



By the end of year 8...

MATHEMATICS

- Use index notation with numbers to establish the index laws with positive integral indices & the zero index
- Carry out the four operations with rational numbers & integers, using efficient mental & written strategies appropriate digital technologies
- Investigate terminating & recurring decimals
- Investigate the concept of irrational numbers, including π
- Solve problems involving the use of percentages, including percentage increases & decreases, with & without technologies
- Solve a range of problems involving rates & ratios, with & without digital technologies
- Solve problems involving profit & loss, with & without digital technologies
- Extend & apply the distributive law to the expansion of algebraic expressions
- Factorise algebraic expressions by identifying numerical factors
- Simplify algebraic expressions involving the four operations
- Plot linear relationships on the Cartesian plane with & without the use of digital technologies
- Solve linear equations using algebraic & graphical techniques. Verify solutions by substitution
- Choose appropriate units of measurement for area & volume & convert from one unit to another
- Find perimeters & areas of parallelograms, trapeziums, rhombuses & kites
- Investigate the relationships between features of circles such as circumference, area, radius & diameter. Use formulas to solve problems involving circumference & area
- Develop the formulas for volumes of rectangular & triangular prisms & prisms in general. Use formulas to solve problems involving volume
- Solve problems involving duration, including using 12- & 24-hour time within a single time zone
- Define congruence of plane shapes using transformations
- Develop the conditions for congruence of triangles
- Establish properties of quadrilaterals using congruent triangles & angle properties, & solve related numerical problems using reasoning
- Identify complementary events & use the sum of probabilities to solve problems
- Describe events using language of 'at least', exclusive 'or' (A or B but not both), inclusive 'or' (A or B or both) & 'and'.
- Represent events in two-way tables & Venn diagrams & solve related problems
- Investigate techniques for collecting data, including census, sampling & observation
- Explore the practicalities & implications of obtaining data through sampling using a variety of investigative processes
- Explore the variation of means & proportions of random samples drawn from the same population
- Investigate the effect of individual data values, including outliers, on the mean & median

ENGLISH

- Understand the influence & impact that the English Language has had on other language or dialects & how English has been influenced in return
- Understand how conventions of speech adopted by communities influence the identities of people in those communities
- Understand how rhetorical devices are used to persuade & how different layers of meaning are developed through the use of metaphor, irony & parody
- Analyse how the text structures & language features of persuasive texts including media texts, vary according to the medium & mode of communication
- Understand how cohesion in texts is improved by strengthening the internal structure of paragraphs through the use of examples, quotations & substantiation of claims
- Understand how coherence is created in complex texts through devices like lexical cohesion, ellipsis, grammatical theme & texts connectives
- Understand the use of punctuation conventions, including colons, semicolons, dashes & brackets in formal & informal texts
- Analyse & examine how effective authors control & use a variety of clause structures, including clauses embedded within the structure of a noun group/phrase or clause
- Understand the effect of nominalisation in the writing of informative & persuasive texts
- Investigate how visual & multimodal texts allude to or draw on other texts or images to enhance & layer meaning
- Recognise that vocabulary choices contribute to the specificity, abstraction & style of texts
- Understand how to apply learned knowledge consistently in order to spell accurately & to learn new words including nominalisations

This is to be used as a guide only.

All children learn at a different pace & in different ways.

Summarised from: <https://www.australiancurriculum.edu.au/>