

## The early learner

### The PYP learner in the early years (3–6 years old)

#### Summary

- The PYP transdisciplinary framework offers young students authentic opportunities to focus on key developmental abilities.
- The learning community values the early years as a time in which play is the primary driver for inquiry.
- Play involves choice, promotes agency and provides opportunities to inquire into important concepts and personal interests.
- The following features are central to learning in the early years: play, relationships, learning spaces, symbolic exploration and expression.

#### Laying the foundation

Experiences during the early years lay the foundation for all future learning. A rapid rate of development during the early years occurs in the physical, emotional, social and cognitive domains. The brain and body develop faster than at any other point in a child's life. Social development also takes shape in these early years as children are naturally inclined to explore, to discover, to play and to make connections between self, others and their entire surroundings. Through these interactions, children form their perception of themselves and others in the world (Rushton, Juola-Rushton 2010).

Supporting children cognitively, socially, emotionally and physically requires that all members of the learning community value these early years in their own right, as a time in which play is the primary driver for inquiry. Through play, young children develop approaches to learning and connect with key domains of their development.

- Receptive and cognitive abilities (for example, listening, remembering, thinking, analysing, generating theories, the control of attention and working memory)
- Representational abilities (for example, using symbolic systems—such as oral and written language, drawing and mathematical symbols—to construct and represent meaning)
- Relational abilities (for example, the ability to play with peers, sharing and taking turns, and respecting others)

The PYP transdisciplinary framework is highly relevant for all learners during this period. It offers authentic opportunities to focus on the key developmental abilities that are acquired during this crucial time and that support young students to be self-regulating learners. The transdisciplinary themes offer authentic contexts for students to learn increasingly complex ideas about themselves and the world around them. Central ideas related to “Who we are” support young children to learn about identity, relationships, well-being and what it means to be part of a community. “How we express ourselves” relates to discovery, creativity and the expression of ideas and feelings.

## Early learning and development

Young children’s development proceeds in a complex, and often non-linear, trajectory where individual children follow different pathways simultaneously. Teachers create learning environments and experiences that are both adaptable and appropriate to young students, and they understand the important influence of their sociocultural contexts. As a result, teachers adapt learning goals and intended learning experiences accordingly, based on their observations of young students’ learning and development.

## The role of the teacher

In the PYP early years, teachers take on many roles and identities, including:

- facilitator
- researcher
- participant
- provocateur
- navigator
- observer
- documenter
- reflective practitioner.

Through these flexible lenses teachers plan, facilitate and scaffold, as well as reflecting on students’ learning and their own teaching. Teachers carefully balance the planning and documenting of the learning and progress of the group by monitoring and responding to the learning development of

individuals. Moment-by-moment teacher actions, reactions and interactions with children are key to their cognitive development (Copple, Bredekamp 2009).

PYP early years teachers create stimulating learning spaces, listen deeply to students and craft exciting avenues for inquiry. They ensure a balance between listening to individuals, shaping shared investigations and ensuring overall intentions for learning. Using a repertoire of strategies, tools and understandings, teachers work closely with students to co-construct inquiries and reflect regularly on their practice.

Teachers also support children in developing social-emotional competence because this connects to children's emotional well-being and their ability to adapt in new environments and to form successful relationships throughout life (National Scientific Council on the Developing Child 2004). For example, by positioning play as central to children's development, teachers are creating a non-threatening environment for children to learn about the world at their own pace (Rushton, Juola-Rushton 2010).

## Learning in the early years

### Natural inquirers

Children are natural inquirers from birth; they have the capacity to learn about, interact with and interpret the world around them. From birth, children possess all kinds of mental abilities uniquely suited to these early phases of learning and development. They are curious and capable learners with a sense of agency, rich in potential, bringing valid skills, preferences and understandings to the educational process.



There is a sustained, complex and dynamic interplay between learning and development that requires a well-considered early years educational experience for young children and their families. By actively facilitating a student's meaning-making, the physical and social environment engages students in rich and developmentally responsive ways.

