Progression of Skills and Knowledge: Design and Technology

	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Design	I can draw on my own experiences to think of an idea of my own and use this to create a plan. I can think of who I want to make my product for. I can suggest and discuss ideas and show what I am going to do using words and pictures through labels. I can describe how my product will work. I can create simple mock-ups using card and paper.	I can draw on my own and others' experiences to think of an idea of my own. I can think of a purpose for my product. I can develop my ideas through discussion, drawing and modelling. I can write a simple plan to allow someone else to make my product. I can begin to create simple criteria for my design. I can create mock-ups using different materials. I can use IT to develop and generate ideas with support.	I can consider the order I will complete tasks when making my product. I can put together a detailed plan, which shows the order, equipment and tools needed. I can plan and begin to adapt the original design using drawings, models and diagrams. I can create a sketch to show my design and begin to annotate my choices. I can identify a purpose and audience for a specific product. I can create success criteria for my product.	I can plan the order I will complete tasks when making my product. I can put together a detailed plan, showing the order and equipment needed and explain it to others. I can plan and adapt the original design using drawings, models and diagrams. I can create a sketch to show my design and begin to annotate my choices in detail. I can think about how to present my product in an interesting way. I can create success criteria and begin to change these as needed.	I can develop a clear idea of what needs to be done, planning how to use materials, equipment and processes and suggesting alternatives if the first design fails. I can generate ideas through brainstorming and discussion and identify a purpose for my product. I can create a sketch to show my ideas and begin to create cross-sectional and exploded diagrams to show my plan in more detail. I can explain how my product will appeal to the audience. I can create success criteria and change these as needed.	I can think about specifications for my design including how it will be sold and how much it will cost. I can justify the use of selected materials. I can research and discover the products needed. I can suggest some alternatives plans and evaluate them. I can create sketches, cross-sectional diagrams and exploded diagrams to show the details of my design and explain these choices. I can make a prototype of my product, make any needed changes before creating the final product and explain the reasons for this.

				I can use software to create simple 2d computer aided designs and add simple details using the paint tools.	I can use software to create simple 3d computer aided designs and add details. I can use the rotate and zoom tools with support to view computer aided designs in different ways.	I can make a prototype of my product and consider changes needed before creating the final product. I can use software to create computer aided designs to meet given criteria that require accuracy. I can use the rotate and zoom tools to view computer aided designs in different ways and understand the reasons for doing this.	I can use software to create more complex computer aided designs using design criteria and measurements. I can use software to accurately create different shapes to be included in my computer aided design.
Make	I can select the right equipment to help me create my product. I can develop a range of skills including attaching, cutting and measuring with help. I can use tools safely and carefully.	I can choose and use the best tools and materials to make my product. I can measure and cut with some accuracy. I can attach items in different ways and begin to understand why I have made these choices e.g. masking	I can choose and use the best tools and materials to make my product using appropriate vocabulary to express this. I can attach items in different ways and justify my decisions thinking about its purpose and functionality.	I can use finishing techniques to strengthen and improve the aesthetic of my product. I can measure, tape or pin items accurately and adapt if needed to maximise the functionality of the product.	I can refer to my plan and evaluate any changes that need to be made before applying finishing techniques to ensure the aesthetic of my product. I can measure accurately enough to ensure that everything is precise.	I can follow my plan and refine it as needed whilst designing my product. I can apply the knowledge I have to select the most suitable tools, materials and equipment. I can assemble parts accurately to make a

I can make a simple model that moves using split pins.	tape, glue, sellotape, split pins. I can start to experiment with making holes in different ways. I can combine materials to make a product. I can make a model with a moving part.	I can choose and use appropriate finishing techniques and begin to consider the impact this has on the aesthetic. I can measure and cut accurately. I can join different materials with some accuracy. I can assemble, join and combine a range of materials in order to make a product. I can work safely and accurately with a range of different tools. I can begin to use a needle and thread to create a basic stitch.	I can join and combine materials and components accurately in temporary and permanent ways. I can sew using a range of different stitches and use these to join materials.	I can use a range of tools and products to make my product expertly. I can use skills and different tools safely and effectively, considering which would benefit the functionality of my product best.	working and moving model with full functionality. I can achieve a quality model, including the aesthetic.
Cooking and Nutrition	I can understand that all food comes from plants or animals.	I can understand where in the world	I can understand that different foods grow at	I can identify some of the different foods	I can identify different foods grown in a specific season and	I can plan a variety of dishes thinking about different needs.

	I can explain how many portions of fruit and vegetables people should eat each day. I can begin to understand the five food groups in the Eatwell Guide. I can design dishes and know to select foods from each of the different groups.	different food comes from. I can understand how food is made – farmed, grown, or caught. I can explain how many portions of fruit and vegetable people should eat each day and begin to explain why. I can understand the five food groups and name and sort foods into them. I can design and prepare balanced dishes using all the food groups.	different times in the year. I can explain where and how food is grown. I can explain what makes a healthy diet, including a mixture of food and drink. I can recognise the steps needed to handle and prepare food hygienically. I can follow a simple recipe with support.	grown in a specific season. I can explain where and how food is grown and begin to understand reasons for this. I can explain why nutritious food and drink are needed to be healthy and active. I can explain the steps needed to handle and prepare food hygienically and begin to explain why these are needed. I can follow a simple recipe.	understand why this is. I can begin to plan meals based on nutritional needs e.g. an increase in energy. I can recognise a range of cooking techniques including mashing, whisking, crushing, grating, cutting, kneading and baking. I can handle and prepare food hygienically. I can begin to prepare ingredients using appropriate cooking utensils. I can begin to prepare and cook a range of dishes safely and hygienically.	I can recognise and begin to explain a range of cooking techniques including mashing, whisking, crushing, grating, cutting, kneading and baking. I can handle and prepare food hygienically and explain the steps and reasons why. I can prepare ingredients using appropriate cooking utensils and begin to give reasons for my choices. I can measure and weigh ingredients to the nearest gram and millilitre. I can begin to show an awareness of the need to control the temperature of a heat source when using it with support.

