Numeracy across Health and Physical Education, Levels 7–10

Linking the Numeracy Learning Progressions
and the Victorian Curriculum

Numeracy underpins learning across the Victorian Curriculum F–10. While much of the explicit teaching of numeracy occurs in the Mathematics learning area, it is strengthened, made specific and extended in other learning areas as students engage in a range of learning activities with significant numeracy demands. The Numeracy Learning Progressions are designed to assist schools and teachers in all learning areas to support their students to successfully engage with the numeracy demands of the Victorian Curriculum F–10.

**The Numeracy Learning Progressions are provided as advisory material only and are not mandated as part of the Victorian Curriculum F–10. To view the Health and Physical Education curriculum, visit the** [**Victorian Curriculum F–10 website**](https://victoriancurriculum.vcaa.vic.edu.au/health-and-physical-education/curriculum/f-10)**.**

In Health and Physical Education, students develop numeracy capability when they create, represent and interpret data in spatial, numerical and graphical forms. Students use calculation, estimation and measurement to collect and make sense of information related to, for example, nutrition, fitness, navigation in the outdoors or various skill performances. They use spatial reasoning in movement activities and to develop concepts and strategies for individual and team games, sports or recreational pursuits. Students interpret and analyse health and physical activity information using statistical reasoning, and they identify patterns and relationships in data to consider trends, draw conclusions, make predictions and inform health behaviour and practices. Analysing numerical data enables students to elicit, interpret and analyse evidence; critically evaluate claims; and provide specific analytical feedback. It also supports students to develop a deeper understanding of health and movement concepts.

The most relevant Numeracy Learning Progressions for Health and Physical Education Levels 7–10 are Operating with percentages, Number patterns and algebraic thinking, Understanding geometric properties, Positioning and locating, Understanding units of measurement, Measuring time and Interpreting and representing data.

**Quantifying numbers** describes how students become increasingly able to count, recognise, read and interpret numbers expressed in different ways. In Health and Physical Education students read and record quantities relating to health, nutrition and measurement.

**Operating with percentages** involves students using percentages to represent quantities. It is particularly useful to Health and Physical Education for identifying trends, drawing conclusions, making predictions and informing health behaviour and practices.

**Number patterns and algebraic thinking** involves students making generalisations. As students become increasingly able to connect patterns with the structure of numbers, they create a foundation for algebraic thinking (that is, thinking about generalised quantities). Algebraic thinking is particularly useful to Health and Physical Education for identifying patterns and relationships that help to inform health and movement strategies.

**Comparing units** addresses comparing units in ratios, rates and proportions. This learning progression can be applied in Health and Physical Education to identify patterns and relationships between quantities. It is an essential component in interpreting nutritional tables and labels, analysing strategy in games and sports (such as kick-to-handball ratio in Australian rules football) and designing healthy eating fitness plans.

**Understanding geometric properties** describes how a student becomes increasingly able to identify the attributes of shapes and objects and how they can be combined or transformed. Being able to use spatial reasoning and geometric properties to solve problems is important for a range of tasks. For example, in Health and Physical Education, students are required to understand angles in order to critique and improve movement sequences. They use spatial reasoning in movement activities, such as manipulating space and their relationship to other players in this space when playing games.

**Positioning and locating** describes how a student becomes increasingly able to recognise the attributes of position and location. This learning progression is important to Health and Physical Education as it assists with developing spatial reasoning, coordination (hand-eye coordination when hitting) and kinaesthetic awareness (position of the body in space) in movement activities, and concepts and strategies for individual and team sports, fitness or recreational pursuits, such as bushwalking.

**Understanding units of measurement** describes how a student becomes increasingly able to recognise attributes that can be measured and how units of measurement are used and calculated. In Health and Physical Education, this learning progression includes measuring speed, distance, weight, capacity and height to collect and make sense of information related to, for example, nutrition, fitness, navigation in the outdoors or various skill performances. Being able to measure is essential for students who are developing strategies for improving health, wellbeing and fitness.