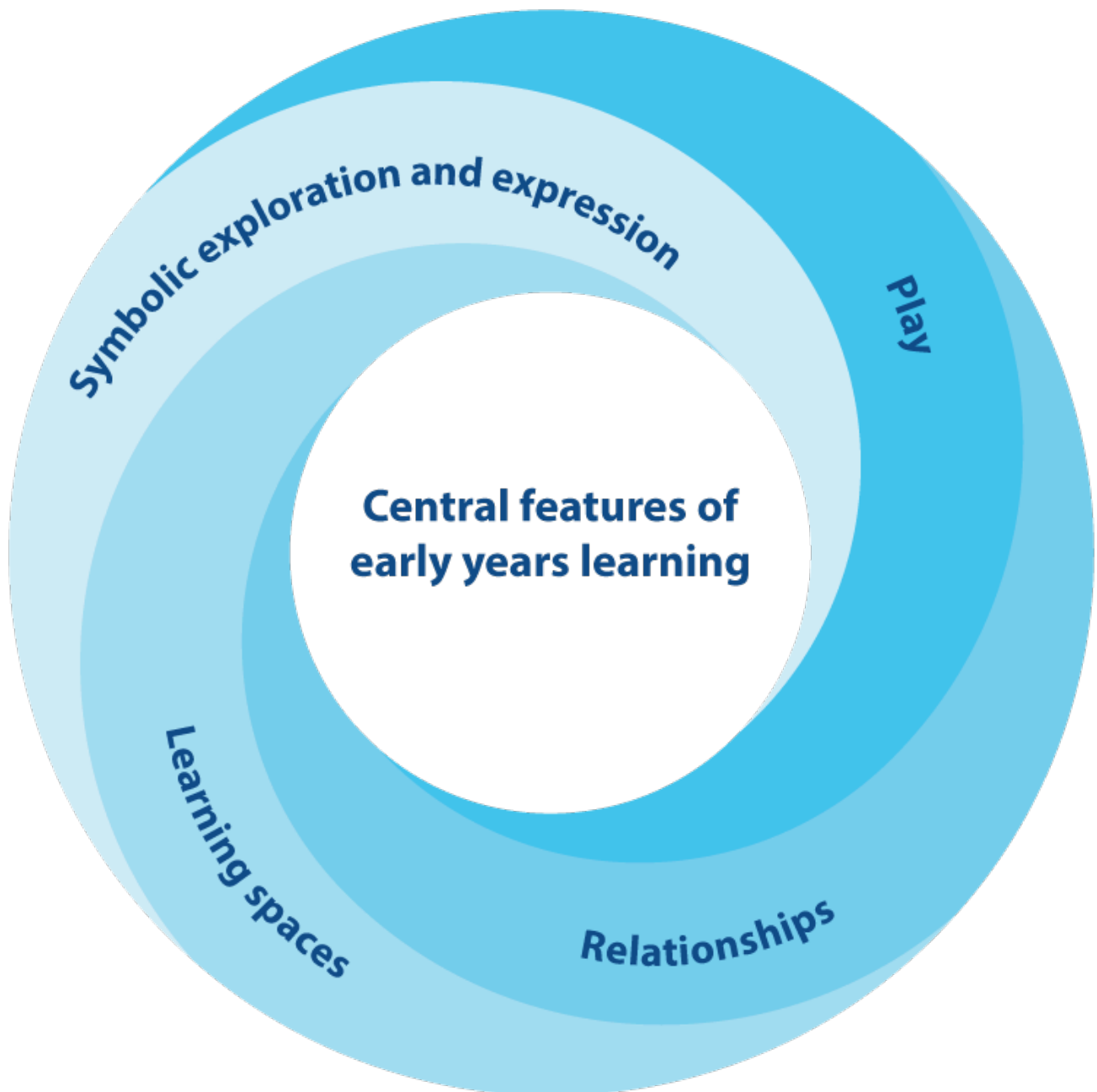
## Central features

The processes of learning and teaching are crafted to support students' individual and emergent pathways of development. Teachers support learning by:

- planning uninterrupted time for play
- building strong relationships with students and their families
- creating and maintaining responsive spaces for play

- offering many opportunities for symbolic exploration and expression.

Each of these elements are mutually supportive and are interwoven with the others in both theory and practice.



## Play

Young students' development is supported when hands-on learning is combined with student-initiated play. A careful consideration exists between student-initiated play and teacher-initiated experiences. Play provides benefits for cognitive, social, emotional and physical development for students from all socio-economic, cultural and linguistic backgrounds, and offers authentic opportunities for students to begin their exploration and development of the IB learner profile.

