

Activity 1

Resource 1: Key connections cards

English

In English, students use numeracy skills to communicate, read and evaluate information that includes quantities, statistics and patterns. They use numeracy skills to understand and present evidence and substantiate ideas. They determine, examine and comment on any possible bias that is present in numerical data and quantitative sources.

<https://v9.australiancurriculum.edu.au/curriculum-information/understand-this-general-capability/numeracy>

Humanities and Social Sciences (HASS)

In Humanities and Social Sciences, students develop the numeracy capability as they apply numeracy skills in relation to historical, geographical, civic, economic and business inquiries. Students count and measure data and information, construct and interpret tables and graphs, and calculate and interpret statistics in their investigations. Students learn to use scaled timelines, including those involving negative and positive numbers, as well as calendars and dates, to recall information on topics of historical significance and to illustrate the passing of time. They collect data through methods such as surveys and field tests. They construct and interpret maps, models, diagrams, and remotely sensed and satellite images, working with numerical concepts of grids, scale, distance, area and projections.

Students learn to analyse numerical data to make meaning of the past, to test relationships in patterns and between variables, such as the effects of location and distance, and to draw conclusions. They make predictions and forecast outcomes based on civic, economic and business data, and environmental and historical information, and represent their findings in numerical and graphical form. Students use numeracy to understand the principles of financial management, and to make informed consumer, financial, and business decisions. They appreciate the ways numeracy knowledge and skills are used in society, and apply these to hypothetical and/or real-life experiences.

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Health and Physical Education (HPE)

As students engage with learning experiences in Health and Physical Education, they select and apply relevant numeracy knowledge and skills. Students use calculation, estimation and measurement to collect and interpret information related to nutrition, fitness, navigation or skill performances. They use spatial reasoning in movement activities and in developing concepts and strategies for individual and team sports or recreational pursuits. Students interpret and analyse health and physical activity information using statistical reasoning. They identify patterns and relationships in data to consider trends, draw conclusions, make predictions and inform health behaviour and practices.

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Mathematics

Mathematics has a more fundamental role in the development of numeracy compared to other learning areas. The Mathematics curriculum provides opportunities to apply mathematical understanding and skills in other learning areas and to real-world contexts. Financial mathematics, health and well-being are important contexts for the application of number, algebra, measurement and probability. In measurement and space, there is also an opportunity to apply understanding to design and construction. Today's world is information driven; through statistics and probability, students can interpret and critically analyse data, and make informed judgements about events involving uncertainty.

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Languages

Languages develops students' numeracy capability as they communicate in real or simulated real-life situations. Students use numbers in the target language to share information (time, directions, etc.) and understand how these might be represented in diverse languages and cultures. They use aspects of measurement in the language of transaction when using money, and units of measurement in the number, volume and weight of items. Students use number patterns and algebraic thinking when they recognise and apply the patterns of grammatical and syntactical rules to respond to and create text.

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Science

Students use and develop numeracy through investigation of Science understanding concepts and application of Science inquiry practices. The key ideas of science which underpin Science understanding and Science as a human endeavour are closely linked to Numeracy through their focus on scale and measurement, and patterns, order and organisation.

Through inquiry practices, students develop numeracy through a focus on measurement and data collection. They identify patterns in data and use mathematical relationships to represent those patterns. They represent observed and secondary data using tables, displays and visualisations and interpret data to construct evidence-based conclusions and arguments. In later years, they engage in statistical analysis of data and consider issues of validity and reliability of data.

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Technologies

Students develop the capacity to interpret and use mathematical knowledge and skills in a range of real-life situations. They use number to calculate, measure and estimate; interpret and draw conclusions from statistics; measure and record throughout the process of generating and iterating ideas; develop, refine and test concepts; and cost and sequence when making products and managing projects. In using software, materials, tools and equipment, students work with the concepts of number, geometry, scale, proportion, measurement and volume. They use 3-dimensional models, create accurate technical drawings, work with digital models and use computational thinking in decision-making processes when designing and creating best fit solutions.

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The Arts

In The Arts, students select and use relevant numeracy knowledge and skills to plan, design, make, interpret, analyse and evaluate arts works. Across The Arts subjects, students recognise and use: number to calculate and estimate; spatial reasoning to solve problems involving space, patterns, symmetry, 2D shapes and 3D objects; scale and proportion to show and describe positions, pathways and movements; and measurement to explore length, area, volume, capacity, time, mass and angles. Students work with a range of numerical concepts to organise, analyse and create representations of data such as diagrams, charts, tables, graphs and motion capture, relevant to their own or others' arts works.

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