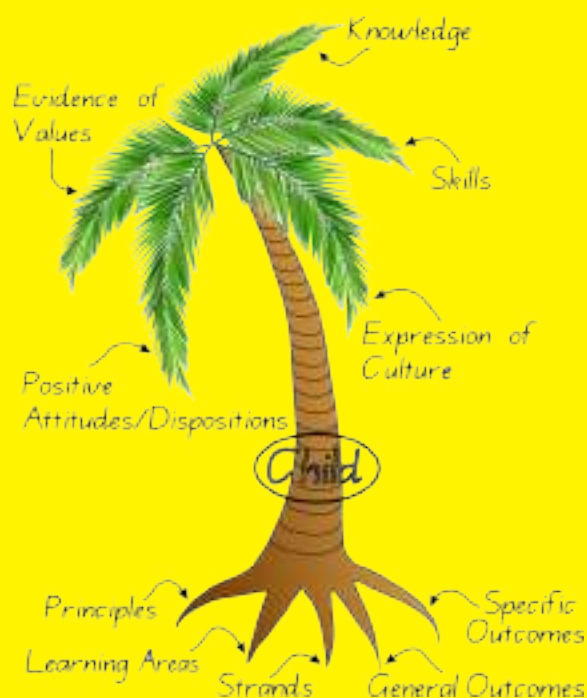




Solomon Islands Government

# Pre-primary Year



## Teacher's Guide 2

**LEARNING AND  
TEACHING APPROACHES**

**Ministry of Education and  
Human Resource Development**



Published in 2018 by the Curriculum Development Division  
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ISBN 978-982-371-180-5

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## Acknowledgements

The Ministry of Education and Human Resource Development is grateful to the following individuals and groups of people whose work has contributed to the development of this Teacher's Guide.

### The Ministry of Education and Human Resources Development

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### Funding Agencies

- United National International Children's Emergency Fund (UNICEF)
- The Solomon Islands Government

## Introduction

Learning and Teaching Approaches are designed to guide teacher's pedagogy – their method and practise of teaching. The teaching strategies, background theory and guiding principles support teachers on how to deliver the lesson activities.

Research has consistently shown that quality Early Childhood Care and Education (ECCE) is very important for human development. Interactions between children and their teachers in pre-schools, parents at home and other learning environments are important. Teachers have the opportunity to positively influence children's learning and development of the foundational skills that children need to establish ready for grade 1 classes. Research demonstrating teachers' crucial role in child development and then have the opportunity to change brain structures, so that children grow their ability to carry on learning in the future. This has been proven through neuroscience research. People's brains grow through positive and negative relationships. The quality of what they gain in a relationship is encoded into structures in their brains.

Therefore, teachers are not just influencing the learners in their class in that year but can positively or negatively influence the learners for a lifetime by the way they teach. This is because of two things. Firstly, the memories that are acquired during learning in a class remain in the brain for a life time. Secondly, the structure of the brain – the way all the parts connect and work together - can be changed for the better with the right kind of teaching (Cozolino, 2010).

The teaching and learning activities that have been chosen for this teacher guide 2 have been developed to foster these positive learning experiences. There are six sections in this Teacher guide 2 outlined below:

- Section One: Learning and Teaching Approaches
- Section Two: Literacy and language approaches
- Section Three: Teaching mathematical concepts
- Section Four: Integrated Studies
- Section Five: Assessment Approaches
- Section Six: Health and hygiene practices.

## Inspiration for Growth

This song was written by Miss Solomon Islands 2016 in preparation for her talent item to contest for the Miss Pacific crown. The contest had a big impact on her life causing change and growth, while her cultural identity and heritage also remained strong. She expressed creatively through the lyrics in this song. The words can be an inspiration for Solomon Islands teachers who are seeking to lead our small children towards a promising future. We must embrace our own changes in order to be excellent models for the children.

The song below reflects possibilities. The possibility of teachers bringing positive change to the lives of young children, the possibility of teachers encouraging children to know that they can embrace their Solomon Islands culture and embrace growth and positive change in themselves too. Teachers in Solomon Islands are very special people. They are talented and love the children in their communities. They can take what is a possibility and make it a reality. They become the voice of positive change, while showing the small children how to do the same.

### **"I Am the Voice of Change"**

*Written by: Camilla Grossmith, Miss Solomon Islands, 2016*

#### **Verse 1**

I am standing in front of the mirror.

I can see an image of my mother, grandmother, my ancestors.  
They make me who I am today.

My culture, traditions, my manna.

They define my identity.

#### **Chorus**

I am the voice of change, I am tomorrow.

This is me embracing my yesterday.

I am the face of change, embracing history.

This is me, the future starts with me.

This is me...me...me. Starts with me...me...me. X 2

#### **Verse 2**

It's all about my values, it's all about my morals.

They shape me, mold me into the woman I am,  
and they make me, who I am today.

My culture, traditions, my manna.

They define my identity.

#### **Chorus x2**

#### **Bridge**

I am the voice of change, I am tomorrow.

I am the face of change, I am tomorrow.

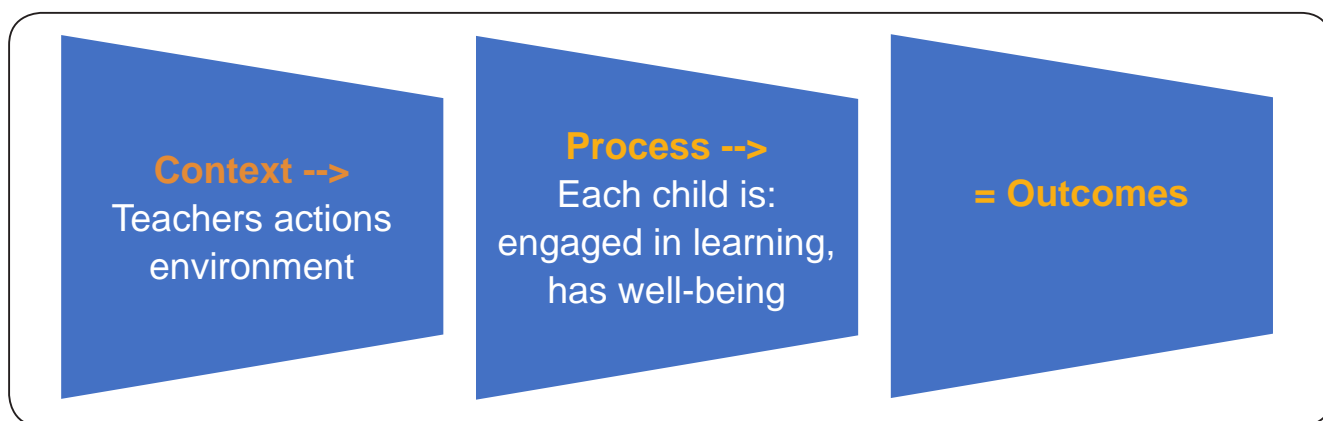
Repeat chorus



## SECTION 1

# Learning and Teaching Approaches

A teacher's pedagogy, the method and practice of his or her teaching, is very important for quality learning to occur. Using different teaching strategies respect the fact that all children do not learn the same way. The diagram below illustrates the process of education that a teacher takes a child through in order to reach the learning outcomes desired in all the learning areas. The paragraphs that follow elaborate on each aspect of this diagram.



### 1.1 Who Are You Teaching?



Figure 1: East Malaita Children, M. Martin Collection

#### Learners

The learner's home village, and community background and his or her environment, form the basis of what he or she brings to learning. This includes the informal learning social and emotional skills developed by observing and participating in family and community life or school.

Teachers can take time to reflect on these things about their learners. Some environments may have been enriched with lots of activity and interaction. However, many environments can be poor with little interaction and children being left mostly to themselves. This will significantly affect the learning experience and progress. Teachers must plan for this in the learning experience they prepare and modifying



expectations to meet the needs of the learners.

## Language – Mother Tongue

Language is central in the learning process. The learner's home, village and community has its own language that should be encouraged in the classroom. Children can speak in their own mother tongue and their home language should be valued.

In classrooms teachers will expose children to multiple languages and use multiple labels for languages on the walls of the room. While play is the basis for discovery, language is the way learners communicate and make connections with what they already know of the world. This meaning is very important. This is why our teaching is not limited to one language and transitions gradually toward English use. While awareness and vocabulary are growing in English, the language of instruction in primary school, the known languages must be used to support understanding and to make links to new language.

It does not matter what kind of lesson the learner is exploring. Language is the key to understanding and mastering all of it. Therefore, a quiet classroom is not always the best classroom. The classroom where learners are talking about the lesson, trying out new words and ideas and asking questions will be the one with more successful learners.

## 1.2 Learner Centred

In a learner-centred environment, teachers and students play an equally active role in the learning process. The teacher is actively involved alongside the learner, guiding them as they make discoveries and enjoy their learning. They can share the joy of learning, building the teacher-learner relationship and adding to the quality and memory of a shared experience. Learners need to acquire knowledge, skills, values and attitudes in the learning outcomes that will be useful to them in life. The teaching is learner-centred rather than teacher-centred. This means that the teachers focuses on the parts of subjects that will be useful to learner's lives.

### Learner's Role

Learner-centred does not mean learner-directed. It means that the child is actively involved in making meaning and discovery, with encouragement and direction from the teacher, rather than passively sitting and listening to the teacher talk.

### Teacher's Role

Because the teacher knows and understands the desired outcomes of the learning area they can guide, prompt and ask questions to direct the learner towards those outcomes. Teachers will structure hands-on activities to guide the learners in their trying and discovering.

*Active, participating and cooperative children are learning.*

The children in this picture are participating actively and cooperating to build their sand castle. This is an important approach to use in learning. Play is the basis for discovery. The teacher here is guiding the discovery by watching, encouraging, asking questions and listening.



Figure 2: Early Childhood Education Teacher's Handbook (2011- 2012), MERHD, Solomon Islands

### 1.3 Principles Direct our Teaching

There are five principles that in the curriculum. The principles described in terms of teaching approaches as outlined in the table below.

Principles	Teaching Approach
Cultural	<p>Teaching will support the development of a strong cultural identity. Teachers maintain each learner's identity and sense of belonging; helping the learner know and understand their local environment; respect their values, beliefs, customs and culture.</p> <p>Teachers can do this by: encouraging culture in the school programme; providing local resources; using local poems, rhymes, songs and dances; promoting local arts and crafts; promoting local and national cultural, values and identities.</p>
Holistic	<p>In teaching include the cognitive, physical, social, emotional and spiritual parts of a child. Lessons will include opportunities to use skills and intelligences in all these areas.</p>
Integrated	<p>Teaching will engage in relevant, meaningful activities that are connected to real life, while making connections for students across learning areas. Teachers will assist learners by addressing skills that cross over the learning areas.</p>
Play-based	<p>Teaching will use active, participatory and cooperative activities. Learners will investigate things individually and while cooperating with each other. Learners will listening and observe but also will actively participate in speech or action.</p>
Values-driven	<p>Teaching will model the value of good character, while integrating values into learning activities. Teachers can do this by living by values themselves, naming values, describing their meanings and inviting children to ask questions and make applications.</p>

#### Play-based Programmes

Physically active play allows children to test and develop all types of motor skills. It promotes significant health and wellbeing benefits and fits the learning needs of this age-group.

Schools and classrooms that have a play-based learning programme include these things:

- the daily schedule includes active indoor and outdoor physical play;
- there are times of music, movement and creative expression;
- every subject area includes activities where children are actively doing things;
- teacher-learner interactions model moderate to high levels of physical activity, meaning that teachers were at times as physically engaged in active play as the children (Steglin, 2005).



## 1.4 The Dispositions

The six dispositions that support our curriculum are ways for children to approach learning that need to be taught and encouraged. Combined with the 12 values they are part of the 6 C's of capabilities and the competencies that frame the Solomon Islands curriculum from Pre -Primary Year to Senior Secondary level. The table below gives examples of what disposition teaching this will look like in the classroom. Teachers should use the 6 Cs when communicating with children, encouraging use of these approaches. For example, teachers can say: "Today I am looking for good communicators who share ideas in a peaceful way. I will also notice children who are peaceful collaborators."

Learning Disposition	Teaching Approach
Critical Thinker	Teaching will encourage curiosity and question asking. It will help children to identify problems, seek information, and explore solutions.
Communicator	Teaching will invite learners to ask questions, to communicate information, to express feelings verbally and share ideas. It will also encourage communication through the visual and performing arts.
Collaborator	Teaching will require learners to work cooperatively with others in group activities, to actively contribute to activities and to respond peacefully to others.
Creator	Teaching will identify options that learners can choose from, give children tasks that require them to take individual and group action, give children tasks that require them to take initiative or produce creative and original ideas.
Good character	Teaching will actively encourage good character by teaching of the 12 values.
Good citizen	Teaching of SE.1 and SS.1 will focus on good citizenship.

## 1.5 Love for Learning

The Pre-primary Year is important for growing a love for learning. Schools want children to learn well and to make sure that teaching and learning processes help children to unfold their knowledge, skills and attitudes. To do that they have to be actively participating in their own learning.

The Pre-primary Year is important for  
growing

## LOVE FOR LEARNING

### 1.6 Organising the Learning: The Five Activity Times

There are different ways a teacher can organise the classroom when working with young children to facilitate and stimulate learning. The PPY curriculum describes the organisation of kinds of integrated activities through the five activity times:

*Talk Time, Story Time, Think Time, Try Time and Move Times*

#### Talk Time

In Talk Time, oral language is developed. It is good for the teacher to try to talk less and get the children to talk more. This is so children can improve their oral language and develop their thinking skills, their understanding and reflect on what other learners are saying. Talk Time can develop social skills as children give instructions in games, make suggestions in play, and learn to support and comfort others. This is also a time for learners to practise using vocabulary or phrases in different languages and across different subjects.



*Figure 3: Childrens Construction. Early Childhood Education Teacher's Handbook (2011 - 2012) MEHRD, Solomon Islands.*

#### Story Time

In Story Time, stories are shared orally, through reading or through picture and word cards. As children practise listening and speaking skills, and acquire knowledge of how language works, they build not only basic literacy but their capacity for critical thinking (Genesee et al., 1994).

Stories will be read out, modelled and shared. This is an important instruction time as it immerses learners in the language, especially giving them access to English. It also provides opportunities to build meaning, explore language sounds and structure and extend their thinking beyond their own experiences.

#### Think Time

In Think Time we confront new ideas and new information. We figure out where and how it fits with what we already know. Think time includes inviting children to make observations, brain storm ideas and make plans.

To move learner thinking forward, the teacher can use some strategies like using wait time to allow for learners' internal dialogues; turning the thinking back to learners with a question like – What's the big idea here? How are these ideas connected? What might the person be trying to get us to



believe? Why do you think that is? Or to prompt further thinking on a problem: What might happen next as a result of that action?

To model thinking strategies and practices, teachers can use a method of ‘thinking aloud’ with rich oral texts/picture books/images that raise challenging issues or present difficult comprehension problems.

### **Try Time**

In Try Time we take something new that we have learned and we put it into practice. The learners may draw or write, construct something, work on a physical skill or work together with a group for a particular result.

There should be an emphasis on “having a go” – an attempt. Emphasis is not on perfection but on improving over time. The teacher can model the “try” if appropriate. Avoid language like “I am not very good at this” or “I can’t”. Instead use “I wonder what I can do. I’ll try a bit more. Can I do better than yesterday?”

Teachers can use language like: “You started this bit really well. I can see you did this well. Can I show you how we can make this a little bit better?”

### **Move Time**

In Move Time learners are involved in physical activities like games, songs and dances, sports or changing positions around the class. In Move Time we will develop gross and fine motor skills and also muscle tone. Moving activities stimulate learners’ brains in different ways to other kinds of activities, developing different kinds of capabilities that are very important. Movement activities release hormones in the body that bring joy and energy. They inhibit primitive reflexes (associated with being an infant), establish right-left dominance and help to encourage both sides of the brain to work together.

Teachers can give opportunities for creative expression during movement times. These opportunities help children develop an understanding and acceptance of themselves as they use speaking, singing, dancing, drama and the visual arts to express their feelings, interests, thoughts and talents.

## 1.7 Teaching Techniques and Classroom Management

A teaching technique is the way a teacher uses technical skills in teaching the learners. A classroom management skill is the teacher's ability to manage learner's behavior. The tables on this page and the next page shows the different teaching techniques and the classroom management skills.

