Educators’ Guide to the Early Years Learning Framework

Outcome 3: Children are effective communicators
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Belonging, being and becoming

Communication is an essential component of children’s belonging, being and becoming.

Belonging
Children feel a sense of belonging when their language, interaction styles and ways of expressing ideas are valued within the early childhood setting. Children are social beings and use verbal and non-verbal language, music, dance and drama to connect with others and to share ideas and feelings. They use spoken and written language and the creative arts to explore their world and construct their own understandings and identities. Some children will use alternative ways such as gestures, symbols or speech devices to communicate their ideas.

Being
Children use language, including gestures, facial expressions, body language and the creative arts, to explore and make sense of their environment and to make their thinking visible to others. They ask questions, pose problems and challenge each other’s thinking. They also use language to interact with others and to play and have fun! As children take part in everyday life they use literacy and numeracy and begin to understand the ways in which literacy and numeracy work. Children also use the creative arts to ‘say’ things to others without using words. They may also use behaviour and gesture to express how they feel about different situations.

Becoming
Communication is central to children’s learning. As children engage and use language they learn to become effective communicators. Literacy and numeracy are essential for learning in all areas and for making choices and leading a full life. Children learn and communicate through the visual arts, music, movement and drama.

Children are effective communicators - What does this mean in practice?
Children communicate in many ways using different text types. These include using gestures, facial expression, body language, spoken language, drawing, movement, music, writing, construction and dramatic play. Some children’s speech or understanding of language is enhanced with the use of symbols, signs or technologies. Children with communication
disorders or hearing impairments may communicate effectively with the use of augmented communication strategies such as cued articulation or sign language.

As children take part in everyday life they are engaging in a range of literacy and numeracy practices. Successful literacy practices for the 21st century involve:

- speaking
- listening
- viewing
- creating a range of visual, gestural, spatial, printed, oral and multimodal texts
- reading
- writing and
- critical thinking about texts (critical literacy).

We all engage in literacy processes as part of daily life. The processes of reading, writing, viewing, creating texts and critical literacy develop alongside speaking and listening as children participate from birth in everyday life. These processes are explained in more detail below.

**Literacy processes**

*Speaking and listening:* involves interacting with others and taking part in conversations verbally and non-verbally for a range of purposes. This includes expressing feelings, naming objects, sharing information and ideas, giving directions and retelling events or stories.

*Viewing:* involves interpreting everyday events, objects, and people as well as images, photographs, drawings, videos, diagrams and multimodal texts. Visual literacy is also the ability to respond to and later analyse the ways in which aspects such as colour, line and shape are used to communicate ideas and create moods.

*Creating visual, gestural, spatial and multimodal texts along with writing:* Children also create meaning by drawing pictures, signs, symbols, maps and diagrams; creating still and moving images; using gestures, dance and body movement; and three-dimensional constructions. Many children use a combination of these modes to create meaning with multimodal texts.

*Reading:* involves making meaning from a range of texts. Children draw on their experiences and vocabulary to make meaning from images, print and multimodal texts. They also use their knowledge of how stories work to ‘pretend’ read and to retell stories using story language. They use their understandings of grammar (the way that language is structured) to make predictions about what type of word comes next when reading. As children develop greater understandings of the sounds of language they also use their understandings of letter-sound relationships to get meaning from what they read.

*Writing:* Writing involves a range of processes, including making marks, handwriting or word processing, spelling, grammar and punctuation. The purpose of writing is to share meaning. Skills such as spelling and grammar help to make meaning clear to others but they are not an end in themselves.
Critical thinking/critical literacy: Critical literacy is about going beneath the surface of texts such as books, films, advertising catalogues and websites to analyse ways in which texts are constructed to present particular points of view and to sell products. It involves thinking about and questioning who is included and who is not, and the ways in which particular groups of people are presented – for example, stereotyping and gender roles. When children listen, view and read critically they look at the meanings and purposes of texts, the views being expressed and how texts work. Critical literacy also entails the creation of texts that are inclusive of diverse cultures and languages and that challenge traditional gender roles. The capacity to think critically about texts is a key component of literacy.

As children take part in everyday experiences they are also developing understandings of literacy concepts such as text conventions, print, the sounds of language (phonological and phonemic awareness), letter-sound relationships and grammatical structures of texts.

Key literacy concepts

Text conventions are understandings about how texts work and how they are used to exchange meaning. For example, a book is held and read in a particular way and a shopping list usually takes a particular form.

Concepts of print are understandings of how print works. This means, for example, understanding that print has meaning and that in English print is made up of letters and words and is read from left to right and top to bottom. It also includes understandings of punctuation and knowledge of upper and lower case letters.

Phonological awareness is the broad understanding of the sounds of a language, and begins with learning to hear different environmental and vocal sounds and to discriminate between types of sounds.

Phonemic awareness is the ability to recognise the smallest units of sounds in words such as the three sounds that are in the word c-a-t. It is being aware of words that rhyme (that is, words that have the same sound at the end of the word) and alliteration (the same sounds at the beginning of words).

Letter-sound relationships means understanding that alphabet letters and combinations of letters have specific speech sounds.

Grammatical structures of texts are the ways that words are put together to make meaning. This means, for example, understanding the word order for statements and questions. Readers use understandings of grammatical structures to help them to make predictions about the type of word (for example a noun or a verb) that comes next in the text.

