

Table 2: *Process matrix*

Developmental Learning Outcome	Mathematisation	Connections	Argumentation
<i>Children develop trust and confidence</i>	How do we encourage children to take risks as they seek to find the mathematics in everyday situations? What opportunities and support do we give children to choose to play with and participate fully in mathematical situations arising from their worlds?	How do we encourage children to play and interact purposefully with the mathematics they experience in their lives? What opportunities and support do we give children to manage and work with different contexts in which a mathematical idea can occur?	What opportunities and support do we give children to explore and take risks as they justify their mathematical thinking? How do we encourage children to demonstrate flexibility and to manage different mathematical ideas as they are presented to them by peers?
<i>Children develop a positive sense of self and a confident and personal group identity</i>	How do we encourage children to accept the challenge of finding mathematics in everyday situations and to use this mathematics to solve problems arising from the situation? What opportunities do we provide for children to participate actively in collaborative mathematical problem solving and problem posing? What opportunities do we provide for children to explore different perspectives as they attempt to solve mathematical problems?	How do we encourage children to feel that they belong to a mathematical learning community with shared values and responsibilities? How do we encourage children to respond positively to the mathematical ideas and strategies of others? What opportunities do we provide for children to explore different mathematical ideas through collaborative group work?	How do we encourage children to develop and maintain respectful relationships with adults and children even though they may not agree with their mathematical ideas? How do we encourage children to help develop agreed values and sociomathematical norms of behaviour in their groups?
<i>Children develop a sense of being connected with others and their worlds</i>	How do we encourage children to represent their mathematical thinking through the use of symbols, words and pictures? How do we encourage children to use technology to help them solve mathematical problems? What opportunities do we provide for children to investigate mathematical similarities, differences and patterns in their lives?	How do we encourage children to contribute to collaborative group work in mathematics through taking on a variety of roles? How do we encourage children to gain knowledge of and build respect for mathematical strategies used by other people? What opportunities do we provide for children to connect the different mathematical ideas they learn?	How do we encourage children to contribute constructively to mathematical discussions and arguments? How do we encourage children to question why their and other people's mathematical ideas work? What opportunities do we provide for children to communicate their own mathematical ideas to a respectful group of peers?
<i>Children are intellectually inquisitive</i>	What opportunities do we give children to experiment with mathematical concepts and representations in problem solving and investigation? How do we encourage children to gather information and ask questions that might be answered by this information?	What opportunities do we give children to investigate mathematical ideas that are part of the local natural and constructed environment? How do we encourage children to use mathematics to be critical consumers of everyday products? How do we assist children to find connections between different mathematical concepts and representations?	What opportunities do we give children to put forward a mathematical argument and to justify it? How do we assist children to gain confidence in their ability to explore, hypothesise and make appropriate choices in their mathematics?

Developmental Learning Outcome	Mathematisation	Connections	Argumentation
<i>Children develop a range of thinking skills</i>	How do we encourage children to use the processes of play, reflection and investigation to solve mathematical problems? What opportunities do we provide to reflect upon and communicate their mathematical thinking?	How do we encourage children to use mathematics to describe and analyse their experiences? What opportunities do we provide for children to reflect upon and respect diversity and connections between people's mathematical knowledge and strategies?	How do we encourage children to participate in group discussion and justification about the solution of mathematical problems? What opportunities do we provide for children to suggest alternative solutions to mathematical problems?
<i>Children are effective communicators</i>	How do we encourage children to talk about and represent their efforts to solve mathematical problems? What opportunities do we provide for each child to demonstrate that symbols are a powerful means of communicating mathematical ideas but that they are not the only way?	How do we encourage children to use different communication strategies to organise and clarify their mathematical thinking? What opportunities do we provide for each child to link their mathematics learning into language and literature experiences?	How do we encourage children to interact with others to explore ideas, negotiate possible solutions and share their mathematical learning? What opportunities do we provide for each child to use different communication strategies to help clarify their and their peers' mathematical thinking?
<i>Children develop a sense of physical well being</i>	What opportunities do we provide for each child to demonstrate enthusiasm for new mathematical tasks? How do we encourage children to celebrate their successes in mathematics?	What opportunities do we provide for children to use mathematics to help predict and manage change in their daily lives? How do we encourage children to use mathematics to increase their knowledge and understanding about physical health and capabilities?	What opportunities do we provide for children to develop confidence in expressing their mathematical ideas? How do we encourage children to celebrate their efforts and achievements in mathematics learning?
<i>Children develop a range of physical competencies</i>	How do we encourage children to actively explore mathematical problems and investigate relevant problems through mathematics?	How do we encourage children to move confidently in space and perform different movement patterns with growing spatial awareness?	How do we encourage children to integrate their mathematical thinking with their communication skills so that they can justify their opinion?

