Design and Technology Assessment Statements

Year	By the end of each year, children at the Expected standard should:	At Greater Depth within the Expected standard they should:
YR	- Use a range of tools, including scissors and other implements with growing confidence. - Select materials that are suitable for the task e.g. strong and stable for a structure. - Safely use and explore a variety of materials, tools and techniques. - Experimenting with colour, texture, design, form and function. - Share creations explaining the process used. - Identify what worked well and what needs to be improved.	- Use a growing technological vocabulary to describe their own and others' work: 'I used strong materials', 'I used a cuboid', 'I attached the pieces together'. - Use and apply new knowledge e.g. If I bend this, I can use it to strengthen my model. - Uses tools with accuracy e.g cuts out with care. - Identify moving parts in mechanisms e.g. cars have axles and wheels attached to a chassis. - Make links e.g. 'This moves because I turn the handle.'
Y1	- Use a range of tools safely and showing care e.g. beat an egg with a fork. - Select materials for their purpose e.g. I need a strong drawbridge out of card, not paper. - Order instructions. - Label diagrams. - Identify moving parts and mechanisms in everyday technology e.g. I have used a slider, a lever and a spinner in my model. - Discuss different inventions such as bicycles or toys. - Know that structures need to be strong and stable. - Use a needle and thread to make a stitched pattern e.g. bookmarks	- Use a growing technological vocabulary e.g. I am making a mock-up/a design/I am evaluating my product. - Knows that a product can be improved with tinkering (making adjustments). - Use tools with greater accuracy e.g. peeling potatoes. - Suggest ways to make structures more stable and stronger e.g. by reinforcing the joins. - Identify different types of movement e.g. up and down, left and right, clockwise and anticlockwise. - Make links e.g. If I turn this, this part moves. - Thread a needle; sew with independence. - Know that technology can change our world.
Y2	- Use tools safely and showing care and control. - Select materials for their purpose based on their properties e.g. paper, card, foil etc. for flying machines. - Follow step-by-step instructions. - Draw diagrams and label. - Identify moving parts in toys and talk about the types of movement e.g. up and down, left and right, clockwise and anti-clockwise. - Discuss different inventions and how technology changed over time e.g. aeroplanes and the Wright brothers. - Observe technology and comment on the design and form. - Be able to show how to make structures stronger by reinforcing joins. - Use a needle and thread to make a stitched pattern or join e.g. bookmarks, felt animals.	- Make links between a force applied and movement e.g. flying machines are thrown, turn handle for moving cams. - Use tools with greater care and control. - Know that it is important to try out designs repeatedly to learn more about the product e.g. planes (Wright brothers tested cheaper materials so could speed up design process). - Observe that products are often symmetrical, especially vehicles. - Realise that testing gives a chance to modify and adapt design. - Use a growing technological vocabulary e.g. my design has cams, levers, followers and an axle. I used a template. - Make links e.g. If I make this symmetrical, it will fly better. - Know that technology can change our world.
Y3	- Use tools well including scissors, knives, graters, scorers, showing a care for safety and accuracy. - Know it is important to wash hands and exercise good hygiene when cooking. - Select materials for their purpose based on their properties e.g. I used bottle tops for wheels because they are circular and sturdy. - Identify how parts move in mechanisms e.g. wheels, axles, both attached to a chassis; the balloon propels the car. - Draw diagrams and label. - Identify solids and liquids when cooking and how liquids can turn to solids when heat is applied (eggs). - Measure out ingredients to make a healthy, balanced meal. - Know the names of different components e.g. albumen, yolk, wheel, axle, chassis.	- Use a growing technological vocabulary e.g. The balloon propels the car; I attached the jinks to the chassis. - Make links between a force applied and movement e.g. Trojan horses/Balloon cars - Talk about the nutritional value of different food. - Use tools with greater care and control e.g. scissors for scoring - Make a prototype or a mock-up to inform design. - Realise that testing informs the design process. - Make changes based on feedback from a user.