Numeracy is more than counting. It includes understandings about numbers, space, patterns and measurement as well as chance and data. Families provide many different opportunities
for children to explore everyday objects and communicate about quantities, patterns, shapes, sizes and spatial relations. As children take part in everyday family experiences such as shopping, doing the washing and cooking they count, sort, categorise, compare, order and sequence objects and develop key numeracy concepts and processes. These are explored in more detail below.

**Key numeracy concepts**

*Number understandings* involve the capacity to count and order numbers and to recognise and write numerals. Number also involves comparing quantities such as ‘more than’ and ‘less than’.

*Spatial understandings* include two-dimensional and three-dimensional shapes. Children find shapes in their environments and describe them in their own words and later learn names for these shapes. Spatial understandings also involve position (for example, under, over), location (for example, near, far) and orientation (for example, turn, roll).

*Patterns* can be found in the environment and can be created. Children notice patterns in their environment and talk about them. They create, copy and extend various patterns using colours, sounds, shapes, objects, stamps, pictures and actions.

*Measurement understandings* include concepts such as height, length and mass. Children notice differences and begin to use terms such as ‘bigger’ and ‘heavier’.

*Chance and data* involves facts, figures and records, such as the measurements taken of the bean plant as it grows, or children’s height over time and estimations of the probability of events.

**Numeracy processes**

*Comparing* involves observing and describing similarities and differences between objects and sorting, matching, ordering and classifying objects according to attributes such as size and shape.

*Problem-solving* involves investigation, questioning, trial and error, divergent thinking and decision-making.

*Predicting and estimating* involves thinking about objects and data and making informed deductions and inferences, for example estimating numbers and measurements and predicting which object will be the fastest. Estimating often involves recording ideas in order to compare them with the actual result.

*Reasoning* involves recognising relationships such as cause and effect, hypothesising, making generalisations and explaining and justifying thinking.
Representing mathematical ideas involves communicating mathematical thinking and strategies to others. These representations can use pictures, numerals, three-dimensional shapes, on-screen representations or spoken or written language.

While there are some general patterns of development in children’s learning, there are also significant variations due to different developmental states and diverse social and cultural contexts. This is particularly the case in the area of communication. Children use and develop communication strategies as they take part in everyday life in their families and communities. These different family and community practices influence children’s verbal and non-verbal language, patterns of interaction, preferred modes of communication, experiences with texts and literacy and numeracy strengths and interests.

Numeracy, literacy and creative expression are integral to effective communication and are woven through Outcome 3. Effective communication includes the capacity to

a) interact verbally and non-verbally with others
b) engage with and get meaning from a range of printed, visual and multimedia texts
c) express ideas and make meaning using a range of media
d) understand how symbols and pattern systems work
e) use information and communication technologies to access information, investigate ideas and represent their thinking.

Each of these key components of communication is explored in more detail below, along with suggestions for ways that educators can acknowledge and extend children’s learning and ideas for facilitating discussion in staff teams. These are followed by strategies for documenting and assessing children’s learning in the area of communication, questions to encourage reflection for change and recommended resources.

**3a Children interact verbally and non-verbally with others for a range of purposes**

http://i.ehow.com/images/GlobalPhoto/Articles/4521789/baby1_Full.jpg

Babies often use non-verbal language such as gestures, cooing and babbling to take part in interactions and to express their needs and preferences. The baby in this photograph is
communicating by maintaining eye contact with the adults around him. He is taking his turn in the conversation with smiles. This is the beginning of speaking and listening.

As young children develop understandings about spoken language they begin to use single words and then sentences to name objects, people and experiences and to express ideas and feelings. For example, Toby at 15 months is able to name familiar objects in his environment, such as dogs. He often over-generalises and calls all birds ‘duck’, for example. He asks adults to name things for him by asking ‘Dat?’ As he is using one-word utterances at this stage, he uses inflection rather than word order to ask a question. He uses both verbal and non-verbal language to get his needs met. For example, he says ‘door’ and points when he wants the door opened. He expresses feelings both verbally and non-verbally, for example saying ‘oooh’ and patting a child who falls down.

Older children use language for an extended range of purposes, including reasoning, predicting, hypothesising, explaining ideas and solving problems. With experience and adult modelling and feedback, children’s vocabulary becomes more extensive and specific and their utterances become more complex. For example, when children are provided with opportunities to explore a range of materials in the natural environment, and when adults in their environment talk with them about these experiences, they learn to appreciate and discuss different colours, textures, shapes and sounds and to explore these in their play.

It is important to remember that many children will be developing their communication competencies firstly in their home language, which may be a language other than English, and later in English. Some children will be effective communicators in a dialect of English such as Aboriginal English and will later add communication skills in Standard Australian English.

Not all children develop speech or understand language in the same way. Some children will need extra support to develop their capacity to communicate, while others will benefit from signs, symbols or devices to enhance their communication and help make the message clearer.