Teaching Technique	What this means
Extending and Expanding	<p>Extending and expanding is when a teacher sees a child is doing one activity, the teacher asks questions to extend the child's understanding and expand their thinking.</p> <p><i>Example</i> – As Doku is now cleaning up the blocks using 2 fingers, the teachers asks him to count how many blocks he is putting away (expanding the activity to include pre-math skills). The teacher can also ask Doku, "What else do you think you can do using only 2 fingers?" (This is extending his thinking).</p>
Demonstrating	<p>Demonstrating is when a teacher explains and shows the child what they want them to do, by doing it him or herself.</p> <p><i>Example</i> – The teacher uses her 2 fingers to pick up a block and put it away, showing Doku how to do it.</p>
Modelling	<p>Modelling is when a teacher does something in everyday practice, e.g. the teacher always washes their hands after using the chalk. Learners will often adopt behaviours they observe in others.</p>
Scaffolding	<p>Scaffolding is when a teacher builds on a child's existing knowledge. When a learner who is struggling with a task, teachers should break the task into smaller more manageable parts to tackle.</p> <p><i>Example</i> – The following week, Doku has a problem cleaning up the blocks again. The teacher asks Doku, "Remember last week when you used 2 fingers to clean up the blocks? How would you like to clean up the blocks today?"</p>
Adjusting	<p>Adjusting is when you change how a task or a part of a task is to be completed, in response to a child's need.</p> <p><i>Example</i> – Doku hurt his right hand and can't hold a pencil this week. Either write for him or get him to do the task a different way. – This child has a disability of some kind and cannot access (do) the task unless you change it. A child in a wheelchair will not do a task standing up and a child who thinks slowly cannot keep up with the group and can be given the questions ahead of time.</p>
Prompting	<p>Prompting means that a teacher says something to help a child carry on talking or doing, or to get someone to start talking or acting. The prompt must be strategic – that is the teacher does it with a good purpose to help the learners build understanding or keep trying but in the right direction.</p>





Classroom Management Skill	What this means
Gaining Attention	Try not to raise your voice and yell to get attention. Instead try this: Clapping, a bell, a bamboo rattle, modelling hands up, singing in a circle then sit down (“we are waiting, hurry up we are waiting – transitional songs and poems), energisers, or even hold up a sign, “I’m waiting on you...”
Redirecting	<p>Redirect when you want to move a child’s attention or behaviour to something else. Redirecting is useful when a child is having difficulty transitioning between activities, or when a child’s behaviour requires him or her to stop their current activity or behaviour and do something different.</p> <p><i>Example</i> – While Doku is playing with blocks (and developing his fine motor skills), he has a hard time transitioning and putting the blocks away. Redirect his attention by seeing if he can pick up each block individually using only his thumb and first finger to put the blocks away (this is a way for him to strengthen his fine motor skills, as well as now redirecting his attention to cleaning up).</p>
Instructing	<p>Instructing is when a teacher directly tells a child what to do and how to do it.</p> <p><i>Example</i> – When the teacher realizes Doku is not cleaning up the blocks, she first goes over and tells him, “Doku, it is time to clean up the blocks now. We need to get ready for <u>(next activity)</u>. Let’s try a new way to put the blocks away. Can you pick up 1 block using only 2 fingers? Do this <u>(demonstrate)</u> and put the block here <u>(put the block away, showing Doku where the blocks go)</u>.”</p>
Encouraging	<p>Encouraging is when a teacher provides positive reassurance and inspiration for a child to do something, try something new, or continue an action/behaviour. It’s important to tell students when they have done something right with praise. You can praise someone into the right behaviour e.g. “Look at you all. I can see how you are already thinking about what we are going to learn today and I can tell you will be so attentive.”</p> <p><i>Example</i> – How can a teacher respond in the earlier examples if Doku stops cleaning up the blocks or refuses to do more? A teacher can encourage him by saying, “Doku we counted 5 blocks that you cleaned up, how many more do you think you can put away... 1, 2, 3 more? I think you can put away 3 more blocks. Let’s see!” Or, a teacher can ask, “Doku, is your hand getting tired using only 2 fingers? Would you like to use your whole hand to clean up the rest of the blocks?”</p>



Classroom Management Skill	What this means
Stopping Negative Behaviour	<p>The more active and involved the children are, the less likely they are to misbehave. The more energetic and enthusiastic the teacher is, the less likely the learners are to misbehave.</p> <p>Here is a process to follow:</p> <p>Talk – tell them not to use the behaviour.</p> <p>Yellow card – a warning of trouble</p> <p>2nd yellow card – another warning</p> <p>Red card – acknowledging a consequence will be applied</p> <p>Parent interview – talking with a parent for back up support Evidence records – take notes about a repeated problem</p> <p>In order to stop negative behaviour, you can: stand up and make your presence known, move closer to the child that is misbehaving, distract the child and redirect them, remove a distracting item or other distracting child, use your height advantage to lean over and insist, frown, use a negative consequence.</p> <p>Physically restrain – gently but intentionally moving a child aside while requesting they move and implying a consequence or Physically restrain an aggressive child who is harming himself or others and hold them until they calm down or help arrives – only if a risk of harm to the child or other children.</p> <p>For persistent negative behaviour, discuss it with the supervisor and parent.</p>

## 1.8 Teaching Methods

1. Make learning fun and enjoyable; that makes it memorable.
2. Use flashcards, they are very effective.
3. Play team games to revise and practise. It gives you many different ways to do the same thing. Review, review, review.
4. Start with a little and then add more. Learning needs to build on 'hooks' in the brain and we need to build up those hooks first.
5. Teach for both recognition (for reading) and recall (for writing) for maximum effectiveness. Games must target both skills.
6. Start big and then go small; that is, move from the general to the specific so there is understanding of where things fit in the big picture.
7. Place sounds and words and numbers in many different places where they can be seen. If they are seen often they will be remembered.
8. Celebrate each little gain, especially in helping the slower learners see that they are making progress.



9. Build on memory by doing it in many different ways – repeat softly, loudly, boys only, girls only, while jumping, holding hands, etc.
10. Use the hands to help learning (kinesthetic or tactile mode – see glossary) with sand, blocks or cards, especially if they are having trouble with the learning.
11. Use every technology that you can access, either audio or visual.
12. Grouping

Within the daily activities it is good to use grouping, working with individual children, working in groups - small or large as well as working with the whole class together.

### Roleplay

Teachers can use role-play as a kind of group work in which learners are given a part to play, either in a discussion or a story. Role-plays encourage learners to participate actively through talking. When learners imaginatively act as someone else it helps them to think about how other people think and feel or to think about a new situation.

### Visiting Speakers

Visiting parents, community members and experts bring a different dimension to the classroom learning and teaching. Teachers should prepare learners for guest speakers by sharing background information and helping children to prepare questions for the visitor. Teachers can also make time after the visit to talk about what happened and what they learnt. Discuss the answers to any questions posed.

### Picture Interpretation

Looking at pictures in the classroom helps children to understand and remember ideas and words they have heard. Teachers should help learners to develop skills when looking at pictures. Children can learn to ask themselves questions about the picture like – What does it show? What are the relationships there? Is it part of a story? What happened before or after the picture was drawn or photographed? How big would this thing be in real life?

### Effective Questioning

Some people think that the only reason to ask questions is to get the right answer. This is only partly correct. Effective questioning in education guides the thinking processes of the learner and helps them to draw out and extend what they know. It extends and deepens their learning. Sometimes, the thinking process is actually more important than the answer.

Teachers can help their learners develop strong thinking strategies by developing a range of questioning techniques. Each question should lead the learner one small step closer to understanding. When a teacher asks a series of effective questions, they lead the learner along a path of discovery, drawing on what they know and adding inferences and details to come to a well-



Figure 4: St. Nicholas children with maths counters. *Early Childhood Education Teacher's Handbook* (2011 - 2012) MEHRD, Solomon Islands.

considered response. Look at the following examples.

Questioning	Effective Questioning
<p>Teacher: Why do you think the village is here?</p> <p>Student: (Shrugs shoulders)</p>	<p><u>Teacher:</u> (Knows the question is – why do you think the village is here? – and poses the following questions to lead the learner to the answer.)</p> <p>Teacher: Were you born in this village?</p> <p>Student: Yes, I was born here.</p> <p>Teacher: Were mummy and daddy born in this village?</p> <p>Student: Daddy was born in this village but mummy came from another place.</p> <p>Teacher: Ok, now it's your turn to ask me a question.</p> <p>Student: Umm, were you born in this village?</p> <p>Teacher: No, I was born in another village but I came to this village to work here. That's a good question.</p> <p>What other question can you ask?</p> <p>Student: Where is your family?</p> <p>Teacher: They live in another village, they have farms to look after but I will go and see them during the school holidays. Would you like to know what</p>
	<p>farms they look after? Guess what farm.</p> <p>Student: Chicken?</p> <p>Teacher: They have a few chickens but many pigs. You see, now you know something about my family and me. When you ask questions, you can find out many things</p>

Using effective questioning helped the student follow a thinking process to discover the answer. It is an experience rich with language and gives the learner a positive outcome – they discovered the answer. The next time they are asked a deep question they will have a better idea how to think their way through a process to discover the answer.

To make questioning more effective:

- Know in your own mind where you want to lead the learner ;
- Avoid 'yes' 'no' questions;
- Ask the 5 "W" questions: who, what, where, when, why?;
- Ask the "H" question: How?;
- Listen to and respond positively to the learner's responses;
- Provide 'think time';
- Ask a different question or ask it a different way if the learner has trouble responding; and
- Provide clues to help the thinking rather than just telling them the answer you are wanting.

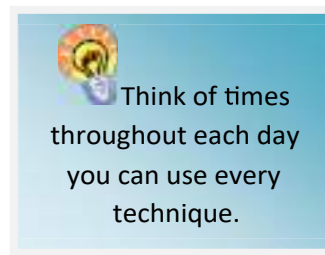
Effective questioning also provides information about the development of children's knowledge, understanding and skills. It can inform the teacher's planning and selection of teaching strategies



to move students from where they are to where they need to go.

**Please note:** All the above techniques demonstrate

positive ways to interact with a child when a teacher wants the child to do something. The teacher has not shouted or yelled. The teacher has not shamed or embarrassed the child in front of the other children. Instead, the teacher has tried to turn a problem into another learning opportunity.



## 1.9 Learning Development

Learning is developmental in nature. That means children have different abilities at different ages. Teachers should be mindful of the developmental stage of average five-year-olds. This will help them to plan meaningful learning. However, remember that average is a middle point and there are children at levels above and below this point developmentally. To ensure everybody in your class is learning, you will need to adapt to each child's development level.

Teachers should be aware of signs that a child is not learning in the same areas or at the same rate as other learners. There could be a number of reasons for this. The learner could be experiencing delays due to health problems, lack of sleep or poor diet. The learner could have difficulty with the language of instruction or the learner could have a deeper level learning difficulty or disability.

No matter what the cause, these learners are part of the class, they have valuable contributions to make if encouraged to do so and they deserve to be included and catered for in the learning process. Research has proven that there is rapid wiring of neurons that make it possible for every child to be able to learn at this stage (Cozolino, 2010). It is important to keep that in mind so that we prevent ourselves from thinking that a child is not capable of learning something. It is not true that they are not capable, it is simply that they need more time or practise or they have a different learning style. For these reasons, descriptions of possible extra learner needs and examples of how to be inclusive of those needs are included below, organised underneath each developmental description of an average five-year old learner.

### 1.9.1 Developmental Characteristics and Inclusive Education

Five-year old children vary in the skills they bring to school because their experiences in families, and communities and their natural abilities vary. However, there are things we can generalise about children this age because of the physical developmental stage they are at.

**1. Routines:** The learner recognises simple patterns and routines and asks questions when they are not followed.

*Inclusive Teaching Strategies: Some children with special needs find great comfort in routines and do not cope well with changes. They can get very distressed and may not be able to continue until their expectations are met. These children manage best when*

they are warned in advance of the changes and provided visual cues to show what to expect. eg. 'Provided with a visual timetable of the sequence of lessons and activities at the beginning of each day which they can refer to or follow. One way to assist all children, especially those who rely heavily on routine is to have a visual routine poster for the day. Children can see when it is Talk time, Story time, break time, handwashing, eating, Think Time, Try Time, Move Time and home time. For the whole of the first term, the teacher can use this visual poster to show them what is going to happen in the day until they get used to it.

- 2. Understanding Others:** The learner is beginning to understand a world beyond their own family but other communities, islands or cultures are still unimaginable.

*Inclusive Teaching Strategies:* Many children have difficulty imagining anything different from what they know and experience. They can also struggle to understand that anyone could have a perspective different from their own. Teachers can use visual stimulus to encourage children discussing their ideas with a partner, for example they can show a picture of a musical instrument from another culture and ask what the children think it is used for or how it is used. Or a picture of food from another culture and ask what they think it is. Or they could invite someone in to the class who is from another village and the children can ask questions to them about their daily life for example, what their houses are like, what their food is like. Teacher can show them photos or picture of a family in the Solomon Islands and a family from China or South America. They can discuss what is the same and different. This can be carried out in many other contexts. Teachers can use talk time to ask children to share what they think and encourage them. This is an opportune time to show the children that people have different perspectives.

- 3. Fascinated with sounds:** The learner loves to play with nonsense sounds, words and situations and finds them very funny, often repeating them again and again.

*Inclusive Teaching Strategies:* Some children can become fixated with such sounds or even actions and repeat them at times that seem inappropriate. They may adopt bird or animal sounds in the same manner. Teachers can understand children of this age are impulsive and need lots of reminders to behave appropriately. Teachers can explain we have our classroom voice and our outside voice and that those noises are an outside voice. They can use that voice when they're outside the classroom playing but inside here we use our classroom voice (learning voice) which helps us to learn. Teachers can ask children to practice using their classroom voice and praise the child often when they use this appropriate voice. Teachers can gently call the child aside and explain to them when they come to school, they must try to control their words and actions because it is different to their home. They can explain that if everyone can show courtesy to each other, it would make it a more peaceful place to play.

- 4. Matching sounds with symbols:** The learner recognises a world of symbols out of her reach such as letters, numbers, movement, and dance. She is eager to understand but often expects to know them "automatically" and may struggle with the effort needed. She loves to pretend to use some of these symbols and may be easily offended when an adult cannot follow what she has done.

*Inclusive Teaching Strategies:* Some children have a great deal of difficulty learning to match sounds with symbols. Adding hand or body actions can help the brain to retrieve sounds and words until they are well established and retrieval becomes more automatic. The pace of learning may need to be slower and more rehearsal may be required. It is





*important to praise the effort children make when learning these sounds and symbols, even if they don't get it correct, for example, "Well done Jonas, I can see how hard you are trying, let's have another go at making the Shhhh sound together".*

5. Using Language: learner begins to use language for purposes other than satisfying her own wants and needs. For example, using language for instructing, directives, messages, letters and stories.

*Inclusive Teaching Strategies: Some children have difficulties with language. While this difficulty can start in the ears or eyes, (which should always be checked first) it can happen in the brain. The child can hear the language but not process it well. They may have good thoughts but may not be able to get them to come out of their brain. Learning activities may need to be adjusted to help these children continue to learn. For example, they may need picture clues or be given only one step or task at a time. Asking them to draw their ideas instead of writing can help too as well as asking them to explain their thoughts to a partner first and then the partner shares the idea with the class.*

6. Memory: The learner has a limited short-term memory and often forgets what she was going to ask or say if not responded to quickly. She needs lots of rehearsal and memory strategies to transfer new ideas to long term memory.

*Inclusive Teaching Strategies: Students may struggle with memory due to language problems, hunger, tiredness or being distracted. They may have trouble remembering if they have suffered trauma in the past. They may be able to remember but struggle to get their memories out again. Visual aids and actions can help the memory as well as simple memory games.*

7. Asking questions: The learner asks lots of questions, sometimes off the topic. A child that does not ask questions needs to be provided with new motivation, freedom to talk and respond, and praise when he does. This interaction with the world is vital to learning.

*Inclusive Teaching Strategies A child who does not ask questions may have language difficulties or limited life experiences. Fear can also stop a child from questioning. Teachers need to make sure that every child feels safe and free to make mistakes in the learning environment. They must never be shamed or laughed at for asking questions. If children are shy or nervous to ask questions the teacher can structure group work so that each group comes up with a list of 3 questions to ask so it is less daunting for the nervous children.*

8. Focussing attention: The average learner might focus on a task for 5-15 minutes progressing to 20-30 minutes by the time they are six. This means that activities must be changed rapidly across the day. If this is not done, they will disengage and find their own fun or trouble.