Table 3: *Content matrix*

Developmental Learning Outcome	Number Sense and Mental Computation	Algebraic Reasoning	Spatial and Geometric Thinking	Data and Probability Sense
<i>Children develop trust and confidence</i>	How do we encourage children to use their own thinking strategies? What opportunities do we give children to demonstrate flexibility and make choices? What opportunities and support do we give children to take risks when developing understandings about number?	How do we encourage children to explore patterns? What opportunities and support do we give children to manage change as they engage with pattern making activities?	How do we encourage children to initiate and participate purposefully in spatial tasks? In what ways are children able to demonstrate flexibility and make choices when playing with collections of everyday shapes and objects?	How do we encourage children to make choices in their lives? In what ways are children able to explore and take risks in their own lives?
<i>Children develop a positive sense of self and a confident and personal group identity</i>	How do we provide opportunities for children to experiment and think about number in different contexts, including their own family group, traditions and rituals? What opportunities do we provide for children to seek new challenges and persist in their problem solving?	In what ways do we encourage children to explore their place in the patterns of traditions and rituals in their families? How do we encourage children to explore different perspectives in mathematical problem solving?	In what ways do we encourage children to explore relationships among collections of shapes? How do we encourage children to explore different perspectives in art and spatial ideas?	In what ways do we encourage children to explore data collected from their environment and to record these data? How do we encourage children to begin to recognise, discuss and challenge unfair attitudes and actions?
<i>Children develop a sense of being connected with others and their worlds</i>	How do we encourage children to play with number? How do we encourage children to represent number in a variety of ways?	How do we encourage children to explore relationships through making and continuing patterns? What do we do to encourage children to use symbols and different representations of their mathematics? What opportunities do we provide for children to develop awareness of similarities, differences, patterns and changes through their mathematical activity?	How do we encourage children to explore shapes of living things? What do we do to encourage children to use visual representations in recording their spatial thinking? What opportunities do we provide for children to develop awareness of similarities and differences among shapes and objects?	How do we encourage children to explore groups to which they belong, based on particular attributes? What opportunities do we provide for children to gather data on living and non-living aspects of their environments?

Developmental Learning Outcome	Number Sense and Mental Computation	Algebraic Reasoning	Spatial and Geometric Thinking	Data and Probability Sense
<i>Children are intellectually inquisitive</i>	What opportunities do we give children to explore, hypothesise, take risks and engage in symbolic and dramatic play with confidence?	What opportunities do we give children to experiment with word, language, number and shape patterns? How do we encourage children to explore patterns using their senses? How do we assist children to use pattern making and pattern continuation for problem solving and investigation?	What opportunities do we give children to explore their local environment and record what they see using visual means? How do we encourage children to analyse critically the shapes found on the supermarket shelves? How do we assist children to compare and classify shapes?	What opportunities do we give children to investigate different forms of data representation? How do we encourage children to interpret data arising from the use of everyday products? How do we assist children to gather information, ask questions, seek clarification and consider possibilities about their own lives?
<i>Children develop a range of thinking skills</i>	How do we encourage children to generate a range of ideas and to use the process of play, reflection and investigation to find answers to problems?	How do we encourage children to use patterns to generate mathematical ideas? In what ways do we provide opportunities for children to reflect upon their mathematical pattern making?	How do we encourage children to participate in group discussions and brainstorm around the properties of shapes? In what ways do we provide opportunities for children to use their imagination to generate interesting shapes or patterns?	How do we encourage children to develop a notion of fairness in their lives? In what ways do we provide opportunities for children to monitor change over time?
<i>Children are effective communicators</i>	How do we encourage children to talk about and represent their findings?	How do we encourage children to demonstrate an understanding that symbols are a powerful means communication? What opportunities do we provide for children to engage in symbolic play?	How do we encourage children to use different communication strategies to describe shapes and their properties? What opportunities do we provide for children to play with shapes and communicate their findings in a variety of ways?	How do we encourage children to use the language of chance? What opportunities do we provide for children to explore the ideas and concepts of data representation?
<i>Children develop a sense of physical well being</i>	What opportunities do we provide for each child to accept new challenges, make new discoveries and celebrate effort and achievement?	What opportunities do we provide for children to predict and manage change in their daily routines and record the patterns of their lives? How do we encourage children to engage in a variety of active and quiet activities in order to experience a balance?	What opportunities do we provide for children to make discoveries that are new to them about shape and space? In what ways do children demonstrate enthusiasm for spatial thinking?	What opportunities do we provide for children to predict and manage change in their daily routines? In what ways do children demonstrate enthusiasm in approaching the ideas of chance?

Developmental Learning Outcome	Number Sense and Mental Computation	Algebraic Reasoning	Spatial and Geometric Thinking	Data and Probability Sense
<i>Children develop a range of physical competencies</i>	In what ways do we establish an environment that promotes children's exploration?	How do we encourage children to explore patterns in shape and space? In what ways do we assist children to represent varied physical activities and games through patterns and symbols?	How do we encourage children to move confidently in space and perform different movement patterns with growing spatial awareness? In what ways do we assist children to engage in a variety of physical activities and games which use geometric ideas?	How do we encourage children to collect, analyse and represent data about their physical activity?