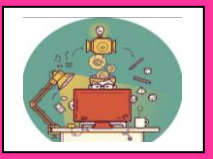
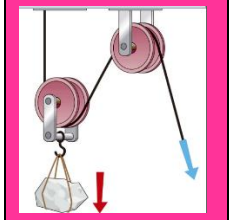
Design and Technology
National Curriculum Progression Mapping

Progression of skills
Design and Technology



Area of DT	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5
Developing, planning and communicating ideas 	• I can explain what I am making and which materials I am using. • I can select materials from a limited range that will meet a simple design criteria e.g. shiny. • I can select and name the tools needed to work the materials e.g. scissors for paper. • I can explore ideas by rearranging materials. • I can describe simple models or drawings of ideas and intentions. • I can discuss my work as it progresses.	• I am beginning to draw on my own experience to help generate ideas and research conducted on criteria. • I am beginning to understand the development of existing products: • I can explain what they are for, how they work and what materials have been used. • I am starting to suggest ideas and explain what I am going to do. • I understand how to identify a target group for what I intend to design and make based on a design criteria. I am beginning to develop their ideas through talk and simple drawings. • I can make templates and mock ups of their ideas in card and paper or using ICT (if relevant). • I can communicate with others about how I want to construct my product. • I can explain how I intend to fix simple materials.	• I am starting to generate ideas by drawing on my own and other people's experiences. • I am beginning to develop my design ideas through discussion, observation, drawing and modelling. • I can identify a purpose for what I intend to design and make. • I understand how to identify a target group for what I intend to design and make based on a design criteria. • I can develop my ideas through talk and drawings and label parts. • I can make templates and mock ups of my ideas in card and paper or using ICT (if relevant). • I am beginning to explain why I chose a certain material. • I can develop my own ideas from given starting points.	• With growing confidence I can generate ideas for an item, considering its purpose and the user/s. • I am starting to order the main stages of making a product. • I can identify a purpose and establish criteria for a successful product. • I understand how well products have been designed, made, what materials have been used and the construction technique. • I have learnt about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. • I am starting to understand whether products can be recycled or reused. • I know to make drawings with labels when designing. • When planning I can explain my choice of materials and components including function and aesthetics. • I can put together a step-by-step plan which shows the order and also what equipment and tools I need.	• I am starting to generate ideas, considering the purposes for which I am designing- link with Mathematics and Science. • I can confidently make labelled drawings from different views showing specific features. • I can develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail. I can identify the strengths and areas for development in their ideas and products. • When planning, I consider the views of others (including intended users) to improve their work. • I have learnt about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. • When planning I can explain my choice of materials and components according to function and aesthetic. • I take account of the ideas of others when designing. • I can produce a plan and explain my plan to others. • I can consider how to present my product in an interesting way.	• I am starting to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and CAD. • I am beginning to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. • With growing confidence I can apply a range of finishing techniques, including those from art and design • I can draw up a specification for my design- link with Mathematics and Science. • I can use results of investigations, information sources, including ICT when developing design ideas. • With growing confidence I can select appropriate materials, tools and techniques. • I am starting to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose. • I can produce a range of ideas after collecting information. • I can produce a detailed step-by step plan. • I can suggest some alternative plans and say what the good points and drawbacks are about each. • I can explain how my product will appeal to the audience.
Working with tools, equipment, materials and components to make quality products	I am beginning to create my design using basic techniques. I am starting to build structures, joining components together. I have looked at simple hinges, wheels and axles. I can use technical vocabulary when appropriate. I am beginning to use scissors to cut straight and curved edges.	I am beginning to make my design using appropriate techniques. I am beginning to build structures, exploring how they can be made stronger, stiffer and more stable. I can explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. I can identify and talk about products which use electricity to make them work.	I am beginning to select tools and materials; use correct vocabulary to name and describe them. I can build structures, exploring how they can be made stronger, stiffer and more stable. With help measure I can cut and score with some accuracy. I have learnt to use hand tools safely and appropriately. I am starting to assemble, join and combine materials in order to make a product – e.g. a pop up card. I can demonstrate how to cut, shape and join fabric to make a simple product.	I can select a wider range of tools and techniques for making my product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components. I can explain my choice of tools and equipment in relation to the skills and techniques I will be using. I am starting to understand that mechanical and electrical systems have an input, process and output. I am starting to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.	I can select a wider range of tools and techniques for making my product safely. I know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. I am starting to join and combine materials and components accurately in temporary and permanent ways. I know how mechanical systems such as cams or pulleys or gears create movement. I understand how more complex electrical circuits and components	I can select appropriate materials, tools and techniques e.g. cutting, shaping, joining and finishing, accurately. I can 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. I understand how mechanical systems such as cams or pulleys or gears create movement. I know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products.