*Inclusive Teaching Strategies: Some children can struggle to keep their attention, especially if they are a few months younger than the other children. Children who wriggle and move around a lot may need extra physical activity before they can be ready to settle and focus. Many children will need a five-minute warning before the change of an activity to cope with the transition time. It is also a good idea to have extra extension activities or games ready that children who finish their task early can do whilst they wait for the rest of the class. This could be as simple as a few reading books the early finishing children can share with a partner.*

**9. Developing social skills:** The learner is moving from side-by-side play to more interactive friend and group play. The need to take turns and allow others to make decisions is new and not easy to adapt to. They need patience, guidance and fair treatment.

*Inclusive Teaching Strategies: Some students have great difficulty with this as they remain very self-centred and have trouble taking the perspective of another. This can improve in time but some conditions make this last much longer. Special training and rehearsal may be needed, visual supports may assist in tracking the passing of time and regular rewards offered specifically when the child shares or turn takes properly can teach that such efforts are worthwhile. Some children can be given some squeeze ball or squeezed up paper or mini bean bags to hold, that will use their movement energy and help them to focus better.*

**10. Emotional:** The learner can get emotional easily through fear, hurt, anger and tiredness. They commonly respond by crying, being uncooperative, or over-active and will often not be able to explain how they are feeling or why. Some learners have limited vocabulary, limited ability to explain feelings, and the triggering of their emotions can significantly limit the ability of the rational brain to respond. Teachers need to articulate (put into words) and problem solve with them to build the needed recognition and response skills.

*Inclusive Teaching Strategies: Some children have extreme reactions to their emotions and big challenges in learning how to manage them. This is not a behaviour problem. It is a difficulty recognising the changes in the body and mind when emotions are triggered. These children need very specific training to both recognise feelings and respond in an acceptable manner. Teachers can provide time and space to these children when they are in an emotional state and gradually work with the child so they recognise when they are feeling upset and stressed and are able to remove themselves from the situation and go to a quiet place to calm down. These children should always be offered the chance to re-join the class group and continue learning when they are ready.*

**11. Physical or motor skills:** The learner is still improving her motor skills but expects to be able to do what older children do. She becomes angry and frustrated when she cannot and can become critical of herself.

*Inclusive Teaching Strategies: Some physical difficulties, such as problems with eyes, ears, balance, formation of limbs and motor control of body parts, can limit participation in physical activities. Physical activity is usually needed for good cognitive development so this needs to be fostered. In addition, every child has a right to participate in the learning activities, so adjustments may need to be made to enable them to do so. Teachers can offer differentiated tasks and decide which children do the more complex tasks so as to take the responsibility off the children for deciding on a task. They should praise the effort of the child who gets frustrated or angry and remind them they are still learning and that with some practice they too will be able to do it one day.*

**12. Imagination:** The learner likes to use her imagination to play and try out elements of the adult world. Her participation and learning can be easily enhanced drawing her into an imaginary setting. She loves fiction books for this reason and will want to hear favourite stories again and again.

*Inclusive Teaching Strategies: Some children with extra needs cannot easily use their imagination and this will affect many areas of their learning. It will also affect their social participation. These children need to be explicitly taught a variety of options and the times to apply them. This will need to be rehearsed again and again. Teachers can use group*



*work and role-play to encourage children to act out stories to help them develop their imagination.*

**13. New vocabulary:** The learner loves to adopt new words and use them at any opportunity. These are usually words she has heard from others and she may not always use them in the right context. Her attempts should be applauded and guided so that she will continue to try.

*Inclusive Teaching Strategies: Children will vary greatly in their ability to understand and adopt new vocabulary. Visual or pictorial supports will help and different learning rates will need to be adjusted for those who struggle. When words are not used accurately, they should be repeated by the teacher regularly to show the correct use in different sentences. Children should be praised for copying or imitating. Encouragement and joy in the learning will achieve far more than criticism.*

### 1.10 Parent and community support

- working together with parents and communities in partnership is very important. Why is this important?
- parents are the children's first educators;
- parents' attitudes to education affect children's success in learning greatly;
- teachers can promote and extend the learning and development of each child by building good connections with parents and community;

we can learn a lot about a child from having meaningful conversations with their parents and family members. This will help us to understand the child's situation better and plan more effectively for them.

How can parents/community be involved?

- resources – provide, or help make them;
- seek strong parent support for water to be made available;
- help out in learning experiences, visits and excursions;
- come as experts to teach something or share stories with the class;
- support through school fees, contributions and working on maintaining school grounds and buildings;
- come together regularly with other parents and teachers in your neighbouring communities to reflect and share best practices about teaching and caring for children.

### 1.11 Multiple Intelligences

The fields of psychology and education were changed when the psychologist Howard Gardner published his 1983 book "Frames of Mind: The Theory of Multiple Intelligences," which described a new model of human intelligence that went beyond the traditional view that there was a single kind that could be measured by standardized tests.

Gardner's Intelligences are:



Linguistic or Language Intelligence	Sensitivity to the meaning of words, the order among words, and the sound, rhythms, inflections, and meter of words (e.g. poetry, song lyrics, rhyme).
Logical-mathematical	The capacity to conceptualize the logical relations among actions or symbols (e.g. mathematicians, scientists). Famed psychologist Jean Piaget believed he was studying the range of intelligences, but he was actually studying logical-mathematical intelligence.
Musical	Sensitivity to rhythm, pitch, meter, tone, melody and timbre. Ability to sing, play musical instruments, and/or compose music (e.g. singer, musical conductor, composer, choirs).
Bodily-kinesthetic	The ability to use one's whole body, or parts of the body (like the hands or the mouth), to solve problems or create products (e.g. dancer, performing artist, visual artist). Nearly every child at this 5-year-old age is at a developmental stage where touching and doing is their highest engagement with learning. They need many hands-on activities in the classroom.
Spatial	The ability to conceptualize and manipulate large-scale spatial arrays (e.g. airplane pilot, sailor), or more local forms of space (e.g. architect, chess player, soccer and rugby players).
Interpersonal or Social Intelligence	The ability to interact effectively with others. Sensitivity to others' moods, feelings, temperaments and motivations (e.g. negotiator).
Intrapersonal or Knowledge of one's self	Sensitivity to one's own feelings, goals, and anxieties, and the capacity to plan and act in light of one's own traits.
Naturalist or Nature Intelligence	The ability to make consequential distinctions in the world of nature as, for example, between one plant and another, or one cloud formation and another (e.g. taxonomist, farmer, florist)

Table 4: Adapted from Gardner, H., (2011), *Frames of Mind*, Basic Books 3rd ed.

The idea is that each of us has a number of relatively independent mental abilities, which can be called our “multiple intelligences”. We all have multiple intelligences. But we single out, as a strong intelligence, an area where a person has considerable ability. For example, a person's ability to win regularly at a game involving spatial thinking signals strong spatial intelligence.

Teachers can use the different learning styles to teach everyone. For example, a lesson may use activities that are verbal (e.g. reading to children), then follow on with activities that are physically active (e.g. roleplaying a story character) or logical (e.g. sequencing the events in the story).

Teachers can observe and make notes about which way each child in their class learns best. They can use this information in planning further learning experiences and to especially address weaknesses in learning.

Two main lessons for teachers:

1. Individualize your teaching as much as possible. Instead of “*one size fits all*,” learn as much as you can about each student, and teach each person in ways that they find comfortable and learn effectively. Eg. the teacher may notice that Abel learns best through physical activities that reinforce concepts. When he struggles with a concept the teacher can try to find a physical way to show him the idea or concept.
2. Teach the same thing in more than one way. Teach important things in several ways. For



example teach it through stories, through art, and through role play. In this way you can reach students who learn in different ways. Eg. For the value peace, read a story about peace, draw pictures that show peaceful behaviour and lead learners in a roleplay about peace.

### 1.12 Implicit and Explicit Learning Opportunities

Teachers should provide a balance of explicit and implicit learning opportunities:

“Explicit” learning opportunities are clear, planned, overt and purposeful teaching times. This is where the teacher explains or models exactly how to do something. For example, once the students are familiar with the shape of 5, the teacher might explicitly teach the best way to draw the number with a pencil – “draw his back, then his round belly, now go up to the top and put on his hat”.

Learning is implicit when the learning process is unaffected by intention. It means learning without awareness, no matter what sort of knowledge is being acquired. A learner is not really aware of trying to learn something. “Implicit” learning opportunities are often found in purposeful play, where an activity is provided but children are self-directed in their learning. They are given the opportunity to explore and find methods and strategies for themselves. For example, the teacher may present the students with a picture of the numeral 5. Then an implicit learning opportunity might provide the opportunity to make the shape of the numeral with clay and then with sticks.

This has value in that the student becomes familiar with the shape and begins to form a visual picture of it in the memory.

While play-based, discovery learning is precious to children, times of explicit teaching are also good in helping to reduce frustrations and future learning difficulties.

### 1.13 Brain Training

To enable our children to learn to the best of their ability we need to know how to best set-up their brains for learning. Scientists now believe that to achieve the precision of the mature brain, stimulation in the form of movement and sensory experiences during the early developing years is necessary (Montgomery, A., 2013).

A child's physical development is more than having a healthy, growing body that can learn to run and jump and throw. Physical activities also help to develop pathways in the brain. These pathways carry emotions, messages, signals and responses that tell the rest of the body what to do in any situation. If a young child does not participate in many physical activities they develop only small pathways. If they participate in a variety of physical activities they develop extensive pathways in the brain. These pathways become strong and work more efficiently, giving the child more effective and a wider range of options as they confront life experiences (Greenough, W. T., & Black, J. E., 1992).

This curriculum recognises that significant brain development is needed for the learner to be able to gain all of the knowledge, skills and dispositions that will be needed throughout their schooling. The Pre-primary Year aims to help learners to build brain pathways to give them the best opportunities for success. A range of special exercises are included to help learners build these brain pathways.

#### 1.13.1 Stopping Some Automatic Reflexes

Babies are born with reflexes, which are actions that are performed without thinking in response to a stimulus. eg. The baby turns its head to suck on the breast; a baby will throw out their arms and legs and extend their neck in a startle reflex when their back is lowered a little; they will close their hands when something touches their palms. A baby is helpless when it is born and these reflexes

and others are built into the brain to help it to survive. They are called primitive reflexes.

Some learners start school with some of their primitive reflexes still working. They were needed when they were infants but these reflexes can get in the way if they stay in the body too long. For example, it is very hard to learn to write with a pencil if your whole hand wants to keep closing around it like a baby's hand does. Some of the exercises in this curriculum help to train the brain to stop these primitive reflexes.

### **Variation to sausage roll and flop**

The Sausage Roll as well as the Flip Flops work well for this purpose. 1) Pictures and directions are included in the Teaching and Learning Resource Book 1. Some teachers have little space and cannot find a place for learners to roll on the ground for these two exercises. In those cases it is okay to use variations of the exercises that still stimulate the brain in the same way.

Stand at a table, do "superman". Pictures and direction are included in R1. Variation flip flops are included.

For Homolateral Flip Flops: These can be practiced standing up or seated on the edge of the chair. Ask learners to do them very slowly, positioning arms, legs and heads just as they would on the floor.

### **1.13.2 Building a Dominant Side to the Body**

Some of the exercises help learners to develop a dominant side, or a boss side, to their body. These are known as **homolateral exercises**. Scientists have discovered that learners who establish a firm dominant side to their body have less confusion and are much better at learning. Therefore, it is helpful to learners to train their brain to recognise a dominant side to their body and make it stronger. This brain training includes **Homolateral Walking** and **Homolateral Flip Flops**. Learning to throw and step up with the dominant or boss side of the body is also helpful. Most people naturally have a dominant side on the right side of their body but for some people it is the left side of their body. There is nothing wrong with that and learners should be encouraged to develop the side that is most natural to them. If learners are forced to try to make their right side dominant when their natural dominance is on the left, this can cause problems for their learning. Over time, teachers and parents will notice which side a learner tends to use most. They can also check by asking the learner to squeeze both of the teacher's hands at the same time. Whichever hand squeezes hardest is the dominant side. If both hands squeeze the same they are not ready to choose a dominant side yet and should continue with homolateral exercises.

Pictures of the exercise and directions are included in the Teaching and Learning Resource Book 1.

### **1.13.3 Using Both Sides of the Brain**

The other group of exercises in this curriculum helps learners to be able to use both sides of their brain together. Everyone has a left side and a right side to their brain and each side is better at doing certain things. Many of the things we do need us to use both sides at the same time

For example, to sing a song we use the right side of the brain for the tune but the left side of the brain for the words. If we cannot use both sides at the same time, and working together, then we are very limited in what we can do. Learners need to train their brain to make both sides work together.

We can sometimes see learners having difficulty with this when they try to cross the mid-line of their own body. The mid-line is an invisible line down the centre of the body that separates the left side from the right side.



When young children are doing activities, they can have trouble making their right hand cross over onto the left side or their left hand cross over to do something on the right side. Sometimes they will move the paper to work on the other side or they will change hands. We can help them learn to cross over and use both side of the brain together using cross-pattern exercises. These exercises include **Cross-pattern Walking** and **Cross-Pattern Flip Flops**. Pictures and directions are included in the Teaching and Learning Resource Books . Some teachers have little space and cannot find a place for learners to lie on the ground for cross-pattern flip flops. In those cases it is okay to use variations of the exercises that still stimulate the brain in the same way.

For example, these can be done standing up or seated on the edge of the chair. Ask learners to do them very slowly, positioning arms, legs and heads just as they would on the floor.

When teachers become familiar with these exercises they will see other opportunities to include activities that cross the midline. Many custom dances, tapping and jumping activities, turning ropes for jumping, also train the brain in the same way.

It is very important for teachers to understand that these exercises are not enough to prepare learners' brains for learning. Children need lots and lots of talking and doing to learn and they also need to feel safe and comfortable. They will learn best from a place of love and security. If we do not give them love and security, they will learn from a place of fear. This will result in all kinds of negative results such as limited ability, poor behaviour, withdrawal, depression and even anger.

We must also remember that we can give children the best of exercises and resources, but if we do not treat them with love, patience, joy and kindness, the exercises and resources are wasted.

### 1.14 Outside Learning Environments

Learning environments that are conducive to good outcomes are welcoming and relaxed. Every child is special and every family is respected. Behaviour management is positive. Classrooms are peaceful. A love for learning is more important at this pre-primary level. Use kind and caring language, encouragement and praise towards the children at all times.

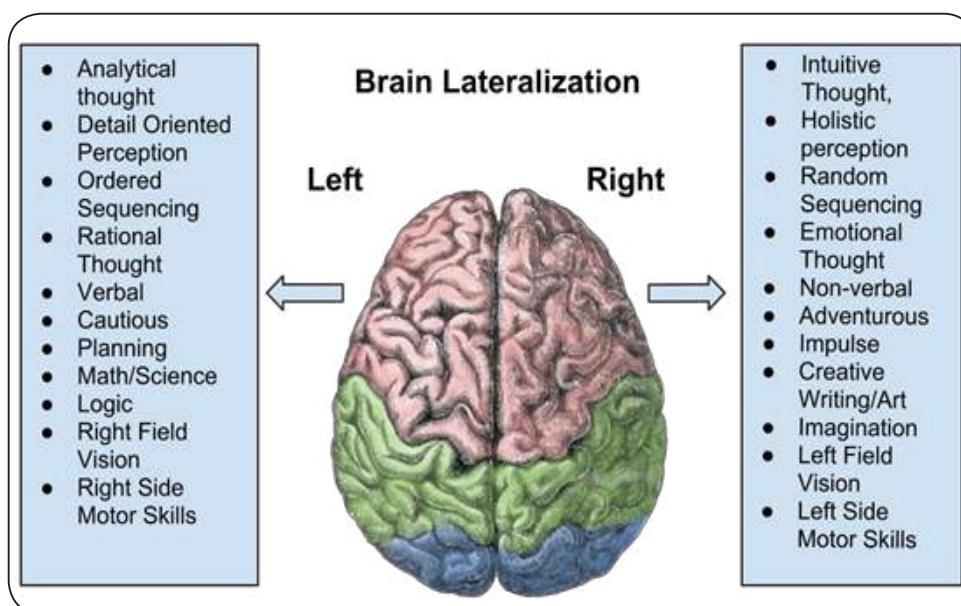


Figure 1: Chickensaresocute ([https://commons.wikimedia.org/wiki/File:Brain\\_Lateralization.svg](https://commons.wikimedia.org/wiki/File:Brain_Lateralization.svg)), "Brain Lateralization", <https://creativecommons.org/licenses/by-sa/3.0/legalcode>.