**Measuring time** describes how a student becomes increasingly aware of the passage of time. In Health and Physical Education this learning progression is fundamental for measuring and recording time (and speed) in a range of physical activities.

**Interpreting and representing data** describes how a student becomes increasingly able to recognise and use visual and numerical displays to describe data. Making sense of data is vital to studying Health and Physical Education. Students use data to develop displays to propose explanations for patterns, relationships and trends; to predict outcomes; and to propose future action. They interpret statistical displays and think critically about claims made by others, either questioning or confirming them.

Numeracy in the context of Health and Physical Education

The tables in this document make explicit the links between the Numeracy Learning Progressions and content descriptions in both strands of the Health and Physical Education curriculum. Relevant extracts of the achievement standards for Health and Physical Education are also included.

In addition to these Numeracy Learning Progression links, the approximate relation to the Victorian Curriculum F–10 Mathematics levels has been included. For further information on the alignment of the Numeracy Learning Progressions and the Victorian Curriculum F–10 Mathematics, please refer to the [Numeracy Learning Progressions map on the VCAA website](https://www.vcaa.vic.edu.au/curriculum/foundation-10/crosscurriculumresources/Pages/Numeracy.aspx).

The ‘Numeracy in context’ section of the table provides examples of learning that connect to the Numeracy Learning Progressions, allowing for a deeper understanding of numeracy demands.

Links to Personal, Social and Community Health

Being healthy, safe and active

The curriculum focuses on supporting students to make decisions about their own health, safety and wellbeing and on developing the knowledge, understanding and skills to support students to be resilient. It also enables them to access and understand health information and empowers them to make healthy, safe and active choices. In addition, the content explores personal identities and emotions, and the contextual factors that influence students’ health, safety and wellbeing. Students also learn about the behavioural aspects related to regular physical activity and develop the dispositions required to be an active individual.

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| **Relevant Victorian Curriculum achievement standard extract** | **Relevant Victorian Curriculum content descriptions** | **Numeracy Learning Progression links (plus approximate relation to Victorian Curriculum F–10 Mathematics levels)** |
| **Health and Physical Education Levels 7 and 8** |
| * … students investigate strategies and resources to manage changes and transitions and their impact on identities.
* They investigate strategies that enhance their own and others’ health, safety and wellbeing.
 | Evaluate strategies to manage personal, physical and social changes that occur as they grow older [(VCHPEP124)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP124)Investigate and select strategies to promote health, safety and wellbeing [(VCHPEP126)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP126) | **Quantifying numbers*** Understanding place value (3–6)
* Understanding decimal place value (3–5)
* Representing place value (6)

**Interpreting and representing data*** Collecting and displaying data (4–5)
 |
| **Health and Physical Education Levels 9 and 10** |  |
| * … students critically analyse contextual factors that influence their identities, relationships, decisions and behaviours.
* They analyse the impact of attitudes and beliefs about diversity on community connection and wellbeing.
* They compare and contrast a range of actions that could be undertaken to enhance their own and others’ health, safety and wellbeing.
 | Evaluate factors that shape identities, and analyse how individuals impact the identities of others [(VCHPEP142)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP142)Plan, rehearse and evaluate options (including CPR and first aid) for managing situations where their own or others’ health, safety and wellbeing may be at risk [(VCHPEP144)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP144)Identify and critique the accessibility and effectiveness of support services based in the community that impact on the ability to make healthy and safe choices [(VCHPEP145)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP145) | **Operating with percentages*** Understanding percentages and relative size (6)