The active role of the educator in acknowledging and extending children’s verbal and non-verbal interactions

There are many opportunities throughout the day for educators to interact with children individually and in small groups. It is important that educators respond to children’s attempts at communication and that they model and extend language. Educators have a responsibility to ensure that they initiate conversations with children, as well as responding to children’s verbal and non-verbal communications, particularly with children who may not initiate interactions themselves.
To support children’s verbal and non-verbal communication educators can:

- Make use of routine times to engage in reciprocal interactions with children - for example, as you are changing babies’ nappies play singing games and encourage them to join in by smiling or clapping. Babies often appreciate interactive games such as peek-a-boo.
- Include songs, rhymes, games, books and posters in languages other than English. These should reflect the languages and dialects of the children, families and staff in the setting and the wider community. If possible, access family members or bilingual resource workers to share community language resources with children.
- Talk with babies and toddlers about what is happening around them and look at and talk about photographs of familiar objects and people such as family, friends, pets and the local environment. These interactions provide opportunities to introduce new vocabulary and to extend children’s language.
- Plan small group experiences with open-ended resources such as water, paint and blocks that enable children to interact with each other using non-verbal communication as well as through conversations about shared interests. When there are opportunities for multi-age groups, older children can also provide language models for babies and toddlers. Opportunities for children who are learning English as a second language to participate in these types of experiences with more experienced English language speakers can also provide a supportive environment where children can try out new language.
- Join in children’s play and engage children in conversations about what they are doing. It may be appropriate to take on a role in the play where you can acknowledge and respond to children’s language while also modelling and extending language.
- Engage children in conversations throughout the day. Sustained (extended) conversations with children about their ideas and experiences are an important way of developing children’s vocabulary as well as their sentence structure and conversational skills. Open questions such as “Can you tell me about what you are doing…?”; Why do you think that happened?” and “What do you think might happen if…..” encourage children to use descriptive, reasoning and predicting language.
- Share picture books, told stories and rhymes with children in small groups and individually. Engage children in conversations about what is happening in the story and talk about how it relates to their own experiences.
- Provide children with access to everyday resources such as measuring jugs, tape measures and containers of different sizes and natural objects such as shells. Join in children’s play with these resources and encourage the use of mathematical language such as ‘more than’ and ‘less than’.
- Listen to sounds, music and stories and play listening games with children. Talk about the sounds, clap the beat, repeat repetitive refrains and encourage children to retell stories.
- Ask questions and make comments that encourage children to project into the feelings of others, for example “I wonder how Josie felt when she found the puppy?”, and that encourage children to speculate about what might happen.

Discussion starters:

1. Mario, aged 4, has recently begun attending the local preschool two days a week. The preschool staff have observed that he spends much of his time on his own and does not play with the other children. He engages in solitary activities such as painting, drawing
and completing puzzles. He does not show any interest in books or writing.

The director spoke to Mario’s mother and asked about his experiences at home. The family migrated recently from Chile. Mario lives with his parents, an older brother and sister and his grandparents. The family has a shop and Mario’s parents spend very long hours working there or shopping at the markets. Mario is often at the shop as well, or he goes to the markets with his father. Mario speaks Spanish at home, particularly with his grandparents and parents. His older brother and sister speak some Spanish at home but prefer to use English in daily interactions. Mario enjoys watching television and his mother says that this is helping him with his English. One of his favourite programs is Dora the Explorer, which includes some Spanish as well as English. The family home includes newspapers and magazines in Spanish and some children’s magazines and colouring-in books and sticker books in English. Mario is particularly interested in magazines that include characters from his favourite television programs.

The director shared this information with staff and they planned strategies to strengthen the continuity between Mario’s home environment and that of the preschool and to support him in his interactions with peers. These strategies included asking Mario’s family to bring in magazines in Spanish, accessing Spanish music and books from a library, including children’s magazines and books about Dora the Explorer, and putting them in the book area, as well as setting up a shop dramatic play area.

What other strategies could staff use to build on Mario’s family and community experiences and extend his language and literacy in both Spanish and English?

Think about the children in your setting. How do you acknowledge and build on children’s family and community experiences and knowledge?

2. Add example from case studies

3b Children engage with a range of texts and get meaning from these texts

Children engage with a range of texts

Communication involves sharing and making meaning with a range of texts. These include:

- oral texts – for example, conversations, stories, poems, songs, rhymes
- printed texts – for example, notes, books, magazines
- visual texts - for example, photographs, drawings, paintings
- gestural texts – for example, body and facial gestures, dance, movement
- spatial texts – for example, constructions, sculptures
- multimodal texts (that is, texts that integrate different modes, such as images, words and sound) – for example, television, DVDs, computer games, internet sites.
From the time they are born, children appreciate and respond to sounds and patterns in speech, stories and rhymes. They view, listen to and interact with many different texts and respond to these verbally and non-verbally.

Children have many varied experiences with texts. Some children will be familiar with books. Others will have experiences with told stories or songs and rhymes in languages other than English and/or English. Some children will use Braille and be familiar with communication boards as aids to communication. Many children will engage with texts on television, DVDs and computers and will be interested in texts of popular media culture. Many of the texts that children interact with are visual and multimodal.

Children get meaning from a range of texts

Experiences from infancy with a range of texts encourage children to play with the sounds of language and to take an interest in print and how print works. Babies and toddlers are often interested in picture books, told stories, television programs and DVDs. Because texts are so much part of their world, toddlers and older children frequently notice signs, symbols, images and words in their environment. They may recognise symbols that they see regularly. Toddlers will often be interested in reading and may ‘pretend’ to read by looking at the pictures and making up the story or using the words they remember if they have heard the story before. Older children will often have favourite characters and stories that they act out, retell, read along with an adult or read themselves. They use a range of strategies, including using the pictures, their memory, recognition of familiar words and their understandings of text conventions and print to make meaning.

