safely and purposefully	• Group familiar food products e.g. fruit and vegetables • Cut, peel, grate, chop a range of ingredients • Measure and weigh food items, non standard measures e.g. spoons, cups	• Analyse the taste, texture, smell and appearance of a range of foods • Follow instructions • Make healthy eating choices from and understanding of a balanced diet • Measure and weigh ingredients appropriately • Build a vocabulary of the names of food, equipment and utensils used	• Develop sensory vocabulary/know ledge using, smell, taste, texture and feel • Analyse the taste, texture, smell and appearance of a range of foods • Follow instructions • Make healthy eating choices from and understanding of a balanced diet • Join and combine a range of ingredients e.g. snack foods • Measure and weigh ingredients appropriately	• Prepare food products taking into account the properties of ingredients and sensory characteristics • Select and prepare foods for a particular purpose • Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing. • Weigh and measure using scales • Cut and shape ingredients using appropriate tools and equipment e.g. grating • Join and combine food ingredients appropriately e.g. beating, rubbing in • Decorate appropriately	• Select and prepare foods for a particular purpose • Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing. • Weigh and measure using scales • Cut and shape ingredients using appropriate tools and equipment e.g. grating • Join and combine food ingredients appropriately e.g. beating, rubbing in • Decorate appropriately

Domain		EYFS	KS1		LKS2		UKS2	
DT progression of skills	Structures	• Join different materials explaining why they have chosen fixings. • Purposely choose construction materials for a job	• Fold, tear and cut paper and card • Roll paper to create tubes • Cut along lines, straight and curved • Curl paper • Join appropriately for different materials and situations e.g. glue, tape. • Use hole punch • Insert paper fasteners for card linkages • Create hinges	•test the strength of different shaped paper pillars • to experiment with using different folds. • To build a multi-storey structure to bear weight • Design and make a structure according to criteria • Modify design inlight of test results. • Rebuild structure to incorporate design changes.	• Create shell or frame structures, strengthen frames with diagonal struts • Make structures more stable by giving them a wide base • Prototype frame and shell structures • Use glue gun with close supervision (one to one) • Develop a vocabulary of the tools and the properties of materials used	• Explore shapes to ensure stability in structure • Use a range of materials to investigate 3D shapes. • Create shell or frame structures, strengthen frames with diagonal struts • Make structures more stable by giving them a wide base • Prototype frame and shell structures • Measure and mark square selection, strip and dowel accordingly to 1cm • Use glue gun with close supervision (one to one)	• Explore ways to reinforces framed structures. • Experiment methods of joining straws securely e.g. forming gussets and inserting pipe cleaners to create a flexible join. • Use a hacksaw and bench block to accurately cut wood • Join materials using appropriate methods • Use glue gun with close supervision • Design and annotate a model of a shelter • Use carpentry skills to construct a stable frame, incorporating structural joins for additional support and strength • Evaluate and modify the design and structure as needed	• Devise and carry out an experiment to test strength and stability. • Explore ways to increase a products weight that it can withstand • Draw conclusions from observations and test results. • Investigate the stability and strength of 3D shapes. • Explore effects of adding features to a structure e.g. flying buttresses • Combine techniques and features to construct a stable tower from limited materials e.g. cubes and pyramids • Build a tower at least 1m tall • Identify ways in which a structure can be made more stable and modify a design as necessary

Domain	EYFS	KS1		LKS2		UKS2	
DT progression of skills – Mechanisms	• Know how equipment works • Know the effect of a simple push and pull force.	• Fold, tear and cut paper and card • Cut along lines, straight and curved • Design and make simple slider • Use simple pop ups • Mark out materials to be cut using a template • Investigate joining - temporary, fixed and moving	• Make vehicles with which contain moving parts • Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels • Attach wheels to a chassis using an axle • Join appropriately for different materials and situations e.g. glue, tape. • Cut strip wood/dowel using hacksaw and bench hook • Investigate joining - temporary, fixed and moving	• Investigate linkages and levers. • Design and make a linkages and lever product • Select and use a variety of modelling materials	• Cut slots • Cut internal shapes • Use lolly sticks/card to make levers and linkages • Use linkages to make movement larger or more varied. • Use and explore complex pop ups • Create nets	• Identify different types of gears and their applications • Construct simple pulley system to lift a load • Use diagrams, photos and annotations to record information about gears and pulleys • Identify specific constraints and limitations related to a design brief • Make a structure containing a pulley system for a specific purpose • Apply modelling, measuring, joining and cutting skills	• Make accurate measurements of force using a Newton meter • compare the mechanical advantage provided by different pulley systems • Apply knowledge of gear trains to design and construct a model Ferris wheel
Domain	EYFS	KS1		LKS2		UKS2	

