Overview of Working Mathematically

	1.0	2.0	3.0	4.0	5.0	6.0
Problem solving strategies	• model problems using materials	• use diagrams and models	• make lists and tables	• check special cases	• use deductive reasoning	
Explaining generalising, conjecturing	• identify and extend patterns	• explain reasoning and solutions • make and test simple conjectures	• use counter-examples to disprove conjectures • communicate efficiently using mathematical language, symbols and visual representations	• generalise using words and symbols • refine conjectures • follow simple mathematical deductions	• informal justification of generalisations • follow a formal mathematical argument	
Real world situations	• identify addition & subtraction situations • identify mathematics in everyday life (e.g. numbers, shapes, time, measures)	• identify multiplication and division situations (e.g. sharing, price per kg, simple scale drawing, map reading) • show growing appreciation that mathematics is useful in the real world	• develop simple, e.g. linear, mathematical models • appreciate use of mathematics in other times and places	• choose appropriate procedures (e.g. numerical, algebraic or statistical) and function models		
Investigations	• display growing independence of posing questions and planning • show increasing sophistication of investigation (number of components, complexity of questions, mathematics used) • show increasing length, sophistication and precision of reporting (whether verbal, written or other) • display greater perception in evaluation of the results					
Calculators	• explore & record number, counting, simple operations	• calculate answers when beyond number skills • check calculations and estimates • explore number patterns and properties	• plan multi-step calculations	• use graphics calculators for functions, scientific notation, exponents, roots, surds, pi • CAS for algebra		
Major other Technology	• draw shapes with software templates	• organise and graph data with spreadsheets • use drawing software (e.g. for transformations)	• investigate with dynamic geometry software • use spreadsheets with formulae and functions			
	1.0	**2.0**	**3.0**	**4.0**	**5.0**	**6.0**