Play is highly adaptive, involves choice, promotes agency and provides rigorous opportunities to inquire into important concepts and personal interests. Through play, children actively construct meaning from their interactions with their physical and social worlds. These meanings, models or ideas are revisited and revised in light of new experiences and further learning. In play, children construct, test, confirm or revise these ideas by themselves or with their peers, constantly adapting their personal models of how the world works. Teachers interact with students while observing, monitoring and documenting their learning. During uninterrupted time for play, teachers initiate a range of intentional learning experiences, offering support and feedback when needed.

Teachers in the PYP early years support play through:

- creating and maintaining engaging learning spaces
- scheduling uninterrupted time for play in both indoor and outdoor spaces
- noticing students' emerging thinking processes, interests and theories, and responding in ways that extend learning
- monitoring and documenting students' learning and development during play, and offering appropriate scaffolded learning experiences for individual students and small groups.

## Relationships

Children's first experience of a sense of belonging is at home with family, the foundations of which expand significantly when they enter school. Encouraging and nurturing positive relationships between home, family and school provides a strong basis for learning, behaviour, health and well-being. Young children experience their world as an environment of relationships; these relationships affect virtually all aspects of their development (National Scientific Council on the Developing Child 2004). The significance of relationships in the early years is a fundamental part of establishing

important skills and dispositions that centre on trust, agency and belonging. When the importance of relationships is reinforced, the foundations for an effective learning community are established.

Teachers support the development of relationships through:

- regular conversations with parents and legal guardians
- acknowledging and respecting each student's individuality
- connecting with individual students throughout the day by having conversations, listening to and documenting their evolving questions, and acknowledging their efforts and achievements
- recognizing opportunities for students to learn to self-regulate during play and offer support and feedback when needed
- planning uninterrupted time for play in engaging learning spaces.

### **Learning spaces**

A fundamental part of effective education in the PYP early years is the creation of safe, stimulating and inviting learning spaces that promote exploration, wonder, creativity, risk-taking and learning through play.

These are spaces where opportunities for authentic learning experiences are of utmost importance, and where students are valued for their knowledge, strengths and competencies as individuals and as part of a larger group. Students who are emotionally invested stay more engaged in their learning (Rushton, Juola-Rushton 2010). Deliberate attention is paid to the structure, purpose and function of these spaces as contexts that support play-based transdisciplinary learning, collaborative learning of knowledge, conceptual understandings and skills, and opportunities to take action.

Teachers create safe, stimulating and inviting learning spaces by:

- offering a range of open-ended materials
- arranging and rearranging materials as invitations for learning
- creating areas for role play, block play, mark-making, expression through the arts, and so on
- considering a range of choices and opportunities for group and individual play
- involving students in the design and construction of play areas

- creating displays that reflect the process of students' learning.

### **Symbolic exploration and expression**

From an early age, language is the central operating system that generates and supports cognition. Learning language begins at birth and develops exponentially with experience. Teachers understand that becoming literate and numerate are evolving processes that bring students to more sophisticated understandings over time. Effective language and mathematics learning and teaching is based on students' developing ability to listen to and speak with others, and to understand and use symbols. The importance of expanding these skills by transferring learning and experiences to other contexts allows students to re-encounter their thinking, develop symbolic competency, explore new connections and consolidate their understandings.

Language and mathematics teaching follow students' learning pathways that are connected to personal interests and larger concepts. Young learners enter school with no pre-conceived distinctions between subjects; play brings life to transdisciplinary learning. Schools support the way young learners experience the world by providing them with ample time to play with their peers. For example, while playing together with blocks, students acquire vocabulary, learn about volume and shape, and develop fine and gross motor skills.

The development of understandings in language and mathematics are interwoven and intentionally explored through strategies such as:

- games
- rhymes, poems, stories
- play
- conversations
- mark-making, drawing
- problem-solving, reasoning
- counting, patterning and sequencing.

These interest-based and intentional experiences directly support and influence later formal learning in language and mathematics.