### 1.14.1 Physical Learning Environment

A quality learning environment will:

- provide a child with stimulation and challenge.
- pick up on a child's interests and enable them to explore and experiment, taking risks and making mistakes, encouraging creativity and imagination.
- be flexible to allow for quiet, reflective and focused learning, maybe in a comfortable book corner, as well as more active and physical play.
- supports children's learning across all developmental areas, allowing them to practise their skills and develop new ones.
- help children to learn about rules and how to communicate with others.
- promote equality and support children to develop a greater understanding of others' needs, cultures, religion and backgrounds.
- provide safety and emotional support.
- encourage independence and help children to develop a positive attitude towards learning.
- provide a clean, safe, attractive and well organised environment

#### **Outside Learning Environment - Teaching Strategies Outdoors**

Outside learning occurs in natural learning environments and contains many wonderful opportunities for exploration and investigation. Being in the outside context for learning still requires a focus for learning which should be explained by the teacher before going outside.

Outside activities may require different class management strategies from those applied inside. Children will need to know appropriate rules of behaviour.

#### **Suggestions to Teachers**

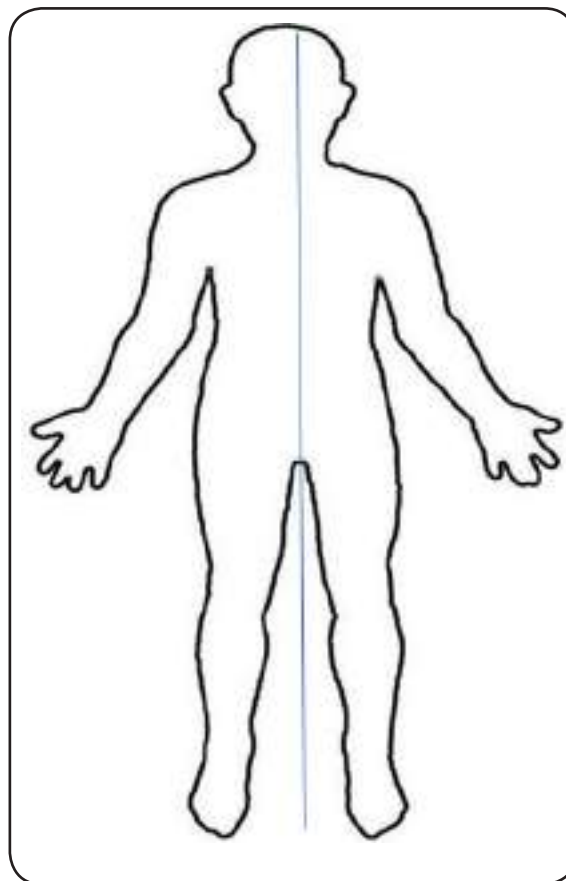
Build a cooperative mindset by explaining the rules of the outdoor classroom. Do this while you are still inside. For example, ask the learners to line up and ask them for 3 suggestions that can keep them safe when they are outside. Teacher can contribute 2 or 3 more suggestions.

- Keep learners accountable to your expectations of learning. Encourage them to help each other to stay on task. Then carry a class list where you can write notes about their behaviour and involvement while outside. Later you can talk to individual children commenting on what you saw that was good and what was off task;
- Be flexible – if the weather suddenly changes have another plan to follow inside;
- Make the most (maximise) learning time by having a learning activity to do on the way to a location e.g. sing a song or repeat a rhyme on the way to sit under the tree;
- Model respect for living things – if you collect plants, or leaves, take them from somewhere that there are plenty enough other ones left behind. Return things back to their original location after you've finished;
- If learners are spread out keep moving around them all;
- Outside is easily used for direct experiences but less for direct instruction.





- Teachers can build a sense of wonder about the world, pointing out how clever and complex and wonderful the creation is;
- Help children to build good relationships with each other. As they work together at outside tasks encourage them to think of the values and show good character being caring, fair and displaying united team work.
- Help children to value the environment by bringing out values around being responsible for actions in the environment, respectful and caring toward living things, being thankful for what the earth produces and living in harmony with nature by sustainable living practises like composting, replanting and no pollution of waterways.
- There can be several different learning areas outside if the teacher carries a few baskets out. Space the baskets out at different locations so that children have to move around to different activities.



*Figure 6 Copyright (c) 2018 K. R. Martin, Corel Corporation and its licensors. All rights reserved.*

- Mark outside boundaries for the learning by pointing out where you will be going and where you will stay away from in that lesson. Use baskets or slippers or rope to mark out the lesson area.
- Use teaching circles often. A circle allows you to see all your learners at the same time so you can encourage them all to participate.
- Call to attention. Decide on a way to get everyone's attention, like a whistle or custom drum means turn and look at the teacher. A thumbs up means I've seen you and you can carry on what you are doing, a thumbs down means I'm not happy with what you are doing and a wave or beckon means come to me.

### 1.14.2 Emotional Learning Environment: Well-being and Engagement



### Process – Each Child is Actively Learning and has Well-being

When we try to consider the quality of the process of learning we can measure two dimensions – the level of involvement of the learners and the degree of emotional well-being they exhibit.

#### Involved = Actively Learning

Being involved as a learner means the learner responds to relevant stimuli like communication, activities and incentives, and shows fascination and motivation. The learner is focused, purposeful, and actively engaged. If a learner shows involvement it does not mean they show one specific behaviour at a certain level. It means lots of different kinds of responses at various levels. A teacher can see the response in some kind of activity they observe in a learner. It might look like concentrated thinking, it might look like concentrated drawing or it might look like moving quickly in a physical activity.

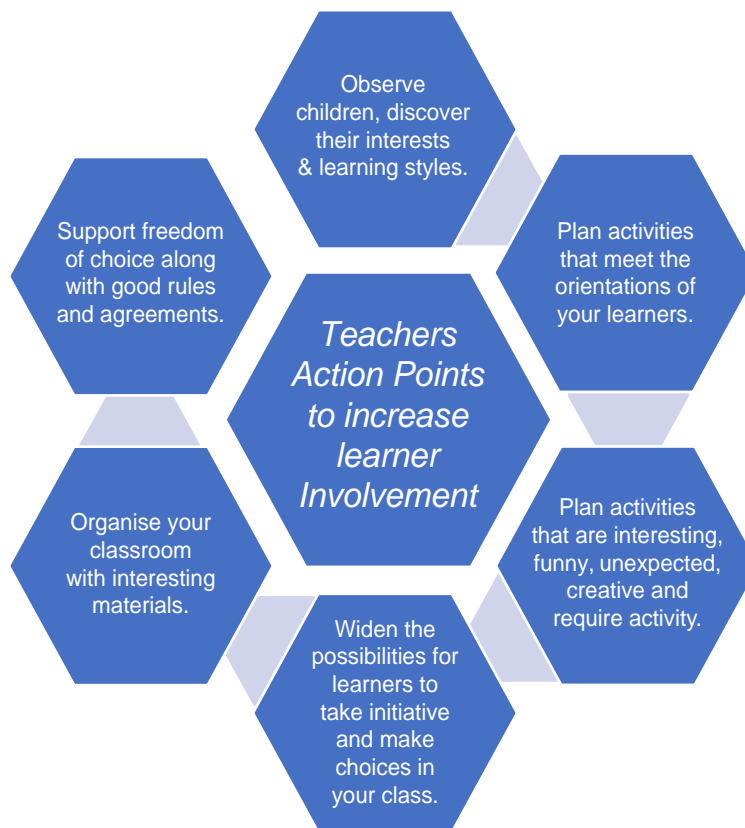
Involvement produces satisfaction. Involved learners perceive things and think about things with intensity. The meanings of words and ideas are felt strongly and deeply. Learners feel motivated and they feel satisfied.

*A teacher can see a response through observing the activity of the learner. It might look like concentrated thinking, it might look like concentrated drawing or it might look like moving quickly in a physical activity.*

#### Teachers Action Points

A teacher can help bring learner involvement to their classroom learning. A few suggestions about actions to increase learner involvement can be found in the diagram on the next page.





*Figure 1: Actions to Increase Learner Well-being*

Widen the possibilities for learners to take initiative and make choices in your class. While learners are making choices or pursuing activities teachers can encourage involvement further through: suggesting activities to children that wander around; offer materials to use for a particular activity; inviting children to communicate; provoking their thoughts through questions; giving them information that will capture their mind; acknowledging the interests of particular children as they work; making suggestions that will extend their thinking or stimulate further initiative; making suggestions or asking questions that will cause a learner to think about how they can add to the work they are doing before calling it finished.

### **Support freedom of choice along with good rules and agreements.**

Invite children's cooperation with setting and following classroom guidelines. Talk about class rules and ways of working and ask children if they can agree with you and with each other. Ask them if they can help each other to follow these rules.

### **Observation, monitoring & assessment of well-being: How is each child doing?**

The assessment of how the child is doing should be holistic in the sense that the assessment is based on observations in real life situations at school and should look at emotional health and development in all important areas. It is important to consider a child's physical development (e.g. control of a pencil), early language and literacy development (e.g. oral language), early numeracy and problem-solving skills (e.g. shapes and spatial relations), and socio-emotional skills (e.g. understanding feelings). The templates section of the Pre-primary Year Syllabus provides six templates for observations of children that will assist teachers.



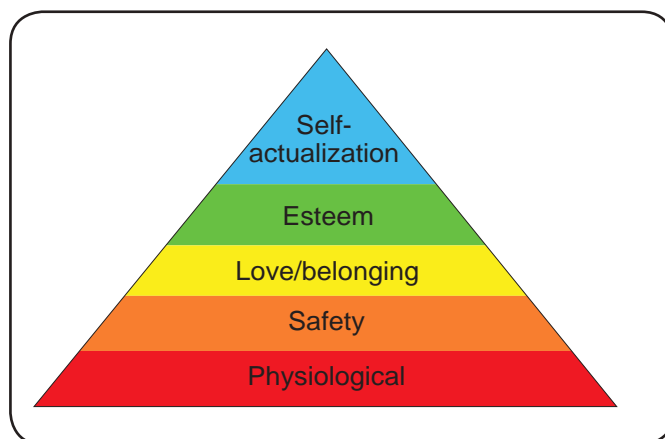
## Emotional Well-being

If a child is showing emotional well-being they will mostly seem relaxed, self-confident and can act spontaneously. For this to be possible the child's basic needs will have to be satisfied. A teacher must show sensitivity to children and should try to meet their basic needs while they are in their care. A description of the basic needs below is followed by action points for teachers to increase learner well-being.

Maslow (see Maslow's Pyramid of Hierarchy of Needs) theorised that there is a hierarchy of needs in each person. If a person's basic needs are met they will have the motivation to learn and act at a higher level. His ideas are often portrayed in the shape of a pyramid with the largest, most fundamental needs at the bottom and the need for self-actualization at the top.

The most basic needs are physical needs like food, water and shelter and a child will not learn well if they are for example thirsty. The next three levels need to be met or the learner will feel anxious and tense. If a person's basic needs are met at these four levels, they will have the motivation to learn and act at a higher level.

Basic needs of safety, love and belonging, and self-esteem can be more fully described in these five areas of security, affection, attention, affirmation and accountability.



FireflySixtySeven(<https://Common.wikipedia.org/wiki/File:MaslowstteirarchyOfneeds.sug>) <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

### Security

For children to feel secure, they must understand that they are loved and accepted.

### Affection

Affection means that children know that the teacher cares about them. Affection can be in the form of quality time spent talking, reading, writing, or playing games.

Showing affection means conveying feelings of contentment, security, and acceptance.

### Attention

Children need positive attention from their teachers and emotional support. They need a teacher's time and attention to provide clarity, so that they understand what is wanted from them.

### Affirmation

Positive affirmations such as "I'm proud of you," and "Wow, you worked really hard!" are examples of authentic praise. In order to help children develop confidence and feelings of self-esteem it is important that teachers give affirmations.

### Accountability

Holding children accountable helps them to become more responsible later in life and more vested



in the decision-making process. Additionally, teachers need to make sure they are modelling this behaviour by being accountable for their own actions. Teach that mistakes are a learning experience and not necessarily a bad thing. When it is time to modify negative behaviour, it will have an effect on the children because they can clearly distinguish between the kind and caring language that is usually spoken at all times in their class and the firm language that is used to correct the undesirable behaviour.

## SECTION 2

# Language and Literacy Approaches

The Language and Literacy outcomes in the Pre-primary Year (PPY) Syllabus and Teachers Guides are foundational learning to help children transition into Primary School learning. The activities in the teachers guides that include Language and Literacy are designed to fit the Solomon Islands context, which is a multilingual country. The PPY curriculum recognises that learners must begin to build proficiency in English and literacy through the use of first vernacular languages. They must first engage actively in talk (oracy) about ideas and concepts, guided by the teacher in languages that they already know, and then move into talking about these ideas and concepts in English.

The four strands and the themes are;

### Strand: Listening and Speaking

Strand Theme: Promote effective communication and learning

### Strand: Reading

Strand Theme: Basic concepts of print as language and meaning represented by symbols

### Strand: Writing

Strand Theme: Emerging writing skills to convey meaning through print

### Strand: Literature

Strand Theme: Recognise that text is written to share experiences and information

### Literacy Concepts

Concepts are groups of facts and ideas that commonly go together. In the PPY Curriculum, ideas are organised into Strands, Strand themes, General Learning Outcomes (GLO) and Specific Learning Outcomes (SLO). Within each SLO there are concepts. If a teacher digs deeply into a SLO they will see the concepts there.

For some Language and Literacy Strands and some SLO it is obvious what concept is there because the word concept is found there in the learning outcome. For example Strand theme LL 2.2 Develop awareness of basic concepts of print. All the SLO that begin with LL 2.2 are based on grasping the basic concepts about print in texts.

When naming one of these LO in a lesson plan, teachers can name the concept as 'concepts in print'. Similarly sub-strand LL 2.4 Develop and awareness of conventions in print, is another part of concepts in print and all the SLO beginning with 2.4 are about this concept.



For other Language and Literacy Strands and some SLO it is not as obvious which concept to name. For example, “LL.4.1.1.1 show interest in books through questioning and predicting how a story might continue”. The concept or deeper idea here is questioning and predicting skills. When this LO is in a lesson plan, teachers can name the concept as questioning and predicting skills. A careful look at SLO will reveal all the concepts.

## 2.1 Teaching Language and Literacy

There are a few key understandings that teachers need to grasp about how children learn language and literacy.

Literate children develop through:

- 1) using language and finding meaning in language
- 2) participating actively with language activities;
- 3) engaging with a range of conversations, texts and writing;
- 4) being heard.

## 2.2 How do children learn to listen and speak?

The Strand Listening and Speaking is addressed in this section. In the daily time table, the learning outcomes for the Listening and Speaking strand can be achieved in any activity time. However, Teachers have 40 minutes every day to focus on listening and speaking during Talk Time activities.

Lesson plans direct teachers to invite children into conversation in Mother Tongue or Pijin. Children should listen and talk actively at this time. The teacher will have to be skilful to help children that are not used to talking a lot in a class setting and draw them into daily class conversation.

### Share news

Each day the Talk Time directs teachers to allow children to share news. Each classroom teacher is free to use their own method for sharing news time in the classroom. However here is a suggested way that usually works well.

- Children talk in pairs. Child #1 gets to tell something that she saw or did since yesterday, or anything of interest. Child #2 sits very quietly and listens without interrupting. Teacher calls time after three minutes.
- Child #2 repeats back what Child #1 said. Child #1 gets to say whether Child two was a great listener.
- Follow same steps with Child #2 as talker and Child #1 as listener.
- Teacher reaches into name basket and chooses a “Child of the Day” who gets to tell her/his news to the entire class. After s/he finishes, children may raise hands to ask questions about what was said. The speaker can call on three children to ask a question. Speaker answers the questions as asked.
- If you still have time, then the Child of Day can call on a boy or girl to also share their news to the entire class.

## Topic

Each day has a suggested topic to talk about and sometimes picture or story resources too. The topics have been chosen to meet various learning outcomes in the curriculum so it is important to follow them as often as possible.

## Discuss

Many times, you will see a direction in the lesson to “talk with or discuss as a class”.