Progression of Skills and Knowledge: Design and Technology

Evaluate	I can say what I like and don't like about items I am familiar with. I can evaluate existing products through discussions and comparisons. I can say what I like about my product and what I would do differently next time. I can say how I could improve my product. I can talk about if my product is what I wanted to make from my original design.	I can test new items and say what I like and don't like about them. I can evaluate existing products and write a simple evaluation for them. I can start to explore the different materials used in products. I can say what I like and dislike about my product and what I would do differently next time referring to my original design. I can say how I could improve my product linked to its purpose. I can explain why I have chosen the materials and techniques used.	I can research and test items and say what I like and don't like about them. I can respond to feedback given to me by an adult to improve my work. I can research given individuals and events within design and technology linked to the product I want to make. I can evaluate my product against design criteria and show that it meets a range of criteria. I can begin to reflect on the materials and techniques I have used linked to purpose, considering what went well and what I need to do differently next time.	I can evaluate existing items and begin to use these findings to inform my own design. I can respond to feedback given to me to improve my work, including through discussion with peers. I can research individuals and events within design and technology and begin to evaluate these. I can test and evaluate my product against design criteria considering the materials and techniques used. I can reflect on the materials and techniques I have used linked to purpose, considering what went well and what I need	I can evaluate existing items and begin to think about how well the design meets the purpose and use these findings to inform my own design. I can discuss my product with my peers and respond to their feedback to improve my design or product. I can research individuals and events within design and technology and evaluate these. I can confidently reflect and discuss the materials and techniques I have used linked to purpose, considering what went well and what I need to do differently next time. I can show enthusiasm to refine and improve	I can confidently evaluate existing items, identifying their purpose and how well the design meets it, and use these findings to inform my own design justifying my reasons for this. I can consider the views and feedback of others (e.g. the intended market) who have evaluated my product and use this to improve it. I can research individuals and events within design and technology and evaluate these, understanding the impact they had. I can test and evaluate my product making changes as needed using market research and thinking about how

				to do differently next time.	my product linked to my initial design.	it meets the success criteria. I can record evaluations using drawing with labels. I can evaluate against the original designs and think about how to improve my product and why.
Technical Knowledge	I can build simple structures, and with support, explore how they can be made stronger. I can include a given mechanism (e.g. levers, sliders, wheels and axles) in my product design. I can use a given mechanism (e.g. levers, sliders, wheels and axles) in my product.	I can build structures and explore how they can be made stronger, stiffer and more stable. I can explore the use of mechanisms (e.g. sliders, wheels and axles) in my product design. I can explore how the use of mechanisms (e.g. sliders, wheels and axles) can be used in my product.	I can build more complex structures and begin to understand how to strengthen, stiffen and reinforce them. I can begin to understand that mechanical and electrical systems have an input and output process. I can identify the input and output of different computer systems.	I can build more complex structures and strengthen, stiffen and reinforce them when given specific materials. I can begin to consider how to support my structure when planning it, and how this can be done. I can recognise different mechanical systems (e.g. gears, pulleys, cams, levers and linkages) and	I can build more complex structures and understand how to strengthen, stiffen and reinforce them choosing the materials that would be best for this. I can plan the support my structure will need, and the materials that will be required. I can identify the input and output of different systems and explain reasons why.	I can build more complex structures and understand how to strengthen, stiffen and reinforce them choosing the materials that would be best for this and justifying this choice. I can plan the support my structure will need and explain my decisions for this, and the materials needed. I can identify the input and output of different systems and begin to

			I can recognise different mechanical systems (e.g. levers and linkages) and explain their uses in existing products. I can begin to plan for mechanical systems (e.g. gears, pulleys, cams, levers and linkages) in my design.	explain the differences between them. I can begin to plan products which involve different mechanical systems. I can begin to include switches in my circuits for my product. I can make electrical circuits, including a series and a parallel circuit, and include these to make a functional product. I understand how a switch is used and can identify it in a circuit. I can follow simple steps to control a product using computing.	I can explain differences between mechanical systems and understand the different purposes of them. I can plan and create products which involve different mechanical systems. I can include a circuit to make a functional product. I can follow and adapt simple steps to control a product using computing.	use this to control my product (e.g. bee bots). I can recognise the mechanical systems needed for a specific purpose and consider this when planning my product. I can plan and create products which involve different mechanical systems and explain reasons for my choices. I can create a circuit to use in my product and include a switch considering the function needed. I can create simple steps to control a product using computing. I can monitor a product I have programmed and adapt it to resolve any problems which occur.