Turramurra High School - 2023-Year 9 5.3/5.2+ - Scope and Sequence

		Term 1 2023														
		Week 2	Wee	c 3	Week 4	Week 5	W	eek 6		Week 7	We	ek 8	8 Week 9		Week 10	
	30/1	31/1	6/2		13/2	20/2	27/2			6/3	13/3		20/3	27/3		4/3
		Topic 1:		Topic 1	: Algebraic Techniques	and Equations 1 (5.3)				Topic 2: Measurement 1 (5.2)				Topic 3: Geometry 1		
				MA5.	2 1WM, MA5.2 3WM, MA MA5.3 1WM, MA5.3 5N					MA5.1 1WM, MA5.1 2W 2 11M		WM, MA5.2 2 2MG, MA5.2		1A5. M	A5.2 1WM,	MA5.2 2WM,
Stage 5.3/5.2+	2	12 only	includin simple a • Perform • Solve	Apply the four operations to the the simplification of algebraic expressions including those involving fractions and expansions with numerical denominators and simple algebraic denominators Perform binomial expansions Solve linear, basic quadratic and cubic equations and linear inequations Solve simple literal equations						Consolidate and build on perimeter, area and volume. Calculate and solves prol surface area of right prisme. Solve problems involving composite solids. Use significant figures as Solve equations arising fiequations.	e. plems involvi s and cylinde g the volume s another met	ng the area of rs. of a range of hod of roundi	f composite figures and prisms, cylinders and ng.	Establish re angles of p Apply logic numerical p	lygons. and reasoni	ncy proofs rior and exterior ng to solve simple olving plane shapes
		Topic 1:	ming T		lices & Algebraic chniques	Topic 2: Equation	ns 1	etics C	Горіс 3:	: Measurement 1 Perimo			ic 4: Measurement	Surface Area	To	pic 5: Polygons 1WM, MA5.2 2WM,
	;	Year	3 3 3 7	M MAS 1	MA5.2 2WM, MA5.2 5NA MA5.2 8NA	MA5.2-1WM, MA5.2		Athl		.1 1WM, MA5.1 2WM, M.			.1 1WM, MA5.1 2WM	и, MA5.1 8MG	MA5.2	3WM, MA5.2 1 14MG
Stage 5.2/5.1			multipli algebrai brackets	expression lly factorise lve linear al tend and ap to using position	tion, subtraction, livision operations to s. including the removal of algebraic expressions. gebraic equations. ply the index laws to tive-integer indices and oraic products and x laws.	Solve linear algebraic involving 1 step, 2 step an equations with grouping step and expression of the step and the st	ď	of vo • 0	f Pythago olume. Calculate f compos	date and build on the conceptoras' Theorem, perimeter, and and solves problems involute figures. ificant figures as another m	rea and	Review is opposed	of nets of solids. types of solids in partid to a pyramid. roblems involving the		n reasonir problem shapes. • Es interior polygon • Aj reasonir	oply logic and ag to solve simple al problems involving
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							Term	2 2023							
		Week 1	Week 2	Week 3	Week 4		Week 5 Week 6		Week 7		Week 8		Week 9	Week 10	
2,5	25/4	26/4	1/5	8/2	15/5	22/5		29/5	9/9	12/6	13/6	9/61		5/9/2	
		Topic 4: Si	milarity Geometry 2	y 2 Topic 5: Indices and Scientific Notation				Topic 6: Surds & Fractional Indices				y		Topic 7: Trigonometry continued	
3/5.2+		MA5.1 3	WM, MA5.1 11MG			M, MA5.1 3WM, MA5.1 5NA, M, MA5.2 3WM, MA5.2 7NA		MA5.3 1WM, MA5.3 2WM, MA5.3 3WM, MA5.3 6NA				A5.1 VM, A5.2 VM,		MA5.1 1WM, MA5.1 2WM, MA5.1 3WM, MA5.1 10MG, MA5.2 1WM, MA5.2 2WM,	
Stage 5.	D. ac Dav	explain similariconditions for t * Solve probler factors in similaric explain similaric conditions for t	gement transformation to tty and develop the riangles to be similar. ns using ratio and scale ar figures. gement transformations to ity and to develop the riangles to be similar	integer indices and the zer * Simplify algebraic produ	ucts and quotients using inc ebraic expressions involvin	lex laws	Define rational and irrational numbers. Perform basic operations with surds and fractional indices				Use similarity to investigate the constancy of the sine, cosine and tangent ratios for a given angle in right-angled triangles		Semester 1 Assessment	* Apply trigonometry to solve right-angled triangle problems * Solve right-angled triangle problems, including those involving direction and angles of elevation and depression	