	- Discuss different inventions in the past e.g. Trojan horse	
Y4	- Use tools well including scissors, knives, graters, scorers, peelers, showing care for safety. - Know that it is important to be hygienic when cooking and handling food. - Select materials for their purpose based on their properties e.g. dowel for axles - Use different types of cams and followers in a single design. - Draw diagrams, label and annotate. - Identify where cams are used in the real world e.g. hole-punchers, sewing machines, clocks. - Use a design criteria e.g. make pasta for two people. - Measure out ingredients to make a healthy, balanced meal. - Know why it is important to eat five or more vegetables a day.	- Be able to cut an onion like a chef. - Use a growing technological vocabulary e.g. boil, saute, fry, cam, follower, axle. - Identify what typifies Italian cooking e.g. basil, tomatoes, garlic, onions. - Describe the nutritional value of different food. - Make a prototype or mock-up to inform design. - Realise that testing informs the design process and allows us to make adjustments. - Make changes based on feedback. - Make links between different moving parts e.g. The handle moves the axle, that then moves the cam, that moves the follower.
Y5	- Use tools well including scissors, knives, graters, peelers, scorers, showing care for safety. - Know that it is important to be hygienic when cooking and handling food. - Select different materials for purpose based on their properties. - Perform practical tasks such as cutting, shaping, joining, folding, scoring and finishing. - Use technical vocabulary. - Design according to a design criteria. - Draw different types of diagrams e.g. cross-sections or exploded diagrams. - Write step-by-step instructions. - Know that we need at least five types of fruit and vegetables a day to be healthy. - Discuss the nutritional value of food e.g. eggs give us protein, pasta gives us carbohydrates. - Discuss the different parts of the food wheel. - Measure out ingredients to make a healthy, balanced meal. - Identify where Computer-Aided Design is used in the real world.	- Group different types of vegetables e.g. root, cruciferous, leafy greens, marrows, alliums, stems. - Discuss the seasonality of food. - Cut up an onion like a chef. - Use a growing technological vocabulary e.g. boil, saute, fry, steam, design brief. - Describe the nutritional value of different food and why it is important for our bodies e.g. carbohydrates give us energy. - Draw detailed diagrams, showing each step accurately. - Make a prototype or mock-up to inform design. - Realise that testing informs the design process and allows us to make adjustments to improve our product. - Make changes based on feedback. - Make links between CAD and real life design e.g. cars are designed using CAD.
Y6	- Use tools well including scissors, graters, scorers, knives, peelers. - Know that it is important to be hygienic when cooking and handling food. - Select different materials for purpose, based on their properties. - Use a range of technical vocabulary. - Use the principles of the food wheel to inform design. - Perform practical tasks such as cutting, slicing, shaping, joining, folding, scoring and finishing. - Adjust the design and modify throughout the process. - Draw different types of diagrams e.g. cross-sections and exploded diagrams. - Write step-by-step instructions with diagrams. - Discuss the nutritional value of food e.g. rice is a carbohydrate and gives us energy. - Compare different carbohydrates e.g. brown and white rice. - Measure out ingredients to make a healthy, balanced meal.	- Group different types of vegetables e.g. root, cruciferous, leafy greens, marrows, alliums, stems. - Discuss the seasonality of food and why it is better to buy seasonal produce (impact on the environment). - Cut up an onion like a chef. - Use a growing technological vocabulary e.g. I secured the axle with a jinks to ensure the wheels could move freely. - Draw detailed diagrams, showing each step carefully. - Describe the nutritional value of different food and why it is important for our bodies. - Make prototypes and mock-ups to inform design. - Realise that testing informs the design process and allows us to make adjustments to improve our product. - Make changes based on feedback. - Make links between how a motorised vehicle moves using a motor and battery e.g. the motor turns the elastic band, moving the pulley, which turns the axles and then the wheels move.