Older children begin to understand that print has meaning and they are frequently able to read familiar words such as their name. They begin to understand key literacy concepts such as text conventions and concepts of print and to understand of the sounds of language (phonological awareness and phonemic awareness), letter-sound relationships and the way that texts are structured.

Children will often engage in reading-like behaviours in their play, for example reading signs and shopping catalogues in a dramatic play area or reading a book to a teddy bear or doll. They will often demonstrate what they know about texts and print in these play episodes, for example holding the book with the title page at the front and running their finger under the print as they read.

The active role of the educator in facilitating children’s engagement with a range of texts and their capacity to get meaning from these texts

Children engage with a range of texts in their play and everyday lives. They may tell stories, talk on the phone, write a message using scribble writing or invented spelling, look at the print and images on food packaging and measure and weigh objects, for example. These experiences provide many opportunities for intentional teaching. Educators also have a
responsibility to initiate literacy and numeracy experiences with children and ensure that all children’s capacity to get meaning from texts is supported.

To support children’s engagement with a range of texts and their capacity to get meaning from texts educators can:

- Include a range of texts in the environment. This could include signs, photographs, books and posters created by children as well as educators. Babies will often enjoy looking at photographs and picture books and older children will appreciate more complex factual texts as well as stories.
- Share picture books, rhymes and songs with children. Babies will appreciate the sounds and patterns of language and will be able to participate verbally or with gestures or movement. Older children will be able to join in with the rhymes and songs and talk about what is happening in the book.
- Read and re-read familiar, favourite books with children, particularly books with lots of repetition and rhyme. Encourage children to join in the reading – for example you might pause and encourage children to say the rhyming word ‘tum’ in the phrase ‘Schnitzel von Krum with the very low tum’ or join in with the repetitive refrain ‘along came Hairy Maclary’ in the Hairy Maclary books by Lyndel Dodd.
- Include bilingual and multilingual texts such as songs, books, posters, signs, DVDs and CD-ROMS in relevant community languages as well as English.
- Share poems, rhymes and story books with children that include numeracy concepts such as measurement and number, and talk with children about these concepts.
- Talk with children about how texts work and how print works to help children develop understandings of text conventions and concepts of print. Point out the author and illustrator when reading books, for example. You could also talk about print and illustrations, words, letters and numerals as you share books with children. When punctuation such as exclamation marks and question marks appear in texts you could also talk about the purpose of these with children.
- Play games, such as clapping the syllables in children’s names, to encourage the development of phonemic awareness. Use musical instruments to mark the beats or syllables in words.
- Make up rhyming games, such as rhyming words with children’s names, and games that involve alliteration such as ‘tidy Thomas’. Talk with children about concepts such as rhyme and alliteration when sharing books.
- Talk with children about characters, the structural elements of narratives (the ways that stories begin, and the ways that plots develop, for example), features of factual texts such as a table of contents, and interesting or new vocabulary when sharing books and other texts with children.
- Discuss how the illustrations in a picture book create particular moods or feelings in the reader or viewer when sharing books with children. Encourage children to create their own images to reflect different moods.
- Ask questions such about who is included and who is left out and how boys and girls are portrayed when sharing books and watching DVDs.
- Read or tell different versions of familiar stories such as the Three Little Pigs and talk about the story from the perspective of different characters, such as the wolf. Encourage the children to create new characters or different endings for familiar stories.
• Look at advertising texts with children and talk about how images, colour and line are designed to attract attention and sell products. Encourage children to think carefully about advertising that appeals to them and why it is appealing. You might look at toy catalogues, for example, and discuss use of the colour pink to advertise toys to girls and the assumptions that all girls like dolls.

• Enrich children’s play environments with a range of literacy and numeracy resources. You might add a cash register, toy money, scales, shopping catalogues, notebooks and pencils to a supermarket dramatic play area. When you also join in children’s play with these resources you are able to model literacy processes such as reading and viewing and numeracy processes such as counting and patterning.

Discussion starters

1. Food packaging and shopping catalogues had been included in the supermarket dramatic play area. Ella and Jess were looking at a supermarket catalogue. Ella pointed to a picture of yoghurt which had the Wiggles on it. Jess said “I have this one at home”. Jess said “I want that one too. I love Wiggles”.

Imagine you are the educator. How would you join in children’s play and use it as a critical literacy experience?

2. Add example from case studies

3c Children express ideas and make meaning using a range of media

Children express ideas and make meaning in a range of different ways. They draw on the narratives and symbols of their family and community cultures and their own preferred forms of expression to share their ideas with others.

Arts experiences allow children to explore ideas, solve problems and make imaginative interpretations. Through exploration and imaginative expression, children can generate new meanings about their world. Children gain immense pleasure from controlling the marks that they make as well as their sound making and movement. As this control grows, so do the ways in which children can communicate intentionally with others.

Art forms like music, visual arts and drama open up a world of possibilities for communication. These symbol systems allow us to say things to each other that cannot be said any other way. Arts experiences also provide valuable opportunities for all children to engage in positive social interactions, regardless of their ability to communicate with spoken language or in English.