 	I can use hole punches to punch holes. I have explored using/ holding basic tools such as a saw or hammer. I can use adhesives to join material.	With help I can measure, mark out, cut and shape a range of materials. I can explore using tools e.g. scissors and a hole punch safely. I am beginning to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. I am beginning to use simple finishing techniques to improve the appearance of my product. I can make a product which move. I can attempt to make my model stronger if it needs to be. I can select appropriate resources and tools for my building projects.	I can use basic sewing techniques. I am starting to choose and use appropriate finishing techniques based on my own ideas. I can select the best tools and materials. I can able to join things (materials/ components) together in different ways. I can measure materials to use in a model or structure. I can create working circuits to light a bulb or work a buzzer. I can attach features to a vehicle (e.g. an axel and wheels). I can join fabric using a running stitch, glue and tape.	I know how simple electrical circuits and components can be used to create functional products. I can measure, mark out, cut, score and assemble components with more accuracy. I am starting to work safely and accurately with a range of simple tools. I am starting to think about my ideas as I progress and I am willing to change things if this helps me to improve my work. I am starting to measure, tape or pin, cut and join fabric with some accuracy. Use equipment safely. Attempt to make sure that their product looks attractive Make choices of material both for its appearance and qualities Select the most appropriate tools and techniques to use for a given task Make a product which uses both electrical and mechanical components Work accurately to make cuts and holes – e.g. to measure and then use equipment to cut. Try alternative ways of fixing something if the first attempt is not successful. Join fabrics using a running stitch Create and use simple gears, pulleys, cams, levers and linkages Build models incorporating circuits with buzzers and bulbs.	can be used to create functional products. I am continuing to learn how to program a computer to monitor changes in the environment and control their products. I understand how to reinforce and strengthen a 3D framework. I can now sew using a range of different stitches, to weave and knit. I can demonstrate how to measure, tape or pin, cut and join fabric with some accuracy. I am beginning to use finishing techniques to strengthen and improve the appearance of my product using a range of equipment including ICT. I can measure carefully and show initiative to check so as not to make mistakes. I can persevere with my product even though my original idea might not have worked I can use pulleys, levers and linkages in my product. I can build a model which incorporates a motor. I can use a glue gun with close supervision (one to one) Create a more complex pop up (e.g. card) Use a simple pattern to create a life-sized item of clothing	I understand that mechanical and electrical systems have an input, process and output. I am beginning to measure and mark out more accurately. Demonstrate how to use skills in using different tools and equipment safely and accurately With growing confidence cut and join with accuracy to ensure a good-quality finish to the product Weigh and measure accurately (time, dry ingredients, and liquids). Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. Use a range of tools and equipment expertly Make up a prototype first Measurement accurately to ensure that everything is precise Demonstrate motivation/perseverance to refine and improve their products. Create a 3D product using a range of materials and sewing techniques. Use a glue gun with close supervision. Incorporate switches to turn on and off into models made.
Evaluating processes and ideas 	Say what they like and do not like about items they have made and attempt to say why. Begin to talk about their designs as they develop and identify good and bad points. Start to talk about changes made during the making process. Discuss how closely their finished products meet their design criteria.	Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). When looking at existing products explain what they like and dislike about the Products and why. Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make next time..	Evaluate their work against their design criteria. Look at a range of existing products explain what they like and dislike about Products and why. Start to evaluate their products as they are developed, identifying what went well and possible changes they might make next time. With confidence talk about their ideas	Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose Suggest some improvements and say what was good and not so good about their original design Begin to disassemble and evaluate familiar products and consider the views of others to improve them. Begin to evaluate how the key designs of individuals in design and technology have helped shape the world.	Evaluate their work both during and at the end of the assignment. Evaluate their products carrying out appropriate tests. Be able to disassemble and evaluate familiar products and consider the views of others to improve them. Evaluate how the key designs of individuals in design and technology have helped shape the world. Suggest some improvements and say what was good and not so good about their original design Begin to explain how they can improve their original designs Evaluate their product, thinking of both appearance and the way it works	Start to evaluate a product against the original design specification and by carrying out tests. Evaluate their work both during and at the end of the assignment. Begin to seek evaluation from others. Evaluate how the key designs of individuals in design and technology have helped shape the world. Evaluate appearance and function against original criteria

Food and nutrition 	Begin to develop a food vocabulary using taste, smell, texture and feel. Explore familiar food products e.g. fruit and vegetables. Stir, spread, knead and shape a range of food and ingredients. Begin to work safely and hygienically. Start to think about the need for a variety of foods in a diet. Measure and weigh food items, non-statutory measures e.g. spoons, cups.	Begin to understand that all food comes from plants or animals. Explore common food sources (e.g. from food or animals) Start to understand how to name and sort foods into the five groups in (e.g. could use the 'The Eat well plate') Know that everyone should eat at least five portions of fruit and vegetables every day (check current guidelines!) Know how to prepare simple dishes safely and hygienically, without using a heat source. Know how to use techniques such as cutting, peeling and grating. Measure and weigh food items using non-standard measures (e.g. spoons and cups)	Understand that all food comes from plants or animals. Develop understanding of where different foods come from (e.g. foods which are farmed, grown elsewhere (e.g. home) or caught) and also food from native to different countries. Understand how to name and sort foods into the five groups in (e.g. could use the 'The Eat well plate') Know that everyone should eat at least five portions of fruit and vegetables every day (check current guidelines!) Recognise the need for a variety of food in a diet Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source. Demonstrate how to use techniques such as cutting, peeling and grating Make dishes from other countries (if relevant to learning theme)	Start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Understand how to prepare and cook a variety of dishes including experience of using a heat source. Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Know how a healthy diet is made up from a variety and balance of different food and drink Begin to know that to be active and healthy, food and drink are needed to provide energy for the body (and begin to distinguish healthy high energy foods) Be able to identify foods which come from the UK and other countries in the world	Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Understand how to prepare and cook a variety of predominantly savoury dishes including experience of using a heat source. Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Measure and weigh ingredients appropriately Explain why a healthy diet is important Know that to be active and healthy, food and drink are needed to provide energy for the body and identify healthy high energy foods) Understand what to do to be hygienic and safe Become familiar with some of the processes that foods go through to preserve them/make them more appealing	Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Begin to understand that seasons may affect the food available. Understand how food is processed into ingredients that can be eaten or used in cooking. Know how to prepare and cook a variety of predominantly savoury dishes including the use of a heat source Demonstrate increasing confidence in how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Evaluate a meal and consider if they contribute towards a balanced diet Begin to understand that different food and drink contain different substances (nutrients, water and fibre) that are needed for health Explain what times of year particular foods are eaten in Describe what to do to be hygienic and safe Use appropriate tools and equipment, weighing and measuring with scales.