## What does learning look like in the PYP early years?

<b>Move away from</b>	<b>Move towards</b>
Predetermined time structures and routines	Flexible timeframes and routines that are responsive to the needs of the students
Pedagogy that centres around instructional processes for students and is teacher-led	Play that is co-constructed between students and teachers
Repeated large-group experiences as the basis for all learning	Whole-group experiences at pertinent learning moments
Literacy and numeracy experiences that develop set skills through memorization and worksheets	Literacy and numeracy experiences that develop a wide range of playful, inquiry-based explorations into symbolic and representational learning
Development of self-regulation supported through praise and punishment	Development of self-regulation through play, modelling behaviours, language, group games, and music and movement
Units of inquiry comprising pre-determined learning engagements on concepts that are precursors to later learning	Units of inquiry that are iterative and flexible, centring on concepts of significance in the lives of young students
Learning spaces that promote dependence on others: where materials are stored, controlled and accessed by teachers for student	Learning spaces that promote high levels of independence, offering students opportunities to access materials and manage learning
Learning spaces where play is timetabled at specific times for specific purposes	Learning spaces where play and choice are central features of everyday learning
Learning spaces where learning experiences are restricted and timetabled	Flexible learning spaces that provide for many different learning experiences at all times

Learning spaces where students are asked to engage with particular learning tasks at particular times	Learning spaces where students have sustained time to select their learning experiences based on interests and social connections
Assessment that measures pre-determined sets of skills against developmental norms for grouping/ranking purposes	Assessment that monitors and documents students' learning against individual developmental milestones and celebrates achievements at times that are pertinent to individuals
Measuring learning solely by tracking the progress of the group against learning goals	Responding to the individual learning and development journey as well as valuing and recording the learning of the whole group

## Language development and play

### The complexity of language

Children bring with them to school complex language knowledge, experience and meaning-making strategies from their early years at home. Students use language to:

- explore
- examine
- question
- predict
- share
- investigate
- reflect

in a sustained and deliberate manner, within a supportive collaborative setting.

Students use play to make meaning and understandings of the world, and to develop oral language and symbolic competence. They share personal experiences and understandings through talk, play, shared stories and collaborative exploration. By listening attentively, teachers discover students'

language expertise and mental models. Using this knowledge, teachers plan and create learning experiences that extend students' language capabilities. This knowledge can then be documented on a student's language portrait.

When young students are involved in dramatic and cooperative play, language becomes more complex as it includes negotiating roles, taking turns, conveying desires and meeting the needs of others. Young students often use inner speech to play with elements of language while consolidating understandings of tasks and relationships with which they are engaged. Teachers support language learning by providing opportunities for physical movement, imaginary and cooperative play.

Young students are naturally curious about the world and, by interacting with different kinds of materials, they develop the language needed to share their understandings of the properties and behaviour of the physical world. Teachers model language around these explorations through talk-alouds, and use observations about students' expressed interests to ensure a responsive learning environment.

Stories provide particular opportunities to develop language comprehension and the foundations of literacy. When young students assume the roles of characters and play with elements of a story, comprehension increases, as do understandings of print media. Songs and rhymes accompanied by actions that support the development of concepts, sentence structure and vocabulary along with phonemic and graphemic awareness and memory. Young students relish play with sounds, voices and funny noises, and also play with grammatical constructions, such as repeating patterns, and substituting words, asking questions, repeating lists of words, numbers and letters.

## Technology and play

### Engaging with technology

Young learners in a play- and inquiry-based environment approach technology in a similar way to how they approach any novel objects. According to Bird and Edwards (2015), they begin engaging with the object/device—digital or non-digital—with exploration in mind to investigate, learn and test their theories about its functionalities. When they believe they have understood its functionalities, they move to the innovation phase where they use the object/device in a new context.

Teachers can support young learners' understanding and use of technology by making appropriate technological devices available in order to appeal to their natural curiosity. Such devices could include an old camera, radio, recorder, colouring applications, and so on. The aim for young learners is not so much about mastering technology, but about using technology to extend their investigations through touching, seeing and hearing. During this exploration process, young children develop thinking skills and learn to make connections in subsequent play activities.

## Approaches to learning in the early years

### How teachers support skills development

Categories	What teachers do:
<b>Thinking skills</b>	<ul style="list-style-type: none"> <li>• Model the language of thinking, such as “I wonder”, “I noticed”, “I inferred”.</li> <li>• Ask open-ended questions.</li> <li>• Provide sufficient thinking time to respond to questions, and so on.</li> <li>• Offer open-ended materials.</li> <li>• Provide time for reflection at all stages of learning—before, during and after inquiries.</li> <li>• Co-create and reflect on individual learning goals within the zone of proximal development.</li> </ul>
<b>Research skills</b>	<ul style="list-style-type: none"> <li>• Ensure sufficient time for uninterrupted play (in responsive learning spaces) to practise and develop research skills.</li> <li>• Collaborate with, for example, the librarian and technology specialists to build research skills and to help students identify sources of information.</li> <li>• Model academic integrity by acknowledging where materials and ideas came from.</li> </ul>
<b>Communication skills</b>	<ul style="list-style-type: none"> <li>• Plan opportunities for students to practise and apply these skills in meaningful contexts (including play, class meetings and small-group learning engagements).</li> <li>• Encourage students to consider potential opportunities and challenges arising from shared ideas.</li> </ul>