Children can demonstrate their detailed and complex understandings by using their voices and bodies. Think about a box that has been turned into a plane and launched into the air. This may be accompanied by an improvised song with extraordinarily detailed sound effects that show great knowledge of changes that you hear when the plane takes off, cruises, avoids other
things in the air and lands, and all of this occurs while using a great range of space to demonstrate the physicality of flying. Later, the ‘pilot’ provides a visual trace of the flight activity+ by using a range of implements to draw the flight path and show the changing perspective of the flight as viewed from the ground. These rich data are all communicated to others via the creative arts.

http://www.tc.edu/i/a/2608_kid.jpg


Babies use gestures, facial expressions, body language and movement to make meaning. As they develop greater control of large and small muscles, children begin to use other means for expressing ideas and feelings, such as dance, drama and music as well as drawing, painting and sculpture. They engage in symbolic play and draw on their family and community experience and shared stories to take on different roles in their play.

Babies and toddlers may experiment with different ways of using materials such as crayons, paintbrushes and pencils to make marks. As children begin to understand more about images and print they manipulate materials such as computers, pencils and lined paper, oil pastels and water colours to make meaning.

The active role of the educator in facilitating children’s capacity to express ideas and make meaning with a range of media

To support children to express ideas and make meaning with a range of media educators can:

- Find out about the ways that children express ideas and make meaning at home. This may include children’s family and community experiences with written language in languages other than English and/or English as well as with creative and expressive arts. Invite families to contribute resources from home or borrow resources that reflect children’s home experiences, languages and resources.
• Provide children with easy access to a range of materials that they can use to express their ideas and feelings. For babies and toddlers these should include resources they can use to make sounds, as well easy-to-grip painting and drawing materials. Older children will appreciate a wide range of resources including paints, felt pens, oil pastels, pencils and paper of different shapes, sizes and textures, rulers and erasers as well as computers with writing and drawing software and musical instruments.

• Demonstrate skills and techniques with resources such as clay, water colours and musical instruments and talk with children about aspects such as colour, line, beat and rhythm.

• Add writing materials to children’s play areas, such as dramatic play and construction. Join in children’s play and model processes of writing and reading. Talking about what you are writing and the letters, numerals and words that you are using will help to increase children’s understandings about concepts of print and letter-sound relationships.

• Involve children in the documentation of their own learning. Children can contribute by selecting items for inclusion in documentation, adding their own narratives or captions (which may be dictated or written) to photographs and anecdotes, creating their own learning stories with drawings or photographs and adding their own perspectives to the analysis of items.

• Present children with a range of materials that they can use to take on different characters. Puppets, lengths of fabric and dress-up clothes can encourage children to take on different roles and create their own scripts as well to dramatise familiar stories and experiences.

• Share examples of the works of a range of artists such as painters, sculptors and dancers from different cultures. Use specific languages to talk about the arts with children.

• Respond to children’s images and symbols, talking about the meaning they wish to convey and various ways of communicating similar meanings.

3d Children begin to understand how symbols and pattern systems work
Symbols, signs, images and words are part of children’s everyday worlds. Children are often interested in exploring patterns and symbols in their environment and through this they begin to understand that these have meaning. They may be interested in counting objects and may begin to use mathematical language to describe objects in their environment. They also experiment with making marks and writing symbols letters, numerals and words.

Numeracy
Children engage in numeracy processes such as comparing, reasoning and predicting and learn about numeracy concepts such as number and measurement as they take part in everyday life.

Babies are learning about number when they hear counting rhymes and songs and later begin to be interested in repeating numbers that they know and to say numbers in order, although at this stage they will often miss numbers. Older children will often be able to identify numerals and use number-word sequences to count forwards and backwards (for example, counting from 1-10 and backwards from 10-1). They will understand that numbers refer to quantities and begin to compare and match sets of objects and to use language such as ‘more than’ and
‘less than’ to order and compare. They will also begin to develop one-to-one correspondence and will be able to count objects. Some children will be able to count objects up to 10 and some children beyond this.

Children learn about space, patterns, measurement, chance and data as they explore their environment. Babies understand space as they crawl and roll and climb into and over objects. They notice patterns in their environment and begin to learn about properties such as size and weight as they manipulate objects. They notice similarities and differences in their environment, which leads to the ability to sort and classify.

Older children refine their understandings of space, patterns, measurements, chance and data as they engage in experiences such as drawing, block building and sand and water play. They learn about three-dimensional shapes, for example, as they design and create objects with blocks and they begin to discuss the relative positions of objects with vocabulary such as ‘above’, ‘below’, and ‘next to’. They explore patterns with colours, shapes, textures and sounds and can often explain the patterns they have created. They become aware of size as they compare height, weight and strength and begin to understand concepts such as half. They identify objects as ‘the same’ or ‘different’, and then with more refined understandings are able to use terms such as ‘more than’ and ‘less than’ on the basis of attributes that they can measure. Older children also often use chance and data as they predict, compare and record which toy car goes fastest down the hill or which child is the tallest.

![Felicity demonstrating](image)

Felicity is demonstrating many understandings of measurement as she plays with water.

**Literacy processes and concepts**

Children notice the images and print in their environment and are curious as to how these are used to exchange meaning. Babies and toddlers may make marks on paper (and other surfaces) with paint and crayons and appreciate stories. As children get older they begin to notice symbols, signs and words and want to know what they mean and want to create these themselves.