DT progression of skills	Understanding materials (KS1) Systems (Y3&5) Electrical systems (Y4&6)							
			• Investigate strengthening materials • Investigate joining - temporary, fixed and moving • Design and make simple house	• To fold paper to in the style of origami to form a hat • Investigate and group materials by properties • To test media to create a waterproof barrier	• Identify different types of energy • Consider how design choices are influenced by energy sources.	• Explore how different types of switch work • Build a simple circuit to explore a switch • Draw a simple circuit diagram • Incorporate a circuit with a buzzer into a model	• Select materials based on their properties • Combine materials to fulfil a design brief • design to a specific brief, giving and responding to feedback • Measure and cut a paper template • Apply basic stitching skills • Develop an algorithm • Write and test a simple program using coding knowledge	• Explore switches and describe and compare products • Create a circuit using a switch or buzzer • Draw circuit diagrams to represent a circuit including a bulb, or buzzer and a switch • Build circuits according to specific criteria e.g. series and parallel • Draw circuit diagrams to represent those circuits (series and parallel) • Compare series and parallel circuits • Design and make circuit product to fit design brief • Identify and explain advantages and disadvantages or the functionality of different products.

Domain		EYFS	KS1		LKS2		UKS2	
DT progression of skills	Textiles	• Develop ideas though experimenting with a range of materials. • Increasing choose appropriate materials for the job. • Join different materials explaining why they have chosen fixings.	• Create a running stitch • Select tools for sewing • Thread a needle • Join fabrics together using a running stitch • Mark out materials to be cut using a template	• Cut out shapes • draw round a template onto the fabric • Join fabrics by using running • Join materials using different techniques e.g stitch, glue, staples, over sewing, tape	• Join fabrics using running stitch, over sewing, back stitch • Explore fastenings and recreate some e.g. sew on buttons and make loops • Prototype a product using J cloths • Create a simple pattern • Explore a range of solutions to stiffen fabric. • Create a fair test • Draw conclusions from tests. • Use a template to cut fabric to appropriate size and shape. • Fold and manipulate fabric • Use mould to create box out of fabric.	• Explore a range of fasteners • Use sewing techniques to attach fasteners e.g. running stitch • Use a running stitch to create a pocket. • Sew a button onto fabric • Make a shank for a button	• Create 3D products using pattern 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) • Make quality products	• Create 3D products using pattern 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

Domain		EYFS	KS1		LKS2		UKS2	
DT progression of skills	Evaluation	• Express clear opinions and justify their reasoning. • Share their creation explaining processes they have used. • Return to previous learning to refine ideas and develop them.	• Say what they like and do not like about items they have made and attempt to say why • Talk about their designs as they develop and identify good and bad points • Discuss how closely their finished products meet their design criteria	• Say what they like and do not like about items they have made and attempt to say why • Talk about their designs as they develop and identify good and bad points • Talk about changes made during the making process • Discuss how closely their finished products meet their design criteria	• Identify the strengths and weaknesses of their design ideas • 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 and how well it meets the needs the needs of the users	• Identify the strengths and weaknesses of their design ideas • 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 and how well it meets the needs the needs of the user.	• Use the design brief to inform their decisions about ways to proceed • Justify their decisions about materials and methods of construction • Reflect on their work using design criteria stating how well the design fits the needs of the user • Identify what does and does not work in the product. • Make suggestions as how their design could be improved • Evaluate outcomes, identifying where modifications need to be made and assess whether the requirements and specifications of the brief have been met	• Use the design criteria to inform their decisions about ways to proceed • Justify their decisions about materials and methods of construction • Reflect on their work using design criteria stating how well the design fits the needs of the user • Identify what does and does not work in the product. • Make suggestions as how their design could be improved