The Australian Curriculum
Mathematics

Statistics and probability

Measurement and geometry

Number and algebra
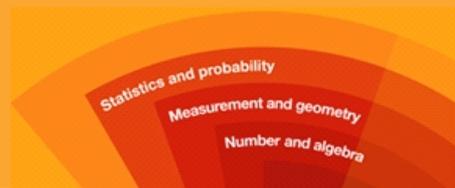
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ASSESSMENT AND
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Mathematics

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Year 6

The proficiency strands **Understanding, Fluency, Problem Solving and Reasoning** are an integral part of mathematics content across the three content strands: **Number and Algebra, Measurement and Geometry, and Statistics and Probability**. The proficiencies reinforce the significance of working mathematically within the content and describe how the content is explored or developed. They provide the language to build in the developmental aspects of the learning of mathematics.

At this year level:

Understanding includes describing properties of different sets of numbers, using fractions and decimals to describe probabilities, representing fractions and decimals in various ways and describing connections between them, and making reasonable estimations

Fluency includes representing integers on a number line, calculating simple percentages, using brackets appropriately, converting between fractions and decimals, using operations with fractions, decimals and percentages, measuring using metric units, and interpreting timetables

Problem Solving includes formulating and solving authentic problems using fractions, decimals, percentages and measurements, interpreting secondary data displays, and finding the size of unknown angles

Reasoning includes explaining mental strategies for performing calculations, describing results for continuing number sequences, explaining the transformation of one shape into another, explaining why the actual results of chanceexperiments may differ from expected results

Number and Algebra	Measurement and Geometry	Statistics and Probability
Number and place value	Using units of measurement	Chance
Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122)	Connect decimal representations to the metric system (ACMMG135)	Describe probabilities using fractions, decimals and percentages (ACMSP144)
Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)	Convert between common metric units of length, mass and capacity (ACMMG136)	Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145)
Investigate everyday situations that use integers. Locate and represent these numbers on a number line (ACMNA124)	Solve problems involving the comparison of lengths and areas using appropriate units (ACMMG137)	Compare observed frequencies across experiments with expected frequencies (ACMSP146)

Fractions and decimals

Compare fractions with related denominators and locate and represent them on a number line (ACMNA125)

Solve problems involving addition and subtraction of fractions with the same or related denominators (ACMNA126)

Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127)

Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers (ACMNA128)

Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies (ACMNA129)

Multiply and divide decimals by powers of 10 (ACMNA130)

Connect volume and capacity and their units of measurement (ACMMG138)

Interpret and use timetables (ACMMG139)

Shape

Construct simple prisms and pyramids (ACMMG140)

Location and transformation

Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142)

Introduce the Cartesian coordinate system using all four quadrants (ACMMG143)

Geometric reasoning

Investigate, with and without digital technologies, angles on a straight line, angles at a point and vertically opposite angles. Use results to find unknown angles (ACMMG141)

Data representation and interpretation

Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147)

Interpret secondary data presented in digital media and elsewhere (ACMSP148)

Make connections between equivalent fractions, decimals and percentages (ACMNA131)

Money and financial mathematics

Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies (ACMNA132)

Patterns and algebra

Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence (ACMNA133)

Explore the use of brackets and order of operations to write number sentences (ACMNA134)