Toddlers’ writing will often look like a series of marks or scribbles. As children begin to understand more about writing they begin to make approximations of symbols, letters,
numerals and words they see around them (for many children these will in languages other than English) and will use what they know to make strings of letters and patterns. They will often engage in self-initiated repeated writing of letters they know, such as the letters in their name.

Older children will draw on their knowledge of the concepts of print in their reading and writing. They may do scribble writing. They may copy print they see in their environment. They may use what they know about the alphabet and letter-sound relationships to write the first letter of a word or the initial and final sound. This results in what is sometimes called phonemic spelling or ‘invented spelling’.

Include samples of writing and numeracy here

The active role of the educator in facilitating children’s learning about symbols and pattern systems

To support children to understand symbols and pattern systems educators can:

• Join in children’s play and encourage them to sort and categorise and to make collections with everyday objects, such as shells. Talk with children about the similarities and differences between objects and the categories they have used to make their collections.
• Provide children with resources for pattern-making such as blocks and wooden beads. Present children with models to copy as well as encouraging them to create their own. Talk with children about the patterns they are making and ask them to tell you how the pattern works.
• Talk with children about patterns and symbols that you see in the environment, in photographs, artworks, and music. Introduce children to specific language to talk about patterns and encourage children to create their own patterns.
• Provide children with access to open-ended resources such as sand, water, blocks and boxes to facilitate their understandings of measurement, space and number. Join in children’s play and model positional language such as ‘next to’ and measurement language such as ‘bigger than’ and ‘heavier’.
• Go on walks with children in the local community and point out symbols and patterns. Take photographs and make drawings of symbols and patterns and talk about these when you return. Older children can also draw diagrams that recreate the path that they took and add in some of the symbols and patterns that they saw. These diagrams can also be used to talk about direction, location and orientation.
• Collect and record data with children. You could record children’s height over time, for example, or the growth of a plant.
• Provide children with access to magnetic letters and numerals, alphabet and number puzzles, alphabet and counting books and matching games with pictures and words, letters or numerals. Display environmental print such as posters, signs and labels and alphabet and counting charts. These should be in languages other than English as well as English. Talk with children about this print, read it together and talk about letters, words and numerals.
• Share a range of texts with children and talk with them about print and how print works. Talk about words, letters and numerals. Talk about punctuation marks such as exclamation marks and question marks.
• Create visual and written texts with children. For example, you could help children to create a sign for their block construction or to write a caption to accompany a drawing. In these contexts it may be appropriate for you to write the words for children to copy to create their own text.

• Provide resources that enable children to create their own paper or digital books. These could use a combination of drawings, photographs, writing, claymation, children’s voices and music created by children.

Discussion starters

1. Consider the following photographs.
   What learning is occurring here?
   How could the educator extend children’s thinking about mathematical concepts in these examples?
   How could the children record their ideas and creations?


2. You are sharing the book *The Very Hungry Caterpillar* by Eric Carle with children. How would you use this book to talk about mathematical ideas with the children? What symbols and patterns can you find in the book?

   What children’s books could you use to talk with children of different ages about spatial understandings associated with position (for example, under, over), location (for example, near, far) and orientation (for example, turn, roll)?

3e Children use information and communication technologies to access information, investigate ideas and represent their thinking

Technologies are part of everyday life for most children in Australia. They see adults and older children using technologies to access information and to communicate with others.
Children also use technologies such as mobile phones, music players, televisions, DVD players, cameras and computers at home and in their communities.

For children with additional needs technologies can be an extension of their everyday life or something that provides them with new opportunities. For example, children may use speech output devices or children with sensory impairments may use FM receivers and hearing aids to help them participate in family, community and early childhood environments.

![Children using technology](http://www.wiu.edu/thecenter/art/artexpress/graphics/Calling%20on%20phone.jpg)

Children often take on roles of technology users in their play. A baby or toddler might use a block as a mobile phone or use an old keyboard or computer in an office dramatic play setting. They will often be curious about technologies and want to explore equipment such as cameras and computers.

Older children will often be competent users of technologies such as computers, cameras and overhead projectors. They will be able use technologies to investigate and explore ideas as they search for information and will be able to get meaning from a range of visual, print-based and multimodal texts. They will also be able to use technologies to record ideas and data and to create meaning with visual, written and multimodal texts.

Babies will often be happy with toy phones and cameras and old keyboards, as their focus is on exploration. It is important that early childhood settings also provide older children with access to real, working, up-to-date technologies. Still and moving cameras enable children to record and reflect on their own learning and share this with others. Computers are important tools for children to use as they investigate areas of interest and explore their world. Computers also enable children to express their thinking through visual and multimodal texts.

Computers support interactions and collaboration between children and with adults as they share what they are doing or finding, ask questions or provide help for others. Children share ideas and strategies as they play computer games, search for information on the internet, upload photographs or music files and create their own texts.

It is important that educators evaluate the appropriateness of computer software and internet sites. Educators can apply the same selection criteria for appropriate written texts, such as picture story books, when they select appropriate software or other digital media such as internet sites.
The active role of the educator in facilitating children’s use of information and communication technologies to access information, investigate ideas and represent their thinking

It is important that educators are confident in their own use of technologies as well as providing opportunities for children to develop their skills with information and communication technologies.