**Understanding units of measurement*** Using formal units (3–5)

**Interpreting and representing data*** Shape of data displays (7)
* Graphical representations of data (8)
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| **Numeracy in context – Health and Physical Education, Levels 7–10** |
| **Health and Physical Education Levels 7 and 8** |
| **Quantifying numbers**Students investigate a variety of snack and lunch options and evaluate nutritional value. They read and record numbers with knowledge of place value, including numbers with very large and very small decimals. **Interpreting and representing data** Students explore and examine the impact of physical changes, identifying feelings and emotions associated with transitions. They collect information on how to access and assess health information services and support and evaluate the qualities of each service.When investigating and evaluating nutritional value, students sort and categorise information to assist with the development of healthy meal plans.  |
| **Health and Physical Education Levels 9 and 10** |
| **Operating with percentages**Students evaluate food options and nutritional value. They look at daily nutritional requirements, including looking at percentages of a quantity, in order to assist with making healthy selections. **Understanding units of measurement**Students evaluate food options and nutritional value, identifying formal units of measurement including calories, kilojoules, grams, milligrams and kilograms. They are able to convert between formal units and apply knowledge of nutritional value to make healthy selections and recommendations. **Interpreting and representing data** Students collect information on a range of available support services and arrange their data to evaluate the effectiveness and qualities of each program. Students collect and interpret information about media representation and external influences on sexuality and sexual health behaviours. Students draw conclusions on the data they have collected and use descriptive statistics that represent values.  |

Communicating and interacting for health and wellbeing

The curriculum develops knowledge, understanding and skills to enable students to engage critically with a range of health focus areas and issues. It also helps them apply new information to changing circumstances and environments that influence their own and others’ health, safety and wellbeing.

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| **Relevant Victorian Curriculum achievement standard extracts** | **Relevant Victorian Curriculum content descriptions** | **Numeracy Learning Progression links (plus approximate relation to Victorian Curriculum F–10 Mathematics levels)** |
| **Health and Physical Education Levels 7 and 8** |
| * Students evaluate the benefits of relationships on wellbeing and respecting diversity.
* They analyse factors that influence emotional responses. They gather and analyse health information.
 | Investigate the benefits of relationships and examine their impact on their own and others’ health and wellbeing [(VCHPEP127)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP127)Analyse factors that influence emotions, and develop strategies to demonstrate empathy and sensitivity [(VCHPEP128)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP128)Develop skills to evaluate health information and express health concerns [(VCHPEP129)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP129) | **Interpreting and representing data*** Collecting and displaying data (4–5)
 |
| **Health and Physical Education Levels 9 and 10** |  |
| Students access, synthesise and apply health information from credible sources to propose and justify responses to situations in the home, in the school and the community. | Evaluate health information from a range of sources and apply to health decisions and situations [(VCHPEP148)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP148) | **Interpreting and representing data*** Collecting and displaying data (4–5)
* Shape of data displays (7)
* Graphical representations of data (8)
* Recognising bias (9–10)
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| **Numeracy in context – Health and Physical Education, Levels 7–10** |
| **Health and Physical Education Levels 7 and 8** |
| **Interpreting and representing data**Students investigate the impacts of bullying, violence and harassment, including the impacts they can have on relationships. They investigate graphical representations of incidents and how the rate, severity and types of incidents have changed over time. Students investigate and collect information about influential cultural factors and beliefs, and they discuss the different ways students respond to the cultural factors and beliefs. When evaluating data students explain how it can be misleading and evaluate the reliability of sources.  |
| **Health and Physical Education Levels 9 and 10** |
| **Interpreting and representing data**Students evaluate health information from a range of sources. They critique and select the most suitable source and interpret health information to assist with informing decisions.They critique services that provide advice and support on health-related issues and investigate ways to store and share information. Students apply an understanding of distributions to evaluate claims based on data, and they recognise and explain bias as a possible source of error in media reports of survey data. |

Contributing to healthy and active communities

The curriculum develops knowledge, understanding and skills to enable students to analyse contextual factors that influence the health and wellbeing of communities critically. The content supports students to access information, products, services and environments to take action to promote the health and wellbeing of their communities.