3	S.D.D.	Topi	c 6 : Similarity				Topic 8: Trigonometry				Topic 8 Trig cont'd		Assessment	Topic 9: Linear Relationships MA5.1 1WM, MA5.1	
Stage 5.2/5.1		Students factors to solve similar figures Use the e to explain simil conditions for t Solve pro	ar figures and scale drawings. Use the enlargement transformation plain similarity and develop the tions for triangles to be similar. Solve problems using ratio and factors in similar figures and scale Trigures and scale drawings. Apply index laws to algebraic expressions involving integer indices Investigate very small and very large time scales and intervals Express numbers in scientific notation		MA5.1 1WM, MA5.1 2WM, MA5.1 3WM, MA5.1 10MG • Use similarity to investigate the constancy of the sine, cosine and tangent ratios for a given angle in right-angled triangles Apply trigonometry to solve right-angled triangle problems • Apply trigonometry to solve right-angled triangle problems • Solve right-angled triangle problems, including those involving angles of elevation and depression					3WM, MA5.1 6NA, Find the midpoint and gradient of a line segment (interval) on the Cartesian plane using a range of strategies, including graphing software Find the distance between two points located on the Cartesian plane using a range of strategies, including graphing software Sketch linear graphs using the coordinates of two					

	Term 3 2023												
		Week 1	Week 2	Week 3	Week 4	Week 5	Week	6	Week 7	Week 8	Week 9	Week 10	
	///1	18/7	31/7		21/8	28/8		4/9	11/9	18/9			
		Topic 7: Trigonometry	Тор	ic 8: Linear Relationsl	iips	Topic 9: Simultaneou	Topic 10	: Rates	Topic 11: Quadra	atic Factorisation and A	lgebraic Fractions		
		MA5.1 1WM, MA5.1 2WM,		WM, MA5.1 3WM, MA5 WM, MA5.2 3WM, MA					MA5.2 2WM, 2 5NA		MA5.3 1WM, MA5.3 5NA		
		* Apply trigonometry to	* Find the midpoint and graplane using a range of strat			Solve linear simultaneous		Recognise direct a	nd indirect	Factorise monic and non-	monic quadratic expression	S.	
Stage 5.3/5.2-		solve right-angled triangle problems	* Find the distance between range of strategies, including	n two points located on the ng graphing software	e Cartesian plane using a	using algebraic and graphical methods, including using digital technologies.		proportion. Solve problems involving direct		Simplify algebraic fraction be performed.	mial factorisation needs to		
tage		triangle problems,	* Sketch linear graphs usin * Solve problems involving	parallel lines			proportion.			Multiply and divide algebraic fractions which involve multiple factorisation			
S		including those involving direction	* Interpret and graph linear the equation of a straight li	ne i c c		graphs and e			nship between ns corresponding	Add and subtract algebra	ic fractions where a commo	n denominator needs to be	
		and angles of *Solve problems involving parallel and perpendicular lines elevation and				to simple rate problen			lems.	found.			
		depression											
	S. O.												
).).	Tonic 9: L	inear Relationships	Tonic 10): Rates/Ratios & Direc	t Proportions	Tonic 11: Ale	gebraic Fractions		Single Variable Data Analysis	Topic 13: Single Variable Data Analysis 2		
	ı	MA5.1 1WM, N	MA5.1 3WM, MA5.1 6NA,	Topic I		•	MA5.2 1WM, MA5.2 3WM, MA5.				MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA5.		