To support children to use information and communication technologies educators can:

- Integrate computers into children’s learning centres and projects so that children can use the computer to find information, record data, upload photographs they have taken and represent their ideas with drawing, photographs, spoken language, music and writing.
- Provide children with still and video cameras to record their own learning as well as using technologies yourself to document learning. Share these images with children and families to facilitate reflections on learning.
- Join in children’s technology and demonstrate specific skills and techniques with technologies, such as how to upload photographs or insert photographs into a document.
- Engage in collaborative research with children where you use both computers and books to investigate a topic and compare and contrast information from different sources.
- Plan opportunities for pairs and small groups of children and children and adults to use technologies collaboratively.
- Use music players to record children’s language, songs and music and share these with children and families.
- Extend children’s technology skills and creativity by teaching the use of technologies such as claymation.
- Evaluate computer software and internet sites before including these in the program.
Discussion starters

1. The director of a centre wants to introduce computers into the children’s rooms but some of the staff and parents are not supportive of this initiative. If you were the director, what reasons would you provide for including computers in the program?

2. Add example from case studies

Assessment for learning

There are many opportunities throughout the day for educators to observe and document children’s communication and to plan for learning. Play-based experiences and routines are times when children are engaged in meaningful interactions and allow for authentic documentation of children’s learning. Regular exchanges of information between educators and families and collaborative documentation will enable all perspectives to be included and children’s communication to be supported most effectively.

It is important that educators are aware of children’s competencies in their home language/s or dialect/s as well as in Standard Australian English, particularly for children who are just beginning to learn English. Educators should draw on community language speakers, members of extended families and bilingual staff to support them to document and assess children’s communicative competencies in their home language or dialect as well as in Standard Australian English.

Identifying and communicating learning

Educators, families and children can use a range of documentation methods to identify and communicate children’s learning in the following areas:

- preferred modes of communicating
- interactions with others – verbal and non-verbal
- oral language – for example, conversations, retellings of events and stories, purposes of language (for example, describing, reasoning)
- expressing meaning with visual arts, dance and music – for example, painting, drawing, three-dimensional constructions, dance, dramatic play
- pattern making and children’s descriptions of their patterns
- sorting and classifying of objects
- estimating and predicting
- processes of thinking through a problem and finding and justifying a solution
- interest in symbols and use of symbols to express meaning
- interest in print – for example, interest in books, environmental print
- beginning reading – for example, retelling a story, ‘pretend’ reading
- beginning writing – for example, making marks, scribble writing, writing letters, numerals and words
• understandings of literacy concepts – for example, text conventions, concepts of print, phonemic awareness, letter-sound relationships
• understandings of numeracy concepts – for example, number, shapes, position, measurement.

Planning for present and future learning

Educators draw on their knowledge of children’s learning and curriculum to analyse what their documentation is telling them about children’s communication and to plan for future learning. The following questions may aid in the analysis of documentation.

What does our documentation tell us about the child’s:

• preferred modes of communication – for example, gestural, spatial, visual?
• interactions with others?
• conversation skills – for example, initiating and responding, turn-taking in conversations?
• capacity to use language for a range of purposes – for example, to get needs met, to explain an idea, to hypothesise?
• expression of meaning using visual arts, dance and music?
• interest in literacy and numeracy?
• understandings of symbols and patterns?
• comparing, sorting and classifying objects?
• deductions and inferences used to estimate and predict?
• problem-solving strategies?
• understandings of text conventions?
• understandings of concepts of print?
• phonemic awareness – for example, ability to recognise rhyme and alliteration?
• understandings of letter-sound relationships?
• critical literacy?
• understanding of numeracy concepts such as shape and size?

Some examples of documentation and analysis

Example: Language Transcript

Context: Louise has been threading with wooden beads and has joined the ends to make a necklace.

Transcript:

Louise: Look what I made.
Teacher: That’s lovely, what did you make?
Louise: I made a pretty necklace.
Teacher: Yes you did, it looks like you made a pattern with your beads.
Louise: I did.
Teacher: What’s the pattern that you made?
Louise: I put green, black, red and orange, and then I put it all again.
Teacher: What do you mean you put it all again?
Louise: I put all the same again.
Teacher: All the same what?
Louise: All these same colours.
Teacher: Where is the start of your pattern?
Louise: Here (pointed to the green bead).
Teacher: Can it start here (pointed to the red bead).
Louise: Yes.
Teacher: What would the pattern be if it started on red?
Louise: Red, orange, green, black, red, orange, green, black.

Analysis: Louise is able to create a repeating pattern with four different coloured beads. She can explain her pattern by identifying the unit of repeat (green, black, red and orange). Louise recognises that a cyclic pattern can have multiple starting points.

Example: Retelling of a story

Context: Abby (3 years) retold a story she had seen on television to an educator and a small group of children.

Retelling: “The cat and the duck came to the Baby Bear’s. Baby Bear made soup. The duck liked it. He ate it all up. But the cat didn’t like it. Maybe he’s had it before at home. I don’t like soup. He said “yuk”. Then the mum came with the cake. It was a surprise. He thought his mum forgot. Then they had cake and he was happy.”