Discuss means to take turns talking about something. The teacher does not just tell the learners what they want them to say. Instead, the teacher asks questions or offers ideas to encourage the learners to think and respond. At this stage there is not right or wrong answers. It is exploring thoughts and ideas from many people. At the end of a discussion, the teacher may like to summarise the ideas or help the learners to understand a particular idea from the discussion as a learning point.

The table below lists some of the steps in learning to listen and speak. Teachers can check that they are making all of these steps available to their learners.

### How do children learn to listen and speak? They learn through:

- Immersion – which is hearing language a lot.
- Demonstration – which is seeing how people use their mouths and when they use particular words and phrases.
- Expectations – which is experiencing the culture that is in the place of that language and discover what is expected language use.
- Responsibility – which is discovering how to use words, when to use words and what to use them for.
- Approximations – which is trying out a sound or word and people giving feed back and praising them for their effort, even if it is not exactly correct.
- Practice – which is just using their mouth to make sounds and try to talk and then keeping on trying.
- Response –which is getting feedback from others that helps them.
- Engagement – which is TPR = total physical response, or combining talk with hand movements, head nodding or other body movements that help them understand and talk more confidently.

Table 5: Learning to listen and speak.

## Listening and Speaking Activities

*Pictures in this section are taken from UNICEF SITTSI manual*

These pictures demonstrate some activities teachers can get learners doing to develop listening and speaking skills independently and in small groups.



### Whispered messages



### Talking about pictures



Hearing differences between sounds, playing with sounds and practising them is important.



In this activity the child picks up two pictures and must speak a sentence about them that is a question. The other children answer the question. When the teacher thinks the children are confident, the teacher leaves the small group to do the activity without her support.

## 2.3 How do Children Learn to Read Written Text?

The Strand Reading is addressed in this section. In the daily timetable, the learning outcomes for the Reading strand can be achieved in any activity time. However, Teachers have 40 minutes every day to focus on reading skills during Story Time activities. Children need to develop connections between spoken and written words. Do not miss the opportunity to build the children's oral (talking)

skills before building their reading skills.

The table below lists some of the steps in learning to read written texts. Teachers can check that they are making all of these steps available to their learners.

- Hearing and seeing others read and pointing to words as they are read.
- Finding out about the sounds and shapes of letters and how they work together in patterns to make words and sentences and meaning.
- Using visual cues in pictures to predict the text. That means talking about what is in pictures and guessing what it might tell us about the story.
- Finding a love of words and ideas through the enthusiasm of teachers and their positive support of children's efforts to read.
- Being surrounded every day by print and also holding books and word and letter cards in their hands that they can use for activities to make words and sentences
- Activities that help them to think about texts and what messages the text is giving.
- Responding to teacher's questions and telling about what they read and what they understood. Also doing activities that help them to talk and think critically about what a text says.
- Being given opportunities to ask their own questions.
- Recognising their own name written down and then the names of friends.
- Recognising common and familiar words.
- Reading repeated lines in a text that become familiar to their eyes and ears.
- Developing decoding skills to sound out words and trying to speak them.
- Using decoding skills to read words they are not familiar with and discovering written words they have heard before.
- Getting skills that help underpin their reading and discovering that through use of their skills they can comprehend the meaning of a text and enjoy the meaning they have gained.
- Feeling motivated through positive attitudes about their own ability to read.

*Table 6: Learning to read.*

## **Reading Activities**

*Pictures in this section are taken from UNICEF SITSI manual*

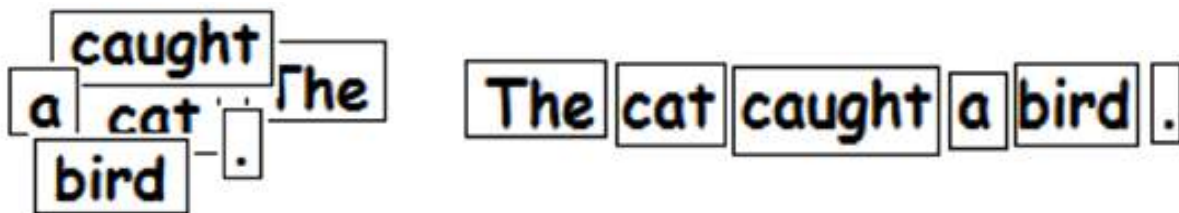
These pictures demonstrate some activities teachers can get learners doing to develop reading skills independently and in small groups.







These advanced PPY learners are matching pictures with words, then speaking the /dr/ blend sound from the front of the words.



Advanced PPY learners can take a mixed up sentence and order it correctly.



Some advanced PPY learners can construct sentences.



When reading to children every day, teachers bring them to sit up close. They make it a happy time and encourage children to listen carefully. If the teacher has a big book that the children can see well, then learners can try to read some words aloud.



Collected bottle tops are good for writing words. Children can read them and advanced learners can order them into sentences.



### 2.4 How do Children Learn to Write?

The Strand Writing is addressed in this section. In the daily timetable, the learning outcomes for the Writing strand can be achieved in the activity time. Children need to develop connections between spoken and written words. Build the children's oral (talking) skills then their reading skills and then their writing skills.

The table below lists some of the steps in learning to write. Teachers can check that they are making all of these steps available to their learners. The purpose of writing is to communicate ideas. But efficient writing is helped by instruction about how to form letters easily. This needs handwriting lessons. Show letter formation to the whole class, to small groups and work with individual children on these skills.

#### How do children learn to write? They learn through:

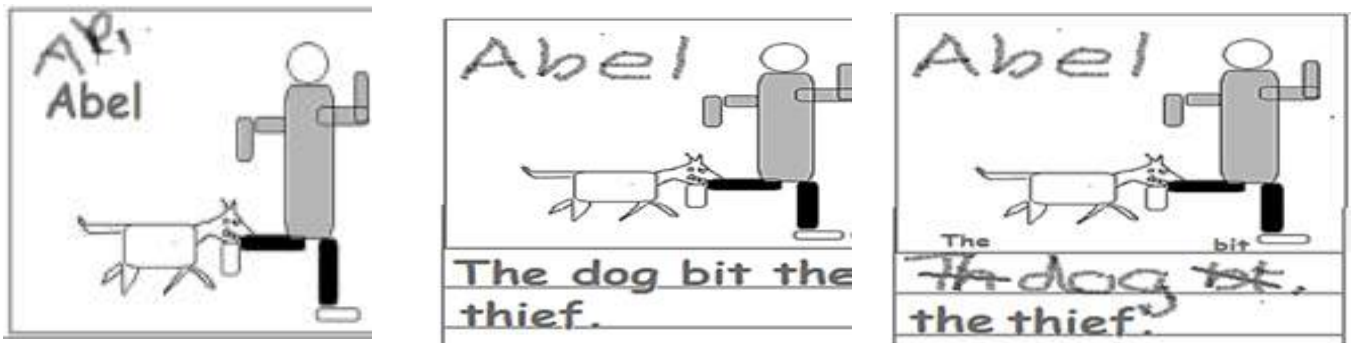
- Drawing pictures about their ideas.
- Sequencing pictures to tell a story.
- Watching others writing.
- Drawing with their finger in the air and tracing over objects or words with their finger or pencil or crayon.
- Attempting letter formation with a pencil or crayon.
- Writing their own name.
- Formal handwriting lessons.
- Trying to copy words.
- Attempting approximations of words in sentences.
- People celebrating the efforts and progress they make in the process of learning to write.

Table 7: Steps towards writing



These three pictures show a progression of learning to write over a few weeks.

*Pictures: taken from UNICEF SITSI manual*



First the learner draws a picture and attempts to write their name. The teacher adds the complete name. At the next stage the learner draws a picture and writes their name confidently. They tell the teacher a story and the teacher writes it for them. The third picture shows the stage when the learner can attempt to write their own sentence and then teacher corrects the approximations of words and adds missing words that the learner spoke. Crossing out the approximated words (like in this picture) is not necessary. Just write the correct word above.

## 2.5 Literature

The Strand Literature is addressed in this section. In the daily timetable, the learning outcomes for the Literature strand can be achieved in the activity time. However, Teachers have 40 minutes every day to include literature skills during Story Time activities. These skills include helping children to develop a love for books and texts through learning to question what a story might be about and predict the events.

The concepts of print (below) cross over between the Literature strand and the Reading and Writing strands.

### Concepts of Print

What do children need to understand about books or texts?

- There is a right way up for a book;
- Every book has a front, back and an author;
- The front cover tells us a lot;
- Read words left to right;
- Read from top to bottom;
- You can read illustrations by drawing meaning from them;
- Print is what we read;
- Print contains messages;
- Use a “return sweep” to move from one line to the next;
- We value texts and treat them with care.

## The conventions of print

What do children need to understand about both reading text and writing it?

- Teach the concepts of print first;
- Sentences start with a capital letter and end with a full-stop;
- Some words like names have capital letters;
- Punctuation includes full stops, commas, question marks;
- Special text features include bold-face type;
- There are spaces between words;
- Print conventions should be used in writing.

## 2.6 Shared Reading Guidelines

Shared reading is a powerful teaching approach to model a love of words and ideas through reading, talking, drawing and sharing. The purpose for all reading is to make meaning, to think about what they read in the environment and in texts and to respond to a range of different fiction and non-fiction texts.

Through hearing and joining in with texts, young learners become familiar with the structure and form of written language in a safe environment (Structure - text, sentence and word level). Learners will think and talk about what the author said and what the author meant as they make connections to the text, themselves, other texts and the world. (Meaning)

Through explicit demonstration, learners understand the visual features of print – how texts work. Teachers model effective reading behaviours for making meaning of text using print, or handwritten words, illustrations and background knowledge (Visual information).

Teachers model reading strategies such as self-correction, word-attack skills, re-reading, searching for sources of information (illustrations, print, layout). Learners will ask and answer questions using evidence from the text.



Before Reading	During Reading	After Reading
Teacher reads Title	Teacher holds book or places where all learners can see it. Teacher reads title. Invites learners to read it too.	Invite learners to help you to retell story or informational text in a few simple words. Use Mother tongue/Pijin and then English.
Activate learners background knowledge – what do you know about ...? Use Mother tongue/ Pijin.	Teacher models Think-Aloud. (eg. I'm thinking, I'm wondering what this book will say about...)	Learners ask and answer questions about: the sequence of story events, - what they infer might also be happening but it's not written down (e.g. I think that the Mummy would be happy because...). - how it made them feel (e.g. I am happy when someone gets a new dog).
If you have time -Invite learners to draw what they know	Teacher reads English text so it sounds like talking. Track text with your finger, from left to right, word by word.	If you have time, make a story map – some simple pictures showing what happened in sequence.
Then turn and talk to a partner about their drawing	Model how the book or text works – a cover, print goes left-to-right. Explaining what a sentence is, a word and a letter. Use English and Mother tongue/Pijin	Innovate on text e.g. make up a new ending together or think of an extra character to add to the story.
Look at book cover - title and illustration	Confirm predictions using illustrations, text and background knowledge, e.g. "Yes we thought it was going to say that..."Change predictions if cannot be confirmed, Eg."Oh it didn't say what we thought. It says..."	Do a role play based on the story.
Ask: what is this book about?	Model fluent reading (means reading with good pace and pitch). Build a sense of story e.g. "what will happen next?"	
Give10-word introduction. eg This is a story about friendship, or This is a factual text about ... Use Mother tongue/Pijin	Focus on meaning of text. Explain story elements – beginning, middle, end.	
Do a picture look through without reading text. Invite learners to talk about pictures.	Make connections – help learners think how they are connected to the text, and how it might be connected to another book or to the wider world. Use English, Mother tongue/Pijin.	

Before Reading	During Reading	After Reading
Make connections- help learners think how they are connected to the Cover and the text, and how it might be connected to another book or to the wider world.	Turn and talk to partner about what's in the text and illustrations	
	Model effective reading strategies –e.g. does it make sense, does it look right, does it sound right?	
	Also model these reading strategies – word attack skills (e.g. did we read the word right?) , re-reading to check meaning (e.g. yes it does seem to mean that).	
	Talk about how text works – Structure (e.g. this story keeps talking about what David likes on every page doesn't it? Or this is short and just tells facts doesn't it?) Sequence of events (what happened after the dog ran away? Or did the girl cry at the beginning or the end?)	
	Teach concepts of print-spacing, capitalization, punctuation by pointing them out on the page.	
	Build English vocabulary – look for familiar words, known letters and sounds. Point them out, go over them, learners can read them with you.	

Table 8: Shared reading guidelines.

The LPMU - Literacy Programme Management Unit (An intervention unit) in Ministry of Education (MEHRD) have devised this diagram showing that there are four main areas that contribute toward a child gaining meaning from a text. All of these come together to make sense of a book or poster or other kind of text.



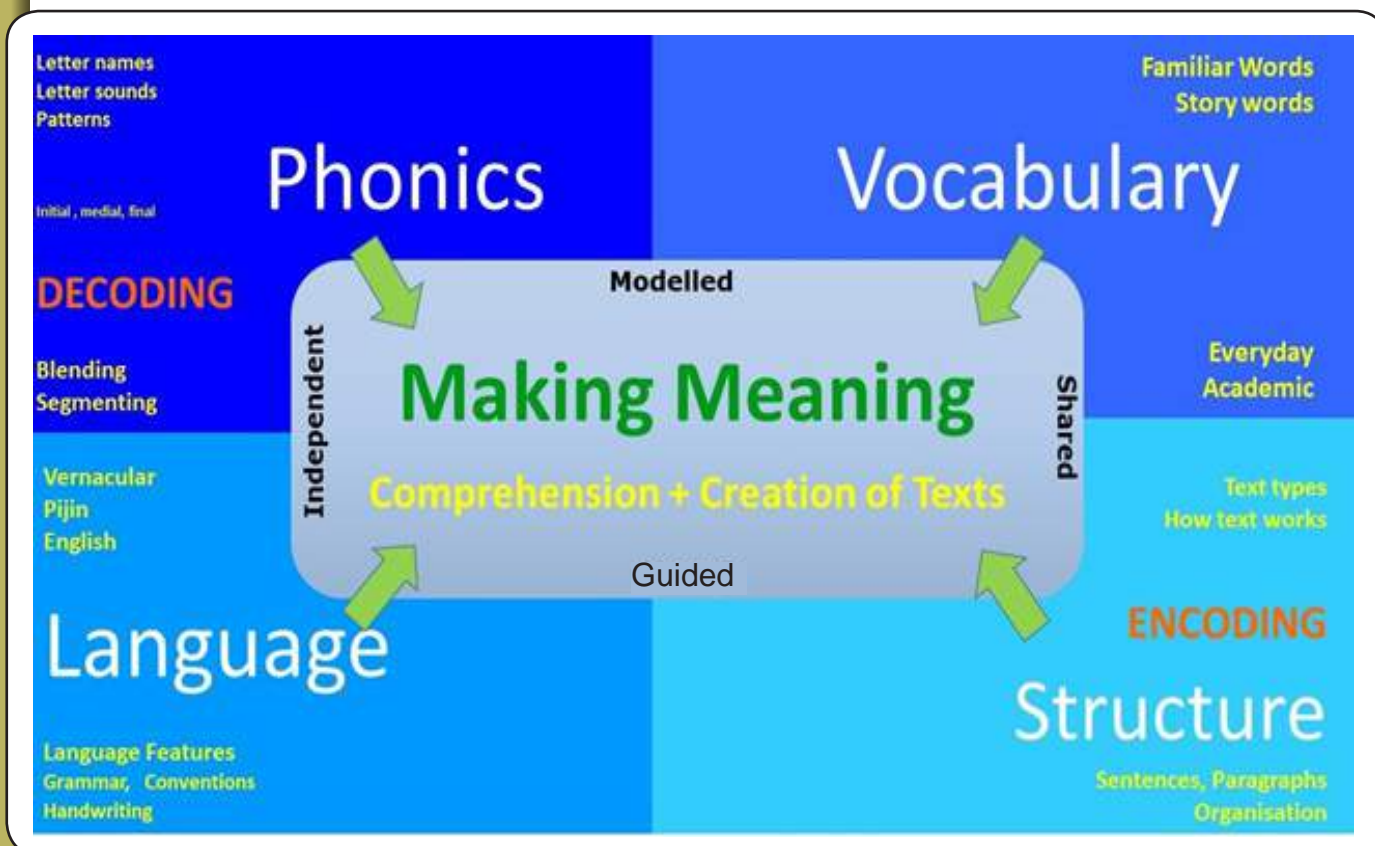


Diagram: Gaining Meaning from a Text, LPMU, MEHRD 2018

A young reader will need to think and connect what they see with their background knowledge of language, vocabulary and sentence structure. Then they may draw on phonic decoding skills. Finally, they may comprehend what they see in a text and gain meaning from it.