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| **Relevant Victorian Curriculum achievement standard extracts** | **Relevant Victorian Curriculum content descriptions** | **Numeracy Learning Progression links (plus approximate relation to Victorian Curriculum F–10 Mathematics levels)** |
| **Health and Physical Education Levels 7 and 8** |
| * They justify actions that promote their own and others’ health, safety and wellbeing at home, at school and in the community.
* They examine the cultural and historical significance of physical activities and examine how connecting to the environment can enhance health and wellbeing.
 | Plan and use strategies and resources to enhance the health, safety and wellbeing of their communities [(VCHPEP130)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP130)Plan and implement strategies for connecting to natural and built environments to promote the health and wellbeing of their communities [(VCHPEP131)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP131)Examine the benefits to individuals and communities of valuing diversity and promoting inclusivity [(VCHPEP132)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP132) | **Operating with percentages*** Understanding percentages and relative size (6)
* Find percentage as part of a whole (7–8)

**Interpreting and representing data*** Collecting and displaying data (4–5)
 |
| **Health and Physical Education Levels 9 and 10** |  |
| * They compare and contrast a range of actions that could be undertaken to enhance their own and others’ health, safety and wellbeing.
* They analyse the impact of attitudes and beliefs about diversity on community connection and wellbeing.
 | Plan, implement and critique strategies to enhance the health, safety and wellbeing of their communities [(VCHPEP149)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP149)Plan and evaluate new and creative interventions that promote their own and others’ connection to community natural and built environments [(VCHPEP150)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP150)Critique behaviours and contextual factors that influence the health and wellbeing of their communities [(VCHPEP151)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEP151) | **Operating with percentages*** Find percentage as a part of a whole (7–8)
* Find the whole from a percentage and a part (8)
* Repeatedly adding a percentage (10)

**Interpreting and representing data*** Shape of data displays (7)
* Graphical representations of data (8)
* Recognising bias (9–10)
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| **Numeracy in context – Health and Physical Education, Levels 7–10** |
| **Health and Physical Education Levels 7 and 8** |
| **Operating with percentages**Students collect information and apply knowledge of percentages to identify trends and interpret quantity as a part of a whole.Students evaluate current community initiatives for health and wellbeing and explore how community members use the services. **Interpreting and representing data**Students identify local existing resources and plan and use strategies to enhance the safety and wellbeing of their community.Students collect information about the community population and evaluate the demand for resources to enhance health, safety and wellbeing of their community. They implement strategies based on collected data and evaluate the benefits to individuals and community.   |
| **Health and Physical Education Levels 9 and 10** |
| **Operating with percentages**Students evaluate the effect of health and wellbeing strategies on their community and explore what is currently accessible to their communities. They explore percentages of population currently accessing goods and services, and develop campaigns to promote health and wellbeing. Students may take into account the demographics of the community (including age, gender, religion and nationality) and currently available services to assist with developing an ideal strategy to support their community. **Interpreting and representing data**Students plan, create and critique strategies to enhance the safety and wellbeing of their communities. They explore demographics and population in order to develop an appropriate campaign to support health and wellbeing in their communities. Students use graphical representations and infographics to explore and interpret data, such as data to do with the health benefits of physical activity, and identify inappropriate sampling from populations. They consider accuracy of representation of marginalised individuals or population groups.Students evaluate the validity of evidence provided by data to test media claims about attitudes regarding race, disability, and gender and sexual diversity, or the relationship between violence and mental illness. |

Links to Movement and Physical Activity

Moving the body

The curriculum lays the important early foundations of play and fundamental movement skills. It focuses on the acquisition and refinement of a broad range of movement skills. Students apply movement concepts and strategies to enhance performance and move with competence and confidence. Students develop skills and dispositions necessary for lifelong participation in physical activities.