Analysis: Abby is able to retell the story with a logical sequence of events. She understands the way that stories are structured by including a resolution (“They had the cake and he was happy”). She uses complete sentences and is able to use dialogue in the retelling. She is able to link the story to her own experiences and to project into the feelings of others.
Example: Photographs and anecdote

http://www.nethowto.net/project/index.php?option=com_content&task=view&id=88&Itemid=92

Context: The children have been interested in shopping for some time, so a supermarket was set up in the dramatic play area. Molly, Thom and Viktor were playing in the supermarket dramatic play area. Resources included food packaging, shopping baskets, plastic fruit, and a toy cash register with toy money.

Anecdote:

Thom and Viktor were in the supermarket dramatic play area. They were lining up the food boxes and the plastic fruit and vegetables on a table. Thom placed the larger boxes at the back and the smaller ones at the front. Molly entered the area and started to pick up some of the boxes and look at them.

Molly: I have to buy food for my baby. I need Cocoa-pops (picking up a cereal box and putting it into a shopping basket).

Thom got a basket as well and they both filled up their baskets. They went over to the table with the cash register. Viktor walked over to the cash register.

Viktor: Here. I have to tell you how much. You have to put them here first (pointing to the table).

Molly put the items on the table and Viktor pretended to scan them.

Viktor: Fifty hundred dollars.

Molly took some money out of her bag.

Molly: Here. This is fifty.

Viktor: No – that one is ten. See there (pointing to the numeral 10) – it says ten.

Analysis:

The children are drawing on their own experiences with shopping to create roles, scripts and ideas and to integrate literacy and numeracy in their play (Outcomes 3c).
The children are interacting with each other, directing each others’ actions, challenging and clarifying each others’ thinking, and sharing ideas about how supermarkets work. They are using language for a range of purposes: to ask questions, express ideas and reason (Outcome 3a).

Thom shows knowledge of measurement and seriation by ordering the food packages from smallest to largest. Viktor understands that items generally need to be scanned and the prices totalled. He is developing number concepts. He is able to recognise the numeral 10 and is developing understandings of numbers larger than 10 (Outcome 3d).

The children are engaging with print and images on the food packaging and are using what they know about food and shopping to get meaning from these texts (Outcome 3b). Viktor knows how to use technologies such as scanners and cash registers (Outcome 3e).

**Links to future planning:**

- Find out about children’s family literacy and numeracy experiences and invite families to share resources from home such as catalogues and food packaging.
- Add scales for weighing fruit and vegetables and talk with children about the weight of different objects.
- Model the use of mathematical language such as on’, ‘under’ and ‘first’ to encourage children’s use of language to explain mathematical ideas such as position, direction, order and sequence.
- Join in children’s play and draw children’s attention to the print on food packaging, and the numerals on money. Make some signs for the supermarket with the children and talk with them about concepts of print, letter-sound relationships and numbers while engaging in these processes.
- Add computers for children to use to create signs, to use at the checkout, and to find information about food.
- Ask children open questions that encourage them to clarify their ideas, make predictions and reason. Also encourage children to ask their own questions and investigate possible solutions.
- Take photographs of children engaged in play in the supermarket dramatic play area and give cameras to children so they can take photographs themselves. Talk with children about what they are doing in the photographs.
- Talk with children about the print and images on food packaging and in catalogues. Talk about the ways that products are marketed – for example talk about the use of popular media characters to market particular cereals.

**Using reflection to plan for change**
The following questions may assist you to critically reflect on the ways in which you acknowledge and extend children’s communication and to plan for ongoing improvements:

- What are the assumptions that we make about the communication skills of babies, children with additional needs and children with languages and interaction styles different to our own?
- How do these assumptions influence the choices we make about how to support each child’s capacity to communicate verbally and non-verbally? What changes do we need to make?
- How often do we engage in sustained conversations with each child? What can we do to engage in meaningful sustained conversations with children more frequently?
- What are the songs, rhymes, books and stories we share with children? Whose language/s, culture and life experiences do they reflect?
- How do we incorporate the diversity of children’s family and community experiences with literacy and numeracy in ways that value diversity and are not tokenistic? How could we make our program more culturally responsive?
- How do we support children’s sense of belonging and their respect for diverse languages and literacies? What else could we do?
- How do we incorporate the diversity of children’s family and community experiences with literacy and numeracy in ways that value diversity and are not tokenistic? How could we make our program more culturally responsive?
- How can we change our practices if we feel less comfortable with children whose language and interaction styles are different to our own?
- How do we respond when family expectations for their child’s literacy and numeracy learning challenge our own beliefs and practices? How do we negotiate these differences?
- Are the ways that we document and share children’s verbal and non-verbal communication inclusive of all families and children? How can we make our documentation processes more inclusive?
- How can we make better use of technologies to collaborate with children and families to document children’s learning and to make documentation more accessible?
- What opportunities do children have to engage with a range of texts – oral, print-based, visual, gestural, spatial and multimodal – in our setting? How could we extend children’s opportunities to express meaning using a range of media?
- How do we engage with children in play experiences to scaffold understandings of literacy and numeracy without taking over their play? What else could we do?
- What is our setting’s position on the use of technologies with children? Why? What alternate perspectives are there?
- How do we engage children in critically literacy with a range of texts?
- How confident am I in using technologies such as computers, digital cameras, and music players with children?
- How can we encourage collaborative learning with technologies?


