# Connecting to the Victorian Early Years Learning and Development Framework (VEYLDF)

Enhancing children's numeracy development is an essential part of the expectations of the [Victorian Early Years Learning and Development Framework (VEYLDF)](https://www.education.vic.gov.au/Documents/childhood/providers/edcare/veyldframework.pdf). Educators are encouraged to consider the [VEYLDF Practice Principles and Learning Outcomes](https://www.education.vic.gov.au/childhood/professionals/learning/Pages/veyldf.aspx#link36) as they consider the multiple ways numeracy and mathematics experiences can be included in their programs and promoted to families.

## Practice Principles

The practice principles guide early childhood professionals as they respond sensitively and positively to each child. A key role of educators is to build children’s confidence, sense of wellbeing and their motivation to engage in active learning with others.

### Reflective practice

Effective practice is strengthened when early childhood professionals gather information, including the views of children and families and use these to inform and enrich decision-making and planning around mathematics and numeracy. Reflecting on and critically evaluating practice is at the heart of maintaining a learning culture.

### Partnerships with families

Create opportunities to engage families in decisions about how to support children to strengthen their mathematics and numeracy skills and establish partnerships where information sharing supports families’ confidence and recognises what families do well.

### High expectations for every child

High expectations and encouragement are closely linked with children’s agency and sense of capability. Understanding that all children can engage in, learn through and benefit from mathematical experiences and maximising children’s diverse strengths and interests to engage them in their mathematics and numeracy development.

### Respectful relationships and responsive engagement

Relationships are deeply connected to thinking and learning. The image of the child as a competent learner from birth should drive professionals to design mathematics and numeracy experiences for children based on a strong foundation of respectful relationships.

### Equity and diversity

Be aware of the diverse way that mathematics and numeracy are understood in communities and by individual families and use these understandings to enhance programs. Identify and implement the type and level of support or intervention that is required to demonstrate or improve children’s learning and development. Equitable opportunities for children promote their learning and development outcomes. All children have the capacity to succeed, regardless of their circumstances and abilities.

### Assessment for learning and development

Assessment of children’s knowledge and understanding, and skills and capabilities is an essential ingredient of planning for and promoting new learning and development. Questioning and analysis, as part of the planning cycle, inform practice decisions ensuring that what is planned has meaning and is worth children knowing and doing. Implement a range of strategies to include mathematics and numeracy learning throughout the planning cycle.

### Integrated teaching and learning approaches

Apply a range of strategies to support children’s mathematics and numeracy learning that emphasise opportunities for child-directed play, adult-led learning and guided play experiences. Share strategies with families and other adults to support learning in the home and other settings. Use intentional teaching strategies that are purposeful, which maybe pre-planned or spontaneous, to support the achievement of well-considered and identified mathematics and numeracy goals. Teach children explicit mathematics and numeracy and associated skills to deepen and extend their knowledge, understanding and values.

### Partnerships with professionals

Work alongside other professionals to plan for and implement mathematics and numeracy learning experiences for children. Work to improve the continuity of learning between settings by collating and using evidence of children's prior and current learning and development.

## The Learning Outcomes

The Victorian Early Years Learning and Development Framework learning outcomes describe the learning and development priorities for children from birth and assist early childhood educators in designing programs that support and extend children's knowledge and capabilities. While all five learning outcomes support children to engage in and learn about mathematics and numeracy, two key outcomes support children to strengthen these skills:

### Children are confident and involved learners

In this Outcome, children are supported to become engaged learners developing dispositions that encourage mathematical thinking and the capacity to solve problems using mathematical concepts.

### Children are effective communicators

In this Outcome children are supported to strengthen their numeracy skills and mathematical concepts to communicate ideas and make meaning about the world around them.

### Learning: Children are confident and involved learners

Children who are confident and involved learners have positive dispositions toward learning, experience challenge and success in their learning and are able to contribute positively and effectively to other children’s learning (Department of Education and Training, 2016, p. 21).