	<ul style="list-style-type: none"> <li>• Encourage physical cues.</li> <li>• Model appropriate, respectful and rich language use.</li> <li>• Encourage communication using different languages.</li> <li>• Ask open-ended questions.</li> <li>• Put thinking ahead of knowing.</li> <li>• Have informal conversations.</li> <li>• Encourage students to explore a variety of perspectives and modalities.</li> </ul>
<b>Social skills</b>	<ul style="list-style-type: none"> <li>• Provide explicit opportunities for students to practise and develop these skills, including (dramatic) play and games.</li> <li>• Provide opportunities for students to reflect on their social skills.</li> <li>• Reflect and provide feedback on different interactions and other moments they observe.</li> <li>• Offer students opportunities for taking perspective.</li> <li>• Use the language of the learner profile in conversations and discussions, and in the development of essential agreements.</li> <li>• Model the social skills and language needed to greet, solve problems, share resources, and so on.</li> </ul>
<b>Self-management skills</b>	<ul style="list-style-type: none"> <li>• Ensure sufficient time for uninterrupted play.</li> <li>• Support children with transitions by sharing a visual timetable and by counting down reminders.</li> <li>• Provide opportunities to meet as members of a learning group.</li> </ul>

- Involve students in planning and organizing learning spaces (including cleaning up).
- Create an atmosphere where learning is viewed as a process of gradual improvement.
- Continually reflect on how they are supporting student agency as an intrinsic motivation for participation.
- Develop their skills in supporting students with developing their ability to self-regulate (including focus, working memory, managing emotions and making choices).

## How students develop approaches to learning

<b>Thinking skills</b>	
<b>Sub-skills</b>	<b>What students do:</b>
<p><b>Critical thinking</b></p> <p>Analysing and evaluating issues and ideas, and forming decisions</p>	<p><b>Analysing</b></p> <ul style="list-style-type: none"> <li>• Observe carefully.</li> <li>• Find unique characteristics.</li> <li>• Consider meaning taken from materials and events.</li> <li>• Synthesize new understandings by seeing relationships and connections.</li> </ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• Organize information.</li> <li>• Evaluate evidence.</li> <li>• Test generalizations, strategies or ideas.</li> </ul> <p><b>Forming decisions</b></p> <ul style="list-style-type: none"> <li>• Revise understandings based on new information and evidence.</li> <li>• Draw conclusions and generalizations.</li> <li>• Apply rules, strategies and ideas from one context to another.</li> </ul>
<p><b>Creative thinking</b></p> <p>Generating novel ideas and considering new perspectives</p>	<p><b>Generating novel ideas</b></p> <ul style="list-style-type: none"> <li>• Use discussion and play to generate new ideas and investigations.</li> <li>• Make unexpected or unusual connections between objects and/or ideas.</li> </ul>



	<ul style="list-style-type: none"> <li>• Practice some “visible thinking” routines (Ritchhart, Church and Morrison 2011).</li> </ul> <p><b>Considering new perspectives</b></p> <ul style="list-style-type: none"> <li>• Seek information.</li> <li>• Consider alternative solutions, including those that might be unlikely or impossible, in play and other situations.</li> <li>• Ask “what if” questions.</li> <li>• Practise some “visible thinking” routines.</li> </ul>
<p><b>Information transfer</b></p> <p>Using skills and knowledge in multiple contexts</p>	<ul style="list-style-type: none"> <li>• Apply skills and knowledge in unfamiliar situations or outside of school.</li> <li>• Make connections between units of inquiry.</li> </ul>
<p><b>Reflection and metacognition</b></p> <p>Using thinking skills to reflect on the process of learning</p>	<ul style="list-style-type: none"> <li>• Identify strengths and areas for improvement.</li> <li>• Reflect on their learning by asking questions such as:           <ul style="list-style-type: none"> <li>• What did I learn today?</li> <li>• What can I already do?</li> <li>• What will I work on next?</li> </ul> </li> </ul>