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| **Relevant Victorian Curriculum achievement standard extracts** | **Relevant Victorian Curriculum content descriptions** | **Numeracy Learning Progression links (plus approximate relation to Victorian Curriculum F–10 Mathematics levels)** |
| **Health and Physical Education Levels 7 and 8** |
| * Students demonstrate control and accuracy when performing specialised movement skills.
* They apply and refine movement concepts and strategies to suit different movement situations.
* They investigate and apply movement concepts and strategies to achieve movement and fitness outcomes.
 | Use feedback to improve body control and coordination when performing specialised movement skills [(VCHPEM133)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM133)Compose and perform movement sequences for specific purposes in a variety of contexts [(VCHPEM134)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM134)Practise, apply and transfer movement concepts and strategies [(VCHPEM135)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM135) | **Understanding geometric properties*** Angles and lines (5–7)
* Geometric properties (7–8)

**Positioning and locating*** Position to other (1)

**Measuring time*** Relating units of time (4–5)

**Understanding units of measurement** * Using formal units (3–5)

**Interpreting and representing data*** Collecting and displaying data (4–5)
 |
| **Health and Physical Education Levels 9 and 10** |  |
| * They apply criteria to make judgments about and refine their own and others’ specialised movement skills and movement performances.
* They apply and transfer movement concepts and strategies to new and challenging movement situations.
 | Perform and refine specialised movement skills in challenging movement situations [(VCHPEM152)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM152)Evaluate own and others’ movement compositions, and provide and apply feedback in order to enhance performance situations [(VCHPEM153)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM153)Develop, implement and evaluate movement concepts and strategies for successful outcomes [(VCHPEM154)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM154) | **Operating with percentages*** Find the whole from a percentage and a part (8)

**Number patterns and algebraic thinking*** Representing unknowns (6–7)
* Algebraic expressions (8)
* Algebraic relationships (9)

**Comparing units*** Ratios (8)
* Rates (8)
* Applying proportion (9)

**Understanding geometric properties*** Angles and lines (5–7)
* Geometric properties (7–8)

**Positioning and locating*** Using formal maps and plans (3)
* Interpreting maps and plans (4–5)

**Measuring time*** Relating units of time (4–5)

**Understanding units of measurement** * Using formal units (3–5)
* Calculating measurements (8)

**Interpreting and representing data*** Collecting and displaying data (4–5)
* Graphical representations of data (8)
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| **Numeracy in context – Health and Physical Education, Levels 7–10** |
| **Health and Physical Education Levels 7 and 8** |
| **Understanding geometric properties**Students estimate and identify measures of angles in degrees up to one revolution (for example, they estimate angles, such as those formed at the elbows when releasing an object, and determine the effect of angles on the height and distance of flight in jumps; they account for wind resistance when angling a bat, racquet or stick to hit; they explain swing bowling in cricket in terms of the angle of the ball seam). **Positioning and locating**Students describe routes using directional language, including movement sequences to travel over, under, around and through natural built obstacles. They plan effective fitness circuits using natural features within a geographical area. **Measuring time**Students apply units of time to assist with improving body performance and coordination. They apply knowledge of minutes and seconds when attaining ‘personal bests’.Students select hours, minutes, seconds, days and weeks and apply these units when developing fitness plans, tracking growth and development, and setting realistic personal and health goals.Students use appropriate units to measure both long and short durations of time, such as when exploring reaction times in sports or games.**Understanding units of measurement** Students estimate, measure and compare length, mass, volume, capacity and time using standard formal units, such as when measuring a personal performance or developing a fitness plan. They convert between formal units of measurement (for example, converting between metric units, such as converting centimetres to metres when measuring length or height, metres to kilometres when measuring distance or speed, litres to millilitres when measuring capacity, and grams to kilograms when measuring weight).**Interpreting and representing data**Students collect, record and analyse their own and others’ performances using information and communications technology (ICT). They justify data collection methods and calculate the most appropriate statistic to describe the data. They use simple descriptives, such as mean and average, and compare the usefulness of different data representations.  |
| **Health and Physical Education Levels 9 and 10** |
| **Operating with percentages**Students increase and decrease quantities by a percentage, such as when exploring the calculation of percentage decrement when completing a phosphate recovery test. **Number patterns and algebraic thinking**For straight-line motion, momentum is the product of mass and velocity; this relationship can inform movement skills and strategies.**Comparing units**Students calculate running speed in terms of metres per second and kilometres per hour. **Understanding geometric properties**Students analyse movement sequences to find optimal angles for throwing, hitting or kicking a ball a long distance. They analyse and adjust goal-shooting angles in sports, and they adjust angles of impact to effect the types of shots strategically required. They use ICT to analyse their own and others’ performances, implementing feedback.**Positioning and locating**Students locate position on maps using grid references (identifying a location in relation to a destination when bushwalking or orienteering). They identify features on maps and plans and use internet-based navigation and tracking systems. Students interpret scale to measure distance between two points when orienteering, as well as compass directions to locate position. **Measuring time**Students use standard instruments and units to describe and measure time, such as measuring the time it takes for a student to run 800 metres. They explain the relationships between different units of time, including months, years, seconds, minutes and hours.Students determine elapsed time using different units and apply this when developing fitness plans, tracking growth and setting personal and health goals. **Understanding units of measurement**Students measure, compare and estimate length using standard formal units, including measuring distances run, jumped or thrown. **Interpreting and representing data**Students describe how they have transferred skills learnt in one movement situation to a different situation and they explain how to use ICT to record others’ performances and provide feedback.Students investigate data gathered in a sport and replicate the type of data gathering – for example, in tennis, data on improvement in speed and accuracy of a serve, mapping of ball placement, and distance and speed run in a match. Students develop visual displays, tables and graphs. They use established criteria to apply and evaluate the effectiveness of movement concepts. |