| VEYLDF 🡨🡪 | Victorian Curriculum: Levels F – 2 |
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| Children develop a range of skills and processes such as problem solving, inquiry, experimentation, hypothesising, researching and investigating | |
| This is evident, for example, when children:  apply a wide variety of thinking strategies to engage with situations and solve problems, and adapt these strategies to new situations  create and use representation to organise, record and communicate mathematical ideas and concepts  make predictions and generalisations about their daily activities, aspects of the natural world and environments, using patterns they generate or identify, and communicate these using mathematical language and symbols  explore their environment  manipulate objects and experiment with cause and effect, trial and error, and motion  contribute constructively to mathematical discussions and arguments  use reflective thinking to consider why things happen and what can be learnt from these experiences. | This develops, for example, when students:  Sort and classify familiar objects and explain the basis for these classifications, and copy, continue and create patterns with objects and drawings. Mathematics: Number and Algebra (F) [VCMNA076](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA076)  Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond. Mathematics: Number and Algebra (F) [VCMNA070](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA070)  Use direct and indirect comparisons to decide which is longer, heavier or holds more, and explain reasoning in everyday language. Mathematics: Measurement and Geometry (F) [VCMMG078](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG078)  Tell time to the half-hour. Mathematics: Measurement and Geometry (L1) [VCMMG096](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG096)  Recognise the importance of repetition of a process in solving problems. Mathematics: Number and Algebra (L1) [VCMNA094](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA094)  Recognise and interpret common uses of halves, quarters and eighths of shapes and collections. Mathematics: Number and Algebra (L2) [VCMNA110](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA110)  Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting. Mathematics: Number and Algebra (L2) [VCMNA105](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA105)  Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment. Mathematics: Measurement and Geometry (F) [VCMMG081](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG081)  Investigate and describe number patterns formed by skip counting and patterns with objects. Mathematics: Number and Algebra (L1) [VCMNA093](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA093)  Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units. Mathematics: Measurement and Geometry (L2) [VCMMG115](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG115)  Respond to, and pose, questions and make predictions about familiar objects and events. Science: Science Inquiry Skills (F–L2) [VCSIS050](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS050)  Participate in guided investigations, including making observations using the senses, to explore and answer questions. Science: Science Inquiry Skills (F–L2) [VCSIS051](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS051)  Explore needs or opportunities for designing, and the technologies needed to realise designed solutions. Design and Technologies: Creating Designed Solutions (F–L2) [VCDSCD018](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD018)  Represent and communicate observations and ideas about changes in objects and events in a variety of ways. Science: Science Inquiry Skills (F–L2) [VCSIS055](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCSIS055)  Explore some learning strategies, including planning, repetition, rewording, memorisation and use of mnemonics. Critical and Creative Thinking: Meta-Cognition (F–L2) [VCCCTM008](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTM008)  Investigate ways to problem-solve, using egocentric and experiential language. Critical and Creative Thinking: Meta-Cognition (F–L2) [VCCCTM009](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTM009) |

## Communication: Children are effective communicators

Fundamental to this development is the understanding of how symbols and pattern systems work, and how they can be used to engage others. From birth, intentional communication is strengthened and broadened. Children learn to take turns in communication exchanges through their relationships with responsive adults, exploring sound and movement patterns, singing songs, reading stories, playing games and recording their thoughts and ideas (Department of Education and Training, 2016).

Numeracy is the capacity, confidence and disposition to use mathematics in daily life. Children bring new mathematical understandings through engaging in problem solving. It is essential that the mathematical ideas with which young children interact are relevant and meaningful in the context of their current lives. Spatial sense, structure and pattern, number, measurement, data argumentation, connections and exploring the world mathematically are the powerful mathematical ideas children need to become numerate. (EYLF p. 38)

| VEYLDF 🡨🡪 | Victorian Curriculum: Levels F – 2 |
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| Children begin to understand how symbols and pattern systems work | |
| This is evident, for example, when children:  use symbols in play to represent and make meaning  begin to make connections between, and see patterns in, their feelings, ideas, words and actions, and those of others  notice and predict the patterns of regular routines and the passing of time  develop an understanding that symbols are a powerful means of communication and that ideas, thoughts and concepts can be represented through them  begin to be aware of the relationships between oral, written and visual representations  begin to recognise patterns and relationships and the connections between them  begin to sort, categorise, order and compare collections and events and attributes of objects and materials in their social and natural worlds  listen and respond to sounds and patterns in speech, stories and rhyme  draw on memory of a sequence to complete a task  draw on their experiences in constructing meaning using symbols | This develops, for example, when students:  Examine words that show reasons and words that show conclusions. **Critical and Creative Thinking: Reasoning (F–L2)** [VCCCTR004](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCCCTR004)  Represent data and the location of places and their features by constructing tables, plans and labelled maps. **Geography: Geographical Concepts and Skills (F–L2)** [VCGGC061](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCGGC061)  Recreate texts imaginatively using drawing, writing, performance and digital forms of communication. **English: Writing (L1)** [VCELT192](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCELT192)  Understand that some language in written texts is unlike everyday spoken language. **English: Writing (F)** [VCELA155](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCELA155)  Retell familiar literary texts through performance, use of illustrations and images. **English: Literature (F)** [VCELT159](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCELT159)  Create short texts to explore, record and report ideas and events using familiar words and beginning writing knowledge. **English: Literacy (F)** [VCELY160](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCELY160) |

## Planning for children’s learning using the VEYLDF

Educators are encouraged to use the descriptors in the outcomes ([see VCAA Illustrative maps Illustrative Maps from the VEYLDF to the Victorian Curriculum F – 10](http://www.vcaa.vic.edu.au/Pages/earlyyears/vfldoutcomes/index.aspx)) to plan for learning experiences that enhance children’s numeracy skills. Using the planning cycle will support setting learning goals that enhance children’s mathematics and numeracy skills, implementing curriculum decisions and tracking children’s progress as well as making mathematical learning visible.

