Design and Technology Essential Knowledge

Rationale for assessment

There are relatively few assessment statements as these knowledge statements should be what pupils remember for ever.
In other words, this knowledge should be retained in long term memory.
There is a difference between knowledge which should be retained close to the point of teaching and knowledge which will be retained for ever.
These statements **should not** therefore be assessed directly after the point of teaching, but at a spaced interval to check if it has been embedded in long-term knowledge.

Year 1	Year 2
Understand the importance of washing hands before preparing food.	Know how to wash, peel and slice fruit and vegetables safely
Know that fruit and vegetables are part of a balanced diet and that 5 portions are recommended per day.	Know and recognise a range of simple kitchen utensils such as sieve, colander, spatula…
Know how to cut food safely.	Understand the four types of motion: linear, reciprocating, rotary and oscillating.
Know how to use their own ideas to design something using talk and drawings	Know that a lever is something that turns on a pivot
Know how to cut round shapes and outlines safely	Know how to use scissors with accuracy
Know how to join components together in a number of ways	Know how to thread and use a needle safely
Know how to choose materials according to their properties	Understand how to carry out a simple running stitch to join two pieces of material together

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Horizon Academy Trust

Year 3	Year 4
Know and understand the importance of seasonality, knowing where and how a variety of ingredients are grown.	Know how to make a basic bread dough, including kneading
Know how the temperature of the bake can affect the outcome.	Know that 'yeast' is a microbe which feeds on sugar
Understand the difference between asymmetrical and symmetrical	Know how to measure ingredients accurately to the nearest gram and millilitre
Know how to strengthen a structure using a cross-brace	Know that an axle is a rod or shaft that connects a pair of wheels to propel them
Know how to use IT to research and investigate ideas before designing	Know how to create a simple electrical circuit
Know how to use different types of stitch – cross stitch and applique	Know how to develop ideas through annotated sketches and cross-sectional drawings
Know how to plan a logical sequence of steps to create a product	Recognise common appliances that run on electricity
Know how to evaluate their own product against set criteria	Know how to select from a wide range of materials and components according to their functionality

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Year 5	Year 6
Know that the nutritional value of a recipe can change if you remove, substitute or add additional ingredients	Know how to work within a budget to create a meal
Know how to use an online nutritional calculator to compare two recipes	Show understanding of the different food groups to create balanced meal
Demonstrate understanding of the different types of bridge: beam, arch, cable-stayed, suspension and cantilever	Know how to use a variety of tools safely and effectively including: saws, glue guns and hand drills
Know how to evaluate the strength of different materials linking scientific knowledge	Know how to reinforce structures in a variety of ways
Know how to accurately join frameworks using appropriate and robust joins	Know how to use Computer Aided Design to produce a 3-D model
Know how to cut and shape fabric using prepared pattern pieces	Know how to use a range of mechanical systems in their designs for example: cams, pulleys, gears and levers
Know how to use a range of sewing techniques to create a garment for wear	Know how to evaluate their work and use this reflection to improve their products