Understanding movement

The curriculum focuses on developing knowledge and understanding about how and why the body moves and what happens to bodies when they move. While participating in physical activities, students analyse and evaluate theories, techniques and strategies that can be used to understand and enhance the quality of movement and physical activity performance. They explore the place and meaning of physical activity, outdoor recreation and sport in their own lives, and across time and cultures.

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| **Relevant Victorian Curriculum achievement standard extract** | **Relevant Victorian Curriculum content descriptions** | **Numeracy Learning Progression links (plus approximate relation to Victorian Curriculum F–10 Mathematics levels)** |
| **Health and Physical Education Levels 7 and 8** |
| * They apply the elements of movement to compose and perform movement sequences.
* They examine the cultural and historical significance of physical activities and examine how connecting to the environment can enhance health and wellbeing.
 | Participate in physical activities that develop health-related and skill-related fitness components, and create and monitor personal fitness plans [(VCHPEM136)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM136)Demonstrate and explain how the elements of effort, space, time, objects and people can enhance performance [(VCHPEM137)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM137)Participate in and investigate the cultural and historical significance of a range of physical activities [(VCHPEM138)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM138) | **Quantifying numbers*** Understanding place value (3–6)
* Representing place value (6)

**Understanding units of measurement*** Using formal units (3–5)

**Interpreting and representing data*** Collecting and displaying data (4–5)
 |
| **Health and Physical Education Levels 9 and 10** |  |
| * Students propose and evaluate interventions to improve fitness and physical activity levels in their communities.
* They examine the role physical activity has played historically in defining cultures and cultural identities.
 | Design, implement and evaluate personalised plans for improving or maintaining their own and others’ physical activity and fitness levels [(VCHPEM155)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM155)Analyse the impact of effort, space, time, objects and people when composing and performing movement sequences [(VCHPEM156)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM156)Examine the role physical activity, outdoor recreation and sport play in the lives of Australians and investigate how this has changed over time [(VCHPEM157)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM157) | **Comparing units*** Ratios (8)
* Rates (8)
* Applying proportion (9)