<b>Research skills</b>	
<b>Sub-skills</b>	<b>What students do:</b>
<p><b>Information literacy</b></p> <p>Formulating and planning, data gathering and recording, synthesizing and interpreting, evaluating and communicating</p>	<p><b>Formulating and planning</b></p> <ul style="list-style-type: none"> <li>• Ask or express through play questions that can be researched.</li> <li>• Select information sources and digital tools.</li> </ul> <p><b>Data gathering and documenting (audio recording, drawing, photographing)</b></p> <ul style="list-style-type: none"> <li>• Gather information from a variety of sources (people, places, materials, literature).</li> <li>• Use all senses to observe and notice details.</li> <li>• Record observations—drawing, charting, tallying—using emergent writing skills, when possible, to write comments, annotate images, and so on.</li> </ul> <p><b>Synthesizing and interpreting</b></p> <ul style="list-style-type: none"> <li>• Sort and categorize information and materials; arrange into forms or order, for example, with graphs, marks or symbols using emergent writing skills.</li> <li>• Analyse and interpret information.</li> </ul> <p><b>Evaluating and communicating</b></p> <ul style="list-style-type: none"> <li>• Notice relationships and patterns.</li> <li>• Present information in a variety of modalities.</li> <li>• Acknowledge sources, for example, from a book, movie or peer.</li> </ul>

**Media literacy**

Interacting with media to use and create ideas and information

- Draw connections among media resources.
- Use media to communicate, share and connect with others.
- Communicate information and ideas using a variety of media (as their skills progress).

<b>Communication skills</b>	
<b>Sub-skills</b>	<b>What students do:</b>
<p><b>Exchanging information</b></p> <p>Listening, interpreting and speaking</p>	<p><b>Listening</b></p> <ul style="list-style-type: none"> <li>• Listen to information.</li> <li>• Listen actively and respectfully to others' ideas.</li> <li>• Ask for clarifications.</li> </ul> <p><b>Interpreting</b></p> <ul style="list-style-type: none"> <li>• Interpret visual, audio and oral communication: recognizing and creating signs, interpreting and using symbols and sounds.</li> <li>• Understand the ways in which images and language interact to convey ideas.</li> <li>• Recognize the meaning of kinaesthetic communication (body language).</li> </ul> <p><b>Speaking</b></p> <ul style="list-style-type: none"> <li>• Express oneself using words and sentences.</li> <li>• Participate in conversations.</li> <li>• Negotiate ideas and knowledge with peers and teachers.</li> </ul>
<p><b>Symbolic exploration and expression</b></p> <p>Using language to gather and communicate information</p>	<p><b>Reading, writing and mathematics</b></p> <ul style="list-style-type: none"> <li>• Take on pretend roles and situations.</li> <li>• Understand symbols.</li> <li>• Access a variety of sources for information and for pleasure.</li> </ul>

	<ul style="list-style-type: none"> <li>• Make inferences and draw conclusions.</li> <li>• Understand that mark-making carries meaning.</li> <li>• Use mark-marking to convey meaning.</li> <li>• Document information and observations in a variety of ways.</li> <li>• Communicate using a range of technologies and materials.</li> </ul>
<b>Social skills</b>	
<b>Sub-skills</b>	<b>What students do:</b>
<p><b>Interpersonal relationships, social and emotional intelligence</b></p> <p>Developing positive interpersonal relationships and collaboration</p>	<p><b>Interpersonal relationships</b></p> <ul style="list-style-type: none"> <li>• Practise empathy and care for others.</li> <li>• Listen closely to others.</li> <li>• Be respectful to others.</li> <li>• Play cooperatively in a group: sharing, taking turns.</li> <li>• Help others.</li> </ul> <p><b>Social and emotional intelligence</b></p> <ul style="list-style-type: none"> <li>• Be aware of own and others' feelings.</li> <li>• Manage anger and resolve conflict.</li> <li>• Be self- and socially aware.</li> <li>• Be aware of own and others' impact as a member of a learning group.</li> </ul>