(Department of Education and Training, 2016)

[The [Early Years Planning Cycle Resource for the VEYLDF](https://www.vcaa.vic.edu.au/curriculum/earlyyears/ey-curriculum-resources/Pages/EarlyYearsPlanningCycleResource.aspx)](https://www.vcaa.vic.edu.au/curriculum/earlyyears/ey-curriculum-resources/Pages/EarlyYearsPlanningCycleResource.aspx) showcases examples of how educators might use the planning cycle to support children’s numeracy learning. The Early Years Planning Cycle Resource for the VEYLDF illustrates how knowledge of the trajectory of children’s learning informs an educator’s decision-making: decisions about what is worth noting and observing, and decisions about what could be planned next for children. The sample evidence markers reflect science or mathematics concepts for the key components of learning in the VEYLDF Learning and Development Outcome ‘Children are confident and involved learners’. In turn, these key components of learning are mapped against the achievement standards in the first three levels of the Victorian Curriculum F – 10 (VCAA, 2018, p.2).

To learn more and see examples about how this planning cycle is used to scaffold children’s mathematical learning, educators might find it helpful to access the [Early Years Planning Cycle Resource for the VEYLDF](https://www.vcaa.vic.edu.au/curriculum/earlyyears/ey-curriculum-resources/Pages/EarlyYearsPlanningCycleResource.aspx) (VCAA, 2018; VCAA, 2020) which includes learning plans & sample evidence markers for children from birth to 8 years. This table illustrates how these examples reflect the key mathematical concepts addressed in this resource.

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| Learning plans: Birth to 2 years | Key mathematical concept | | | Page number |
| Number and Algebra | Measurement and Geometry | Statistics and Probability |
| Block bridge |  | ü | ü | Page 4 |
| Sinking and floating |  | ü | ü | Page 5 |
| Learning plans: 3 to 5 years | | | | |
| Hearts | ü |  |  | Page 11 |
| Floating and sinking |  | ü | ü | Page 14 |
| Water volume |  | ü | ü | Page 15 |
| Learning plans: 6 to 8 years | | | | |
| Counting on, counting back | ü |  |  | Page 16 |
| Musical skip counting | ü |  |  | Page 17 |
| Making yoghurt |  | ü | ü | Page 18 |
| Developing a sequence of instructions | ü |  |  | Page 21 |

In addition to the ideas and resources identified in this resource, educators might find the following online resources useful. Each site and the specific resources are organised into the key mathematical areas.

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| Resource | Key mathematical concept | | |
| Number and Algebra | Measurement and Geometry | Statistics and Probability |
| **Let’s Count**  [Let’s Count](https://letscount.thesmithfamily.com.au/register/) supports parents and early years’ educators to develop the mathematics skills of the children in their care by noticing, exploring, and talking about mathematics in their daily lives. | ü | ü | ü |
| **The Erikson Institute Early Math Collaborative**  [The Early Math Collaborative](https://earlymath.erikson.edu/) is an online community aimed at increasing the quality of early math education. | ü | ü | ü |
| **The Australian Parenting Website**  [The Australian Parenting Website](https://raisingchildren.net.au/babies/play-learning/learning-ideas/early-numeracy)  provides free, reliable, up-to-date and independent information to help families grow and thrive together. They are funded by the Australian Government, reviewed by experts and are non-commercial. | ü | ü | ü |
| **Learning Potential**  [Learning Potential](https://www.learningpotential.gov.au/search?age=22) is an app and website for families to help them support their children’s learning. It contains articles and information on all aspects of children’s learning and development, from the early years to the end of high school. | ü | ü | ü |
| **Early Childhood Resource Hub**  [The Early Childhood Resource Hub](https://www.ecrh.edu.au/) is a central repository of Australian early childhood resources, quality standards, support and forums. It brings together professionally developed resources and information that support educators’ practice under the National Quality Framework for Early Childhood Education and Care, particularly in relation to the National Quality Standard for Early Childhood Education and Care and School Age Care.  The Early Childhood Resource Hub is managed by Education Services Australia with the support of the Australian Government. | ü | ü | ü |
| **Australian money**  An [animated rap](http://fuse.education.vic.gov.au/?TRY9DY) to help children learn about Australian coins.  [Australian notes train](http://fuse.education.vic.gov.au/?SXWH48) is an animation that will help children learn about the faces that appear on both sides of Australian notes. | ü |  |  |
| **DET website For Parents**  [How to build your child's numeracy skills from birth to year 2](https://www.education.vic.gov.au/parents/learning/Pages/numeracy-birth-year-2.aspx) includes tips for parents and carers on how to build children's skills in mathematics. | ü | ü | ü |

## References

Department of Education and Training. (2016). *Victorian Early Years Learning and Development Framework .* Melbourne: Department of Education and Training.

VCAA. (2018). *VEYLDF Learning Outcome Planning Cycle Resource Children are confident and involved learners.* Melbourne: VCAA.

VCAA. (2020). *EARLY YEARS PLANNING CYCLE RESOURCEFOR THE VICTORIAN EARLY YEARS LEARNING AND DEVELOPMENT FRAMEWORK.* VCAA.