**Understanding units of measurement*** Using formal units (3–5)

**Interpreting and representing data*** Collecting and displaying data (4–5)
* Graphical representations of data (8)
 |
| **Numeracy in context – Health and Physical Education, Levels 7–10** |
| **Health and Physical Education Levels 7 and 8** |
| **Quantifying numbers**Students read, write and apply knowledge of the place value system, recording numbers into the millions. Students apply this understanding of place value when they monitor personal fitness.**Understanding units of measurement**Students measure heart rate, breathing rate and ability to talk in order to monitor the body’s reaction to a range of physical activities, and predict the benefits of each activity on health- and skill-related fitness components.**Interpreting and representing data**Students develop and monitor fitness plans and track progress of personal fitness. They select the best way to present and interpret data, including using graphical representations of growth or decline. They examine how sport, physical activity and outdoor recreational pursuits have changed over the last century.Students investigate the cultural and historical significance of a range of physical activities and create a table recording results.  |
| **Health and Physical Education Levels 9 and 10** |
| **Comparing units**Students understand that different proportions of maximum training heart rate are needed for particular types of impacts, such as using 60% for aerobic training and 90% for anaerobic training. They experiment with the manipulation of force and speed.**Understanding units of measurement**Students investigate target training heart-rate zones for a range of different people and how these zones relate to health, wellbeing and fitness. They understand beats per minute (BPM) as a unit of measurement. While completing multi-stage fitness tests, students use a range of measurement units, including units to measure time, weight, distance and speed. **Interpreting and representing data**Students design, implement and evaluate personalised plans for improving or maintaining physical activity. They use digital technology to assist with recording and tracking progress, and review and interpret data in order to improve outcomes. They analyse fitness results such as muscle gain over time, fat loss and increased endurance. Students investigate the varied perspectives held by Australians on sport and examine how this diversity is represented in the sports we play today. They gather data from a range of sources and explore reliability and validity of data. Students use data about personal fitness training to address performance and refinement of skills. They record and review personal performance scores on various fitness measures. |

Learning through movement

The curriculum focuses on personal and social skills that can be developed through participation in movement and physical activities. These skills include communication, decision-making, problem-solving, critical and creative thinking, and cooperation. The skills can be developed as students work individually and in small groups or teams to perform movement tasks or solve movement challenges. Through movement experiences, students develop other important personal and social skills such as self-awareness, self-management, persisting with challenges and striving for enhanced performance. They also experience the varied roles within organised sport and recreation.

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| **Relevant Victorian Curriculum achievement standard extract** | **Relevant Victorian Curriculum content descriptions** | **Numeracy Learning Progression links (plus approximate relation to Victorian Curriculum F–10 Mathematics levels)** |
| **Health and Physical Education Levels 7 and 8** |
| * Students explain personal and social skills required to establish and maintain respectful relationships and promote fair play and inclusivity.
 | Evaluate and justify reasons for decisions and choices of action when solving movement challenges [(VCHPEM140)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM140)Modify rules and scoring systems to allow for fair play, safety and inclusive participation [(VCHPEM141)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM141) | **Interpreting and representing data*** Collecting and displaying data (4–5)
* Shape of data displays (7)
 |
| **Health and Physical Education Levels 9 and 10** |  |
| * They work collaboratively to design and apply solutions to movement challenges.
* They explain the importance of cooperation, leadership and fair play across a range of health and movement contexts.
 | Reflect on how fair play and ethical behaviour can influence the outcomes of movement activities [(VCHPEM160)](https://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCHPEM160) | **Interpreting and representing data*** Collecting and displaying data (4–5)
* Shape of data displays (7)
* Graphical representations of data (8)
 |
| **Numeracy in context – Health and Physical Education, Levels 7–10** |
| **Health and Physical Education Levels 7 and 8** |
| **Interpreting and representing data**Students collect information about and interpret various roles associated with the planning of physical activities.They investigate how sporting bodies modify rules, equipment or scoring systems to cope with problems created by circumstances out of their control.  |
| **Health and Physical Education Levels 9 and 10** |
| **Interpreting and representing data**Students create and implement self-assessment and peer-assessment tools and evaluate their effectiveness. They select appropriate statistics to describe the data collected. They discuss the role of organisations such as the Australian Sports Anti-Doping Authority, the Australian Human Rights Commission and the Court of Arbitration for Sport, and sporting tribunals, in promoting fairness and ethical behaviour in sport. |