Teachers can make sure that readers know things in each of the four areas in the table. The following sections explain details of the diagram.

## 2.7 Phonics

### 2.7.1 Phonics or phonemic awareness

In this Teachers Guide, when we will refer to the term Phonics, it will cover a range of information about phonemic awareness and teaching reading and writing. Teaching Phonics will be in the sense of a broad use of the word, that describes a process of gaining understanding about the sounds in a language in order to gain skills in that language. PPY instruction begins in Mother Tongue Language or Pijin and transitions towards English speaking, reading and writing. The instructions here are to help teachers understand the steps towards supporting learners to acquire English orally and then in reading and writing.

Letters are symbols that represent sounds. Letters come together to form words and meaning. Readers use written symbols to decode and encode words and find meaning.

Before children start to learn specific skills for reading English they need to be immersed in the English language orally. This means they need lots of opportunities to hear English and interact with it. This includes hearing the sounds and structures of words and sentences, hearing tones and patterns and building increasing levels of making meaning. As the ability to make meaning grows, learners will begin to seek out that meaning for themselves, building their desire and motivation to learn to read.



## 2.7.2 Notes on Teaching Phonics and Phonemic Awareness

The notes here are to help build each teacher's knowledge of phonemic awareness and to explain the processes used to help build learner's skills.

- Be bold! Be willing to make the sounds, draw pictures and laugh.
- Encourage identifying sounds from the beginning. When our learners look at a letter, we want the first thing that enters their heads to be the sound, before the name, in order to build fluent reading. e.g. 'B' makes the sound 'buh, buh, buh' for banana. 'A' makes the sound 'aah' as in 'ant'.
- We do not focus on punctuation in the very early stages. Reading is a very complex process. In the beginning stages we will focus on decoding the sounds and pushing them together to make words. When they are fluent in decoding then move attention should be on punctuation.
- Use multiple modes of learning when teaching a sound – see it, say it, hear it, and feel it. You can do all of them at the same time if you use your finger as a pencil and write on each other's backs (or on the sand or dirt), while saying the sound.
- When making the sounds for a letter, think carefully about how you are making the English sounds for your learners. Try to avoid mixing sounds up like /s/ and /sh/, or putting an 'uh' sound on the end of a letter sound like /p/. With /r/, don't use the Pinyin version of the letter name that sounds more like /ara/.
- You will notice that the sounds are not taught in alphabetical order. Instead, they are taught in a specific order according to how many sounds the letter makes, how easy it is to see the mouth movements required and the hand actions needed to write the sound. Teachers are asked to focus on the position of the mouth for correct pronunciation and to be willing to have fun with the sounds.

When teachers are using these processes to help build learner's skills, they should remember to use them within lessons as they have been described in the Teachers Guide 1 (TG1). The instructions below are not designed for teachers to use in isolation, delivering lessons just focused on phonics. They are ways to teach sounds within lessons where texts are being read to learners, shared, talked about and understood. The sounds of words can be decoded (Process of translating print into speech by matching letters to their sounds) or encoded (put together into words) within lessons as needed. The children will often require at least six weeks of practice to reach a level of proficiency in learning and retaining their letter sounds. Many times, it will take longer.

## 2.7.3 First Sounds

The first sounds to be taught are those from letters that only make one sound:

b, d, k, h, f, l, j, p, m, n, v, w, t, r, x, z, qu

(Some letters make more than one sound. That is a bit hard for new learners.)

b as in bed, bat

d as in dog, dig – use your arm to make a tail to wag behind your back

Remember – the dog has a tail, helps to avoid reversals and b/d confusion

k as in kit, - we call this the kicking k to distinguish it from /c/





- h as in hot, hop – the sound just sneaks out of the mouth
- f as in fan, fun – top teeth sit on the bottom lip, blow with no voice  
often confused with /b/ - we do not eat bish for dinner.
- l as in log, lip – tip of tongue in behind the top teeth
- j as in jug, jump – we call this the jumping j to distinguish it from /g/
- p as in pot, pen – the sound just pops out of the mouth
- m as in mum, mat – lips are together and voice is used
- n as in net, no
- v as in van, vet - top teeth are on the bottom lip and voice is used  
put the fingers on the Adams' apple (throat) to feel vibrations
- w as in wet, win
- t as in top, ten
- r as in rag, rat – the sound roll sin Pijin bit does not roll in English
- x as in fix, box
- z as in zip, zero – the front teeth are together and voice is used
- qu as in queen, quiet – we call this the 'married qu', since it always has the letter /u/ with it.

### Example Activity to Introduce New Sound

This example uses the sound /m/.

1. Use the sound cards to revise the sounds that learners already know.
2. The teacher shows the letter card and models the new sound /m/. Learners attempt to make the sound. The teacher listens to individual learners and corrects where necessary.
3. The teacher demonstrates the correct letter formation on the board, pointing out where the letter starts and finishes and how it sits within the lines on a page.
4. Air writing – the learners make the letter in the air several times, saying the sound as they make it (straight arm with two pointing fingers, teacher to demonstrate as in a mirror). (Some lessons stop here and writing may come later.)
5. Learners write the letter /m/ on the ground, in a sand tray, using paint or with a pencil in their book a number of times e.g. 5 times. The teacher goes around the room and checks that each learner can make the correct sound, and also corrects handwriting where necessary.

### 2.7.4 Next Sounds

The next sounds to be taught make more than one sound. Some words will use the first sound and some words will use the second sound. Remember to look for these words in texts you are reading in lessons. Don't just teach them on their own.

c, g, s, a, e, i, o, u, y

c as in cat (hard sound)

as in cents (soft sound, voiceless)

g as in get (hard sound)

as in giant (soft sound, voiceless)

s as in sip (soft sound, voiceless)

as in is (voiced)

a as in at (first sound, short sound vowel)

as in apron or amen (second sound, long vowel sound)

(In English you can also say /a/ as in [half] and as in [water] but two sounds are enough to learn at this PPY level).

e as in egg (first sound, short vowel sound)

as in me (second sound, long vowel sound)

i as in pit (first sound, short vowel sound)

as in final (second sound, long vowel sound)

o as in off (first sound, short vowel sound)

as in open (second sound, long vowel sound)

u as in up (first sound, short vowel vowel)

as in use (second sound, long vowel vowel)

as in put (extra vowel sound)

y as in yes

as in hymn

as in my

as in happy

y sometimes become consonant or a vowel.

y becomes a consonant when it is at the beginning of a word.

y becomes a vowel when it is in the middle of a word or at the end of a word. It borrows the long “i and e” sound especially when it becomes a vowel.

This is a tricky sound to learn so make up actions or a little dance to help remember it and practise it often. Note that sometimes this letter can pretend to be a vowel.

### 2.7.5 Reading Words

#### Pushing Two Sounds Together

When learners are ready for small words, teachers can start to model pushing two sounds together to make them into words. Do not use the word ‘blend’ yet, as this is used later on. Talk about ‘sounding’ and ‘pushing’ and demonstrate this using two flashcards such as ‘a’ and ‘t’. Have two learners hold them on opposite sides of the room. You go to one and point to it for the learners to say the sound (first sound only.) Then walk across to the card on the other side of the room and point to it for the learners to say the sound. Go between the two sounds a few times and then bring



the two cards a bit closer. Keep doing this until the two cards are side by side and the learners can hear the word 'at'. Repeat the activity with a few other words to help get the idea of pushing sounds together.

### First Words

These are some words you might read and learn to push together at this point in your shared books (also refer to basic sight words below):

it      in      is      if      on      off  
up      us      as      am      an      at

Lessons in Teachers Guide 1 include reviewing letters and sounds. You might do extra work on this on day 5 of each week or in the last two weeks of each term. The letter sounds can be reviewed a few at the same time, for example. 3 consonants (b,m,t) and 1 vowel (a) per week. The children can then spend the following week practicing the same letter sounds to build proficiency.

You might also see some of these words below in your texts. When the learners manage two-letter words, they will have no problem also reading three letter words that come up in the same stories and texts.

Start by sounding and pushing as you did before to help learners to understand how the letter sounds come together to form words in meaningful stories.

### Next Words

mat    pat    sat    has    jam    rag  
bag    cap    tap    hen    pen    get  
fit    hit    pit    sit    his    sin  
god    dog    log    cup    pup    jug

It is good to use games to rehearse reading two and three-letter words. Many lessons in Teachers Guide 1 include playing games with letters. You can replace the letters with small words when your learners are ready to read them.

Simple three-letter words are formed when a Consonant is connected with a Vowel and another Consonant. In many parts of the world, these are known as CVC words. You will see in lessons that sometimes you are to play CVC games. Children have a lot of fun decoding these words and putting their new found skills to practice. They can make up silly words as well which is part of their skill building. The children can be further encouraged to draw the corresponding picture for the CVC word or play a matching game with letter and picture cards. These cards are in Resource Book 3.

### 2.7.6 Introducing a New Word from a Story Book

Learners will become very familiar with some words and read them easily if the teacher takes time to make sure everyone recognises the parts of the word and how the letters and sounds come together. It is important to make sure the meaning is also clear.

When it is Story Time teachers can sometimes teach the reading of words they want everyone to be confident to read. Here is an example activity to introduce a new word from a story book. This example uses the word 'mat'.

1. The teacher can sound out the word pointing at the letters on the flash card as they make the sounds.
2. The learners can make the sounds raising one finger at a time with each sound they make (or a stone can be used to represent each sound.)
3. The teacher and the learners slowly say and push the sounds together until they are almost saying the word.
4. The teacher can ask the learners, "What is the word?" The learners should say the whole word.
5. The teacher should give a brief explanation of the meaning of the word in Mother Tongue or Pijin, then provide an example of the word in a sentence spoken in English. A picture in a story book is useful for explaining word meanings.
6. Learners may like to write the word 'mat' in the air (using the air writing technique described above).
7. Learners may like to write the word 'mat' a number of times in their books e.g. 3 times. The teacher can go around the room and check that each learner can read the word they have just written and correct any handwriting errors.

### 2.7.7 Sentences

Once the learners are comfortable with small words you can introduce them to reading whole sentences. Sentence cards are included in Resource Book 3. Please make good use of them. Study sentences in the daily story books too, helping learners to read them. Don't expect the learners to read fluently right away.

Demonstrate both fluent reading in English, as well as slow and careful reading, showing them how to stop to sound and push words as they need to. As the learners begin to grasp this they will love reading and want to read again and again. You may find that they get quite loud and excited. As long as they are focussed on the reading, let them enjoy it!

### 2.7.8 Consonant Blends

If your learners reach a level where they are quite confidently managing emerging level reading words and stories you can teach them about blends. Blends should not be taught until the children can make their letter sound associations – at least 22 out of the 26 letters.

To teach consonant blends use this definition with hand actions:

(Put your two fists together in front.) Blends are two letters that work together (shake two fists up and down together) but each one (shake one fist alone) still makes (shake the other fist alone) its own sound (bring the fists back together again.)

**Note that blends can be made of three letters too, but each letter must still make its own sound. Teachers can then find these blends in stories and help learners to recognise how to say them and where they appear in small words.**

**List of Consonant Blends:**

tr	pr	fr	br	cr	dr
pl	gl	fl	sl		



sp      sw      sk      st      (sl)      sm  
tw      str

### 2.7.9 Support Sounds

Teachers may also go on to teach about support sounds. Support sounds are when two letters that make the same sound are side by side. Even though there are two of them there is still only one sound. We say, 'the second one makes the first one do all the work.' Often they are called silent letters.

ll      as in    will, kill

ss      as in    mess, loss

ee      as in    see, free

ck      as in    back, crack, truck -notice the blend in front, support sound at the end

### 2.7.10 Harder Words

Here are words learners might be ready to read next. They are a little bit harder than 3-letter words because they have a blend or a silent support letter in them. Look for them in the stories you share.

spin    swim    glad    crab    twin    dry

flap    skin    stop    step    slip    smell

plan    blot    trip    press    from    brand

print    stamp    plant    drink    twist    jump

Use activities and games to rehearse new words. This might be straight after story reading or during the move times of the day. Ask questions about the stories when you are rehearsing some words, to ensure children are understand the meaning of individual words they practise reading. This is very important.

Learners will develop at different speeds. Some will need to continue to work at the emerging level, while others move on. The next stage beyond blends and silent support sounds is digraphs.

### 2.7.11 Digraphs

Digraphs are two letters that work together to make a new sound, e.g. /sh/ is a digraph. The letters do not make their own sounds anymore; they work together to make a new sound. Learners will be ready to move to this stage in their first year of Primary school. Teachers do not have to go as far as explaining digraphs with their PPY class. However the /sh/ sound is taught in one lesson and the /ch/ sound in another lesson since it comes up in a story. Resource book 2 has a sheet with digraph sounds /ch/ for [chair] and /th/ [teeth] for advanced learners.

### 2.7.12 Sound and Word Activity

Create a Word Bank on the board or a chart.

Steps:

1. Ask learners to find words in a story or sentence with a specific sound e.g. 'find words with the /h/ sound'. Students point to words such as hot, hat, hen. The teacher can go around the room

and check. Write the words on the blackboard as learners find them.

2. Choose the first word and sound it out, e.g. h/o/t, using a raised finger for each sound in the word (or you may use a stone to represent each sound.)
3. Push the sounds together and say the word.
4. Ask the learners to point to the correct word in the text. The teacher can go around the room and check.
5. Do this with each word for the specific sound, before going through the steps again with a different sound. Make a word bank of many words which will support the students' independent reading.

## 2.8 English Sight Words

Sight words in English are words that occur so often that learners really need to know them and be able to recall them quickly and easily. A list of the 12 basic English sight words is needed on a chart or labels in the room and on flash cards. Names of things, names of class members, and words from favorite books should also be displayed. For extension activities create a chart or lists of the next 22 words as well (see below).

You will also see in Resource Book 3 a list of English sight words (pg 114-118) and sample charts of three letter words to teach (pages 142-144). Use these laminated lists with your learners. These are not the only ones to teach and more words can go on other charts including the ones listed just below. Also look for the words that are arising in the daily stories and add them to lists of words children are learning to read.

The twelve most familiar English words are:

a		and		he		i		in		is	
it		of		that		to		was		the	

The twenty- two next most familiar English words that occur in about one third of all reading are:

all		as		at		be		but		are	
for		had		have		him		his		not	
on		one		said		so		they		we	
with		you		your		has					

## 2.9 Sentence Structure

Structure is about encoding and decoding or knowing how to write words and sentences that are meaningful. Some basic concepts around this are:

- Print tells a story;
- Illustrations support the story;
- Stories have a beginning, middle and end;
- There are spaces between words;



- Punctuation marks help the reader to make meaning.

## 2.10 Language Features

Language features include grammar, print conventions and handwriting. The purpose of writing is to communicate ideas. But efficient writing is helped by instruction about how to form letters easily. This needs handwriting lessons. As you see writing coming into lessons over the year, take time to stop and show the whole class which way to move their hand as they form letters. Help them to use the best pencil grip. Watch children when they are writing and keep correcting handwriting movements until they follow the guidelines below.

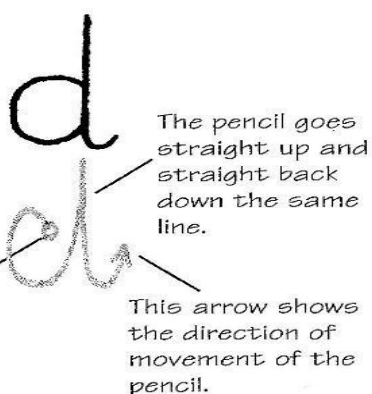
### Here are the handwriting guidelines

#### Lower case letters

Children must be taught the correct starting and finishing points and the direction of pencil movement for each letter. Starting points and pencil direction are shown below.

The letter 'd'.

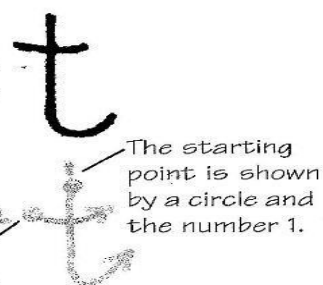
The letter 'd' is made from one continuous pencil line.