<b>Self-management skills</b>	
<b>Sub-skills</b>	<b>What students do:</b>
<p><b>Organization</b></p> <p>Managing time and tasks effectively</p>	<ul style="list-style-type: none"> <li>• Choose and complete tasks independently.</li> <li>• Follow the directions of others.</li> <li>• Follow classroom routines.</li> <li>• Share responsibility for decision-making.</li> </ul>
<p><b>States of mind</b></p> <p>Using strategies that manage state of mind</p>	<p><b>Mindfulness</b></p> <ul style="list-style-type: none"> <li>• Take responsibility for own well-being.</li> <li>• Be aware of body–mind connections.</li> </ul> <p><b>Perseverance</b></p> <ul style="list-style-type: none"> <li>• Demonstrate persistence in tasks.</li> <li>• Use strategies to problem-solve.</li> <li>• Manage own emotions.</li> <li>• Manage feelings and resolve conflict.</li> </ul> <p><b>Resilience</b></p> <ul style="list-style-type: none"> <li>• Work through setbacks.</li> <li>• Work through disappointment.</li> <li>• Show ability to adjust to new situations.</li> </ul>

## Bibliography

### Cited

Bird, J and Edwards, S. 2015. "Children learning to use technologies through play: A digital play framework". *British Journal of Educational Technology*. Vol 46, number 6. Pp 1149–1160.

Copple, C and Bredekamp, S. 2009. *Developmentally appropriate practice in early childhood programs serving children from birth through age 8*. National Association for the Education of Young Children. Washington DC, WA, USA.

National Scientific Council on the Developing Child. 2004. "Young children develop in an environment of relationships". Working paper number. 1. <https://developingchild.harvard.edu/science/national-scientific-council-on-the-developing-child/>. Accessed on 28 September 2016.

Ritchhart, R, Church, M and Morrison, K. 2011. *Making thinking visible: How to promote engagement, understanding, and independence for all learners*. San Francisco, CA, USA. Jossey-Bass.

Rushton, S and Juola-Rushton, A. 2010. "Neuroscience, play and early childhood education: Connections, implications and assessment". *Early Childhood Education Journal*. Vol 37, number 5. Pp 351–361.

## Further reading

Britt, C and McLachlan, J. 2015. *Unearthing why: Stories of thinking and learning with children*. Baulkham Hills, NSW, Australia. Pademelon Press.

Carr, M. 2008. "Can assessment unlock and open the doors to resourcefulness and agency". In Sue Swaffield (Ed.), *Unlocking assessment: Understanding for reflection and application*. Pp 36–54. London, UK and New York, NY, USA. Routledge.

Carter, M. 2007. "Making your environment 'the third teacher'". *Exchange, The Early Leaders' Magazine*. Vol 176. July/August issue. Pp 22–26.

Center on the Developing Child at Harvard University. 2016. *From best practices to breakthrough impacts: A science-based approach to building a more promising future for young children and families*. Cambridge, MA, USA. <http://developingchild.harvard.edu/resources/from-best-practices-to-breakthrough-impacts/>. Accessed on 28 September 2016.

Curtis, D and Carter, M. 2014. *Designs for living and learning: Transforming early childhood environments*. St. Paul, MN, USA. Redleaf Press.

DeViney, J, Duncan, S, Harris, S, Rody, MA and Rosenberry, L. 2010. *Inspiring spaces for young children*. Silver Spring, MD, USA. Gryphon House, Inc.

Fleet, A, Honig, T, Robertson, J, Semann, A, and Shepherd, W. 2011. *What's pedagogy anyway? Using pedagogical documentation to engage with the Early Years Learning Framework*. NSW, Australia. Children's Services Central.

Hedges, H and Jones, S. 2012. "Children's working theories: The neglected sibling of Te Whariki's learning outcomes". *Early Childhood Folio*. Vol 16, number 1. Pp 34–39.

Rinaldi, C. 2006. *In dialogue with Reggio Emilia: Listening, researching and learning*. London, UK and New York, NY, USA. Routledge.

Smith, PK. 2009. *Children and play: Understanding children's worlds* (Volume 12). Chichester, UK. John Wiley & Sons.

Whitebread, D, Basilio, M, Kuvalja, M and Verma, M. 2012. *The importance of play: A report on the value of children's play with a series of policy recommendations*. Brussels, Belgium. Toys Industries of Europe.

Whitebread, D and Coltman, P (Eds.). 2015. *Teaching and learning in the early years* (Fourth edition). London, UK and New York, NY, USA. Routledge.