	ŀ		MA5.2 3WM, MA5.2 9NA gradient of a line segment	Daniero natara a successi	MA5.2 1WM, MA5.2 2V	2 6NA			MA4-20SP	1-12SP, MA5.2-1WM, MA5.2-3WM, MA5.2-15SP			
			ian plane using a range of	Review rates concept Students can recogn	ts and travel graphs se direct and indirect propo	ortion and solve problems				the types of data e mean, median, mode and	 Students can use quartiles and box plots to compare sets of data, and evaluates sources of data 		
5.1		strategies, including gra	aphing software	involving direct proj		ortion, and sorve prooreins		four operations to		of data and interpret these			
Stage 5.2/5.1			een two points located on the range of strategies, including				simple algebraic fractions with statistics in the			the context of data and range to describe and interpret numerical context of data			
ge 7		graphing software	0 0, 0	0 1	equations corresponding to	simple rate problems	minators four operations to		sets in terms of location (centre) and spread • Determine quartiles and interquartiles				
Sta		Sketch linear graphs us Solve problems involvi	ing the coordinates of two points	nts			algebraic fraction					and interquartile range, oret box plots and use them	
			ar relationships using the			pronumerals in the denominator					to compare data sets.		
			of the equation of a straight li								 Compare shapes of histograms and dot plots. 	box plots to corresponding	
		Soive problems involvi	ing parallel and perpendicular	ines								of surveys in digital media	
											and elsewhere for information		
				1									

						Term	4 2023						
	Week 1	Week 2	Week 3	Week 4	Week	5	Week 6	Week	7	Week 8	Week 9	Week 10	0
	9/10	16/10	23/10	30/10	11/9		13/11	20/11		27/11	4/12	11/12	
	Topic 12	: Single Variable Data	Analysis	Topic 13: Financia	al Maths		Topic 13: Financial Maths		Topic	13: Financial Maths	Topic 14: Congruen Proofs		ques
	MA5.1	WM, MA5.1 2WM, MA5. 12SP, MA5.2 1WM, MA5. MA5.2 15SP, MA5.3 1WM 2WM, MA5.3 3WM, MA5	2 3WM,	MA5.1 1WM, MA5.1 2' 3WM, MA5.1 4NA		ınt	MA5.1 1WM, MA5.1 2WM, MA5.1 3WM, MA5.1 4NA		MA5.1 1WM, MA5.1 2WM, MA5. 1 3WM, MA5.1 4NA		MA5.2 1WM, MA5.2 2' MA5.2 3WM, MA5.2 14 1WM, MA5.3 2WM, M MA5.3 16MG	4MG, MA5.3	Year 10 Algebraic Techniques
Stage 5.3/5.2+	Review Year 8 Compare data displays usinumerical data sets in term Determine quartiles and in	s of location (centre) and sterquartile range.	spread.	Consolidate and extend the involved in applying perce. Solve problems involving	entages.	Yearly Assessment	Consolidate and extend the concepts involved in applying percentages.	Urban Challenge	Solve prol compound	blems involving I interest.	Apply logical reasoning numerical problems invo shapes.	olving plane	
	Construct and interpret boo Compare shapes of box ple Investigate reports of surve how data was obtained to o	ots to corresponding histog	rams and dot plots.	money. Solve problems involving	simple interest.	Yearl	Solve problems involving earning money.				Construct proofs involvi triangles. Prove and apply theoren related to triangles.	time, start on	
							involving simple interest.				Extension: Circle Geometry (prove some of the properties of circles using congruency proofs).		If have ti
	Topic 13 cont'd: Single V		Topic 14: Percentages	·	s			pic 16: Equations	Topic 17: Numbers of any magnitud				
	MA5.1-1WM, MA5.1-2W	,	MA4-5NA, MA4-1WM,	MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA5.1-4NA						VM, MA5.2 3WM,	MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA5.		
5.1	 compare sets of data, and e Compare data displa and range to describe and i 	Students can use quartiles and box plots to bare sets of data, and evaluates sources of data. Compare data displays using mean, median ange to describe and interpret numerical data in terms of location (centre) and spread. • Find percentages of quantities and express one quantity as a percentage of another, with and without the use			Students can solve financial mathematics problems involving earning money. Solve problems involving earning money. Solve problems involving simple interest. Solve equations arising from substitution into formulae.					gebraic equations fractions.	Investigate very small and very large ti scales and intervals Describe limits of accuracy		
Stage 5.2//	 Construct and interpreto compare data sets. Compare shapes of b 	and interquartile range, ret box plots and use them ox plots to corresponding			Urban Challenge								
	histograms and dot plots. • Investigate reports of surveys in digital media and elsewhere for information on how data was obtained to estimate population means and medians percentage increases and decreases, with and without the use of digital technologies												