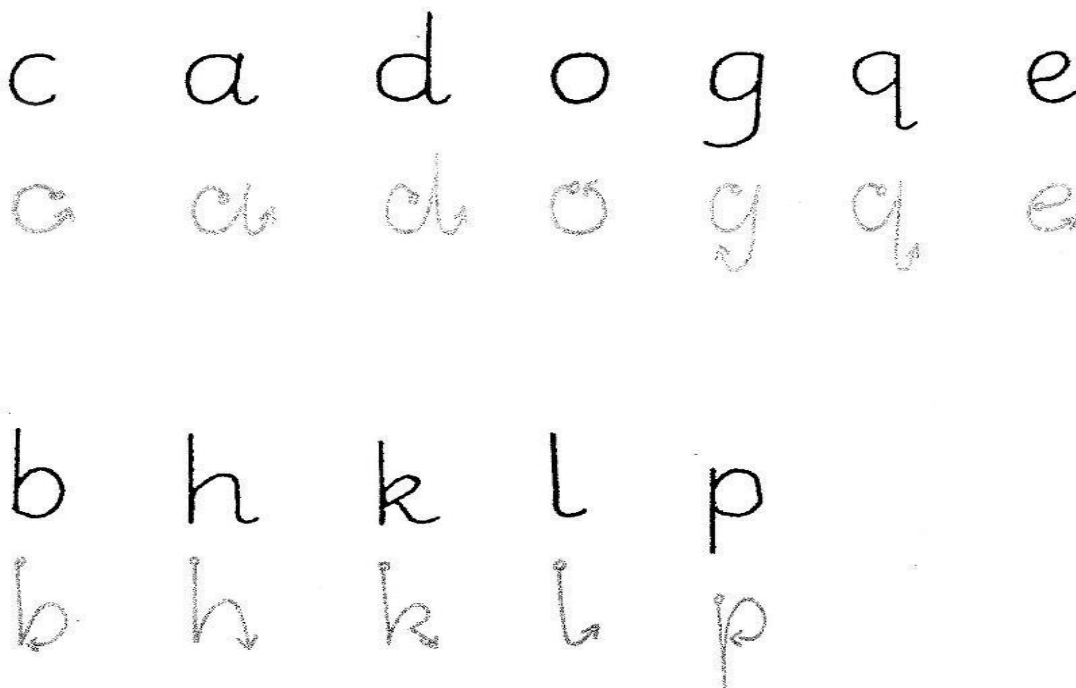
The starting point is shown by a circle.

The letter 't'.

The letter 't' is made from two pencil lines.



The second line starts here.





i j u t

i j u t

m n r

m n r

v w x y

v w x y

s z f

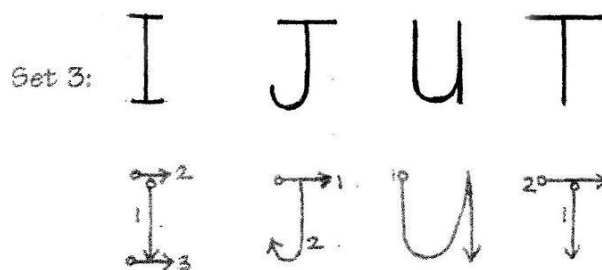
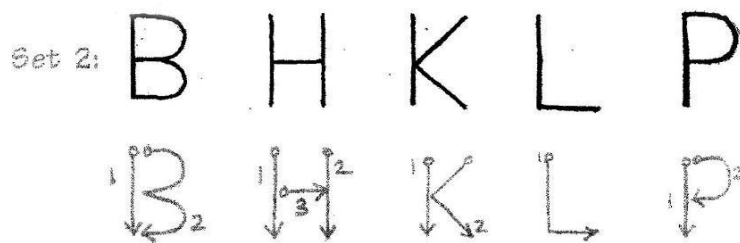
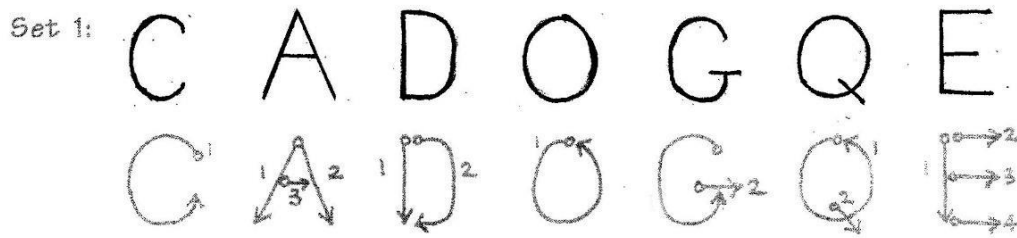
s z f

Source: Curriculum Development Centre, p.14, (1995), Nguzu Nguzu English Teacher's Guide Standard 2, MEHRD.

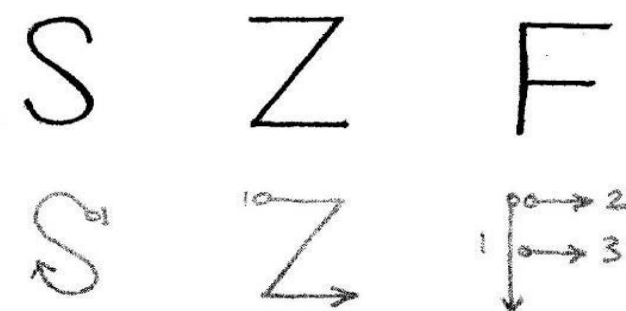
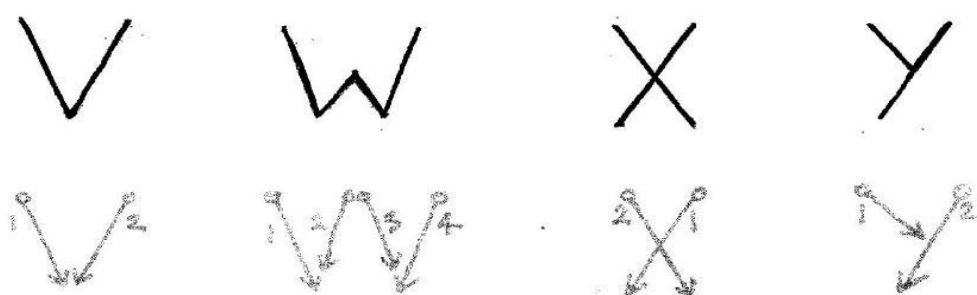
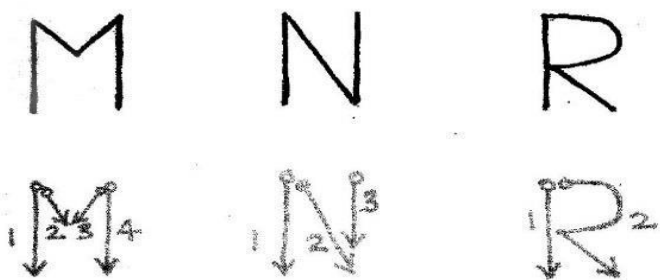


## Upper case letters

Children must be taught the correct starting and finishing points and the direction of pencil movement for each of the upper case letters.



Source: Curriculum Development Centre, p.14, (1995), Nguzu Nguzu English Teacher's Guide Standard 2, MEHRD.



Source: Curriculum Development Centre, p.14, (1995), Nguzu Nguzu English Teacher's Guide Standard 2, MEHRD.

## 2.11 Interactive Activities with Literacy

Teachers in PPY will need to give their learners lots of experience with hearing, seeing and speaking words and sentences. They need to provide activities where children touch and use materials with words and sentences on them. Eventually they can also try to write words and sentences.

A recent review of research about literacy teaching in developing and multilingual countries (Westabrook et al, 2013) found that:

...teachers' use of communicative strategies encourages pedagogic practices that are interactive in

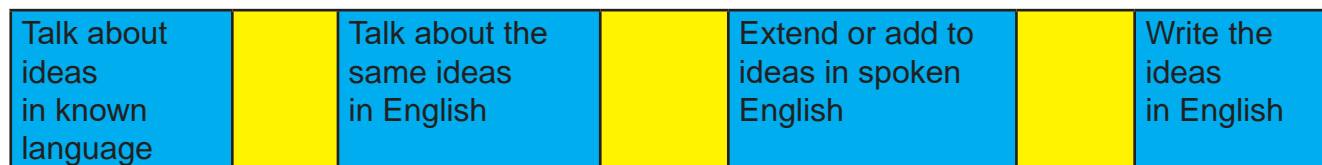


nature and is more likely to impact on learning outcomes and hence be effective.

In other words, if teachers use good communication strategies that include children doing interactive activities with language and literacy, learning will be better.

To learn a language, learners need to *engage in extended talk*. Learning English needs practise. This talk can be with each other and with the teacher and needs to be about the content they are learning. To build their proficiency learners need to speak about their ideas in sentences and paragraphs, not just single words.

Teachers assist learners to talk in English by helping them to use words and phrases from written texts and making new sentences with words they are learning as shown in the diagram below.



Teachers should provide multiple opportunities within every lesson for learners to talk purposefully in known languages and English. They should include daily opportunities for formal talk in Talk Time. Teachers should also give learners the opportunity to join in a discussion of topics before, during and after reading a book, to recap ideas from a previous lesson and to predict what might occur next. Learners must have books and other reading materials in their hands, not only on the walls or on the blackboard.

## 2.12 Literacy Enriched PPY Classrooms: Using Literacy Resources

In the Teaching and Learning Resource Book 1, there are lots of stories for the classroom teacher to read to and read with children. There are factual information texts, poems, rhymes and songs that link to activities in the Teachers Guides Book 1. There are a range of language and literacy templates for making concrete materials to use with language and literacy. Finally, there are language and literacy templates for teachers to use on charts or in exercises for children's books. These are in Resource Books 2 and 3.

Big books and small books are also provided for daily story time and independent reading. Each PPY class should be resourced with 14 Big Books and 34 small books so that learners are exposed to a variety of texts and to hands-on activities.

Every PPY classroom will have a set of 12 small Fitzroy readers which are written into lesson plans. In the table below teachers can see the progression of sounds and words that are taught with these books. Notice that the vowels are all short sounds. Notice how the word difficulty progresses. At levels 10-12 some words have digraphs. Instead of teaching the phonemic rules for these, teachers can teach the whole word. In grade one digraphs can be explained.

Fitzroy Readers and Word Skills.

NO.	TITLE	SOUNDS	SPECIAL WORDS
1.	A Fat Cat	c(a)	A or a
2.	A Big Pig	p(i)g	
3.	Bug on a Rug	b(u)g	the of

NO.	TITLE	SOUNDS	SPECIAL WORDS
4.	Dot	d(o)t	alternative printing of the letter a
5.	The Pet Hen	h(e)n	was to
6.	Fox on the Box	f(o)x	I have
7.	I Can Run	b(u)g	too with
8.	The Picnic	p(i)g	for go said
9.	My Pup	r(oo)f	name like my play
10.	John and his Fox	p(e)t	very he John
11.	The Animals	c(u)p	are you who
12.	My Lost Bear	b(e)	please ring bear love

### 2.13 Lesson Sequences in Developing English Literacy

In Terms 3-4 some learners will be ready to read sentences and small stories. This will prepare them well for a focus on these skills in Grade 1. Other learners who have had a lot of time in early childhood care and education before coming to PPY classes may be ready to read sentences and small stories earlier in the year. They will need extension activities if they are ahead of other learners with their reading skills. Here is a guided reading activity sequence that teachers can use with those

#### Guided Reading Activity - Sentence Reconstruction

Procedure:

1. Prepare the resources choosing from the Sentence Reading Cards or Story Reading Cards in Resource Book 3. Teachers can also choose a few pages from one of the shared reading books to use in sentence reconstruction. Divide the short passage into readable sections of one or two sentences. Write these sentences on card. Cut the sentences up into 'segments of meaning' (the bigger the segments, the easier the activity). Place the cut-up sentences in an envelope with the story marked on the envelope.
2. Learners work in pairs. Give each pair an envelope with cut up sentences inside. Do not give the learners the original story to copy when making their sentences. The learners lay out the cut-up sentences on the desk or floor and begin to reconstruct the sentences.
3. When the learners have completed their sentences, they read them back to the teacher. The teacher then supports the learners to self-correct their sentences and re-read them when complete.
4. When the learners have completed their sentences, they receive a new envelope with different sentences.
5. This activity can be made progressively more difficult over the course of a term by cutting up the sentences in to smaller and smaller 'segments of meaning'. Eventually, strong readers may be able to reconstruct sentences with each word on its own piece of card.



## SECTION 3

# Mathematical Concepts

Mathematics is a means of understanding the world around us. It is a way to organise information about space and shape, to organise information about time and quantity and a way to describe, group and order things.

The three strands and themes are:

### Strand: Number and Operations

**Strand Theme: MA .1 The use of simple symbols to represent numbers and emerging concepts**

### Strand: Shape and measurement

**Strand Theme: MA.2 Simple shapes and concrete forms of measurement**

### Strand: Statistics

**Strand Theme: MA.3 Simple Statistics**

## Maths Concepts

The activities in the Teacher's Guide 1 and in this Teacher's Guide 2 will show teachers how to give opportunities for children to develop confidence and skills in mathematics.

Maths concepts are groups of facts and ideas that commonly go together. The Pre-primary Year (PPY) Curriculum, ideas are organised into Strands, Strand themes, General Learning Outcomes (GLO) and Specific Learning Outcomes (SLO). Within each SLO there are concepts. If a teacher digs deeply into a SLO they will see the concepts there.

For some Mathematics Strands and some SLO it is obvious what concept is there because the word concept is found there. For example Strand theme MA 1.1 Develop emerging mathematics concepts through using concrete materials. All the SLO that begin with MA 1.1 are based on grasping the emerging concepts about mathematics. When naming one of these LO in a lesson plan, teachers can name the concept as 'emerging concepts in maths'. Similarly sub-strand MA 1.2 Develop addition and subtraction concept. All the SLO that begin with MA 1.2 are based on grasping the emerging concepts of addition and subtraction. When naming one of these LO in a lesson plan, teachers can name the concept as 'addition and subtraction concepts'.

For other Mathematics Strands and some SLO it is not as obvious what concept is there. For example, Sub-strand MA.2.1 Identify and draw shapes, construct and describe objects. All the

SLO that begin with MA 2.1 are based on the concept that things can be described and measured. When naming one of these LO in a lesson plan, teachers can name the concept as things can be described and measured. A close look at SLO will reveal all the concepts.

### 3.1 Play-based Learning in Mathematics

Educators believe that play shapes the structural design of the brain. Play-based learning provides active exploration that assists in building and strengthening brain pathways (Lester & Russell, 2008, p. 9). Young children's play allows them to explore, identify, negotiate, take risks and create meaning.

That means that teachers need to give children time to use maths materials, exploring and investigating what they can do with them. A teacher must not keep the children all together in one group all the time talking to them. Instead send them to play with maths materials and use their moving bodies in games and activities to solve problems. Children need to learn by doing with lots of hands-on activities. Young learners are naturally curious about maths and they are eager to explore it by talking, reasoning, playing and doing. Teachers do not need to be mathematical experts. They just need a desire to learn and explore, to get on the floor and make discoveries alongside their learners.

### 3.2 Explicit Teaching

Children should not just play with maths. In addition, children benefit from a specific time set aside for structured math activities that deliberately cover all the emergent math skills competencies. So before you send children to play with maths materials, talk to them and model skills and language. This is called explicit teaching.

Maths helps children or learners to understand the world. Teachers should introduce mathematical concepts through relevant experiences in the local environment and culture. They should recognise that learners arrive at school already having experienced a lot of mathematics ideas that just need to be described with language, actions, pictures or symbols.





### 3.3 Experiences Children Bring to School

The table contains learner's prior knowledge of mathematics concepts and how they link to each other.

Children's experiences	Links to strands and mathematics concepts
<p>Meal times: When helping to make food children may have been sorting kinds of food, measuring salt or water, estimating how much of something, counting plates, cups and spoons, sorting where to store cabbage in a different place to tuna tins.</p> <p>Nature: seeing and describing patterns Eg. a watermelon has patterns on the skin; seeing and describing shapes Eg. an oval leaf; describing places and positions to find things Eg. how to find the pigs.</p>	<p>Strands: Numbers and operations Measurement Talk with children about these things they do at home and how maths is part of their lives.</p> <p>Shape and Measurement</p> <p>Numbers and operations</p> <p>Talk with children about these things they see around their community and how maths is part of their lives.</p>
<p>Games:  Playing rubbers;  Shooting Bottles at bottle lids;  Hop-sotch;  Constructing toys from plastic bottles</p>	<p>Numbers and Operations</p> <p>Shape and Measurement.</p> <p>Talk with children about these games they do with friends and how maths is part of their lives.</p>

Table 11: Prior knowledge in Mathematics

### 3.4 How do children learn mathematics?

#### They learn through:

Playing with and manipulating concrete objects (e.g. counters, cards, play rubbers, boxes, slippers, books) and discovering the need to describe their actions.

Understanding the concept of “number” by first perceiving objects, then categorizing and group them based on “sameness”. This can be done with concrete things and also by finger counting with one-to-one correspondence with those things. Understanding of maths comes through using the body.

Using language about mathematical concepts while talking with each other and the teacher. E.g. On top, underneath, more than, less than; “I have more than you. My counters are on top of the table”.

Many maths difficulties can stem from maths language difficulties, rather than difficulties with the numbers. Below you will find tables about maths language.

It is important to teach the language of maths and its application at the same time. For example, if we are teaching the children how to group things according to shape, size or colour, it is important for the word ‘group’ or ‘sort’ or ‘grouping’ and ‘sorting’ to be used. The teacher can support the children to think about using the word ‘grouping’ by doing the activity ‘Can you group the members of your family to boys and girls?’ Tell us who is in the girl group. Start by saying ‘In the girl group, there is ....’ Now, who is in the boy group?

Hearing and seeing maths ideas being used and talked about.

Playing games that are full of maths concepts (ideas).

Building skills in exploration and investigation through practise (studying, thinking and asking themselves questions).

Investigating things in contexts that they are familiar with. e.g. counting rubbers in a game, noticing shapes and patterns in plants or measuring how far they have to walk to reach the canteen.

Finding meaning and purpose in the activities they are doing because the maths helps describe their local world.



### How do children learn mathematics? They learn through:

discovering they can enjoy organising information about space and shape, time and quantity.

discovering they can enjoy organising information to show groups, patterns or categories.

responding to teacher's questions and telling about what they did and what they understood.

being given opportunities to ask their own questions.

recognising numbers, numerals and symbols written down and talked about.

recognising common shapes and patterns.

finding ways to measure things. We call this non-standard measurements e.g. how many books are needed to go across the table?

developing skills to organise and display maths information in pictures, charts and graphs.

feeling motivated through positive attitudes about their own ability to do maths.

teachers can give these positive messages to learners. Teachers can teach learners to encourage each other with positive messages about maths.

### Mathematics Resources in Book 1 for use in lessons.

Songs and rhymes about numbers *page 3*

The Values Stories have maths in them. *pages 18 - 30*

Game: Guess the Numbers *page*

Number Teams *page 134*

Fingers Out *page 135*

Recipes for Crafts *page 138*

Geo Boards *page 144*

Weaving Boards *page 145*

### Mathematics Resources in Book 2 for use in lessons.

This book is called "Copy and Trace". You can present the things straight from the book, copy them onto charts or trace them into exercise books and on posters and charts.

Grouping numbers into sets of 10 – groups of shapes

Number Mat *page 126*

Ten Frames *page 128*

Learning shapes – trace *pages 157 - 158*

Trace location words (prepositions, in, on under ) *page 182*

Number and numeral tracing *page 114 - 115*

Number line *page 122 - 123*

Table 12: How children learn mathematics

### 3.5 Mathematics Resources in Resource Books 1 to 3

Number chart *page 129*

Play money *page 127*

Shapes and sizes *page 130 - 133*

Blocks *page 134 - 135*

Patterns *page 136 - 137*

Square grid *page 192*

Counting groups *pages 118 - 119*, trace around number words *pages 116 - 117*

Mathematics Resources in Book 3 for use in lessons. This book is laminated (covered in plastic) so that it can be pulled apart and cards can be cut up.

Shape word cards Numeral Cards 1-30

Fish sets *pages 1 - 4*

Bird sets *pages 5 - 8*

Vegetable sets *pages 9 - 11*

Dice templates *pages 12 - 13*

Domino cards *pages 14 - 17*

Smiley Face sorting and grouping sets *page 18*

Colour word cards *pages 30 - 34*

Shape cards *pages 35 - 38*

Number and Numeral matching cards *pages 55 - 59*

Ordinal number cards *pages 60 - 61*

Bug sort cards *page 64*

Addition, subtraction signs *page 63*

### 3.6 Strategies for Teaching Number and Operations

Use the cards, games, activities, rhymes, songs and stories identified in the three resource books.

Model for learners that counting tells how many objects are in a set no matter how they are arranged or the order in which they are counted. Do this by putting down five different things e.g. a shell, a stone, a bottle top, a pencil, an eraser. Count the 5 items. Rearrange them in different places and shapes and count again to five many times. Invite learners to do the same.

Count using concrete things e.g. shells, slippers, flash cards of fish or fruit or other things.

Next teachers should copy and extend patterns – use various flash cards or A4 pages with patterns of dots or fruit or numbers to copy and extend/add on to with cards or dots. Try this: red/green/red / green/ - children should copy the series; or triangle/ circle/ square/ triangle /circle, \_\_\_ - children should complete the pattern; or with body movements such as stomp/ clap/ stomp/clap or girl/boy/ girl/boy

– children should do the actions, or order the people and extend the pattern longer.

Count matching numeral 1 card with a fish card. Count matching numeral 2 card with 2 fish cards. Count using the “number-numeral matching card set” in R3.

Count using fingers – This is a *very important strategy* as the visual picture and physical movement



activate the brain to learn number skills. Say the forwards and backwards number word sequences in the range 1-10. Use one-to-one correspondence with fingers at the same time. This provides a concrete representation of numbers. Finger use has been shown to positively predict mathematical achievement in children. They must use it.

Counting-all involves counting fingers out one by one to represent the first, then the second consecutively until all fingers put out are counted to determine the sum e.g., for “3 + 2”, thumb, index, and middle fingers are opened, then ring and little fingers; all of them are counted together to find the sum.

Counting-on is where the child counts not from one but starts with the cardinal designation of the first number e.g. for  $3 + 2$  showing 3 fingers and adds the 2 on (3,4,5) to reach the sum of 5.

Note: Children transition from finger counting strategies to arithmetic fact retrieval strategies in primary year one to year two.

Movement helps with maths.

Invite children to clap, stamp, snap 6 times each;

Play a circle counting game where children count 1 to 6. The person who counts # “6” squats. Continue until everyone is squatting. (kneeling down)

Dice Counting Race - Children stand side by side in the playground. Each child has a dice. A finish line is marked. Teacher calls roll and each child rolls own dice and jumps the same amount. Once everyone is in place teacher calls roll again and each child rolls and jumps according to dots on the die. First ones to reach finish line are the winners.

Make up, tell and record number stories – which are also called number problems. It means that a short real-world problem is told that needs maths to solve the problem. E.g. Tell your children a number story and ask them to act it out as you tell it. For example, you might say: “David held up one pencil and one pen. Emily held up two pencils. How many pencils and pens do David and Emily have altogether?” This introduces the concept of addition and subtraction. Late in the year connect this concept to the symbols + and -.

Order numeral cards – order the numbers in a small range counting forwards

e.g. 1-5 or 1-10. Then reorder counting backwards.

Guess my number – a child chooses a numeral card between 1-5. Other children (in a small group or pair) try to guess the number.

Estimate my number – Show 8 stones in hand for 3 seconds. Close hand and ask child to estimate. Can you guess how many stones are in my hand? Now count them and see if you were correct. Get children to play this in pairs.

Numeral Cards Activities – a few examples 1) One child can flash the card for others to see, then quickly turn it over again.

- Children must say what the number was; or
- Children must hold up that many fingers; or
- Children can nod that many times or

- Children can write the number with their fingers in the air,
- Learners can group together counters to show the flashed number.

### Number Mat Activities

A number mat is made from calico or carpet and is marked with 16 big squares. In the squares the numerals 0 through to 9 are written.

5	8	9	3
2	7	5	0
0	1	4	6
7	9	2	8



- 1) Learners place number cards on the right squares.
- 2) One child jumps on a number. The children seated around the outside of the mat can write the number on the floor in front of them with their fingers.
- 3) Play “Twister”: A child calls out three numbers. Another child must use their hands, feet, or head to touch each number while leaving the other numbers untouched.

### Five and Ten Frames

A *ten frame* is a simple graphic tool or box that allows learners to “see” numbers. Understanding that numbers are composed (made up of) of tens and ones is an important foundational concept, preparing learners for work with larger numbers. A strong sense of “ten” is very important for place-value understanding and mental calculations.

Arranging counters in different ways on the ten-frame prompts learners to form mental images of the numbers represented. A ten-frame uses the concept of benchmark numbers 5 and 10 and helps learners develop visual images or pictures in their minds for each number.

Using a ten-frame, learners can easily see that 6 is 1 more than 5 and it is also 4 less than 10. It is easy for a learner to grasp that 8 can be seen as “5 and 3 more” and as “2 away from 10”. Once learners are able to visualise the numbers 1 through to 10, they begin to develop mental strategies for manipulating those numbers.

Children in Pre-primary Year class can explore numbers with a five-frame for a week or so before moving on to a ten-frame. Introduce the ten-frame with the following rule: *Always fill the top row first, starting on the left, the same way you read. When the top row is full, counters can be placed on the bottom row, also from the left. This is a standard way to show numbers on a ten-frame.*

### Game: Ten-Frame Flash

Flash ten-frame cards to the class or a small group and see how fast the children can tell how many dots are shown.

Table 13: Number of cards.



### 3.7 Strategies for Teaching Shape and Measurement

#### Strategies for teaching Shape and Measurement

Resource books: Use the cards, games, activities, rhymes, songs and stories identified in the three resource books. (R1, R2, R3)

#### Shape

Learners need to make and recognize shapes through lots of practice.

Play many games that help learners to identify and name shapes. e.g. "Name the Shape": Make a board game of squares to move along to reach the finish square. Use calico or carpet or chart paper. Roll it up when it is not being used. Each child has a chance to turn over a shape card. If the child can name the shape, he or she rolls the dice, and moves along the game board.

Geo boards: See examples on R1, pg 190 or make with old slippers as the board. Funny Shapes Challenge on Geo Boards. Geo is the short for geometry which is the study of maths about shapes. Two -five children play, each player has a geoboard and rubber bands and one is the judge. A stack of cards is upside down. Each card has a number written on it. The numbers are 3, 4, 5, 6, 7, 8. There should be several sets of the same numbers. When the card is turned over the children quickly try to build a shape with that number of sides. The Judge chooses who is first to finish and that child becomes the next judge. The rubber bands are removed and the children get ready for the next card. They can make any shape they want as long as it has the correct number of sides. This game is good practice for counting, visual reasoning and develops a sense of space and shape.

#### Measurement

Model for learners using non-standard measurement to answer questions they might have in their lives. Eg. Who caught the biggest fish today?

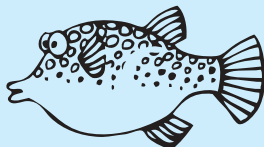
- 1) The first strategy is to compare two or more things directly, by placing them next to each other. Then model language of comparison. (see vocabulary list) Section 3.8
- 2) The second strategy is also to compare two or more things directly, by placing them next to each other. Then question children to draw them to use language of comparison. This could be with a picture and a few words, with the teacher writing the words on the picture when the learner identifies them.  
compare the fish indirectly using a third object and taking it to the two houses?  
The final strategy is to find a way to record the inquiry process and the answer.

3) The next level in the strategies for measuring requires students to compare objects indirectly by using a third object (for example, a length of string, a stick, or an arm span) that can be moved between the objects being compared. Eg. I want to know who caught the biggest fish today but one fish is at my Aunty's house and one is at my cousin sister's house. How can I find out? Help learners find a way to inquire or wonder about this question. Could I compare the fish indirectly using a third object and taking it to the two houses? The final strategy is to find a way to record the inquiry process and the answer. This could be with a picture and a few words, with the teacher writing the words on the picture when the learner identifies them.

Example: length



bigger



This progression of strategies should be covered slowly over the year.



Table 14: Strategies for teaching statistics.

### 3.8 Strategies for Teaching Statistics

#### Strategies for teaching Statistics

Resource books: Use the cards, games, activities, rhymes, songs and stories identified in the three resource books.

Statistics is about sorting and grouping. Gradually over the year Teacher's will strengthen learners skills until they can work together with the teacher to sort,

classify and group items followed by recording through making data displays,

comparing data and drawing conclusions. This is on a simple level that suits 5 year-olds.

Skill to develop: Sort and classify

Sort objects into groups – provide a mix of things to divide up into 3 groups. Talk about the results:

What types of objects do we have?

What groups could we sort them into?

Which group has the most in it?

This is called “classifying” the objects.

Help children to use the language: compare, sort and match.

Get them to compare class members with each other.

Get them to sort children by height, colour of hair and gender.

For example, two children can compare and sort the class group into taller and shorter ones; blond, brown and black hair, boys and girls. The teacher supervisors.

Get them to find the children that match – both the height, gender and hair colour are the same.

Teacher records the number in each group for the class to see.

Children learn how to record the numbers that answer the questions like: How many children have brown hair?

Teachers should study the Learning Outcomes in the Syllabus and build activities from these.

Table 15: Strategies for teaching statistics

### Modelling Problem Solving

Describe a problem that children would have had to solve during their daily activities. Describe maths strategies to solve the problem.

Eg. Mary Fay had a packet full of biscuits. Her 3 friends all wanted to eat some. How could she share them between herself and her friends so they all had the same amount?

### 3.9 Vocabulary List

Teachers need to provide opportunities for learners to use new maths language by scheduling time for them to talk about their experiences after they have had hands on maths activities or played vocabulary building games. The more they hear the words used in a natural way as they play, the more they will increase their understanding of the words. Teachers can move around children as they play games or fold paper, cut and glue, and model maths language to describe what learners are doing.

Words to know	Definition
<b>Position words</b>  near, far, beside, between, inside, outside, above, below, in front, behind, over, under, top, bottom, left, right, closer, further	A preposition or prepositional phrase that indicates location of an object.
<b>Shape words</b>  circle, square, rectangle, triangle, heart, diamond	The outline of something.
<b>Sorting</b>  sort, classify, order, sequence, shortest to longest, biggest to smallest	Words that help learners to study objects and numbers and divide them up according to some pattern.
<b>Language of measurement</b>  measure, size, length, weight, time, hour, minute, second, distance.	The process of measuring an amount. PPY class does not teach standard ruler measurements like centimetres. We use non-standard measurement like – number of footsteps or hands, how many books long, how many seconds to travel, the weight I feel.
<b>Language of comparison</b>  Compare, sort, taller, shorter, shortest, longer, longest, wider, widest, narrower, narrowest, greater than, less than, thin, thick, heavier, heaviest, lighter, lightest.	Comparing an object or a group with another object or group.



Words to know	Definition
<b>Language of ordering</b>  Ordinal number 1st, 2nd, 3rd, 4th...  Cardinal number	Any of the numbers that express position in a series or ordered sequence, as in first, second, and third.  Any of the numbers that express amount, as in one, two, three. It answers the question "How Many?" e.g. "there are five coins". Finger counting provides a physical representation for ordinal and cardinal numbers.
<b>Number and operations – counters,</b>  sets, groups, amount, how many, fewer than, more than, greater than, most, least, the same as, equal, different from, guess, estimate, ones, tens, addition, plus, subtraction, minus, one-half, first, last, pairs, sort  ten frame	Counters are small things to count like shells, bottle tops, sticks.  Operations are the processes or actions done with objects or numbers to calculate an answer. The four basic mathematical operations are: addition, subtraction, multiplication and division. In PPY we do not use multiplication and division.  A frame or box that helps users think of numbers in relation to 10.
<b>Language of statistics:</b>  group, order, pattern, extend pattern, match, data & pictograph	This language forms the basis of early statistics, which is about using numbers to answer questions. It is also about ordering, recording and displaying information.
<b>Calendar</b>  day, yesterday, tomorrow, week, month, year, date, day, night, morning, afternoon, before, after  Learning to use language that describes time is an important skill.	Learning to use language that describes time is an important skill.  Words whose endings indicate that there is more than one are plural words. They indicate the recurrent nature of things. E.g. A cat, cats.  Collections are bound by the number in that group, therefore they are countable, e.g. There are 5 cups on the table.