



Education and Training

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Early Years Literacy and Numeracy Development

Linking PIPS to Teaching and Learning in Early Childhood

**Literacy and Numeracy Section
2010**

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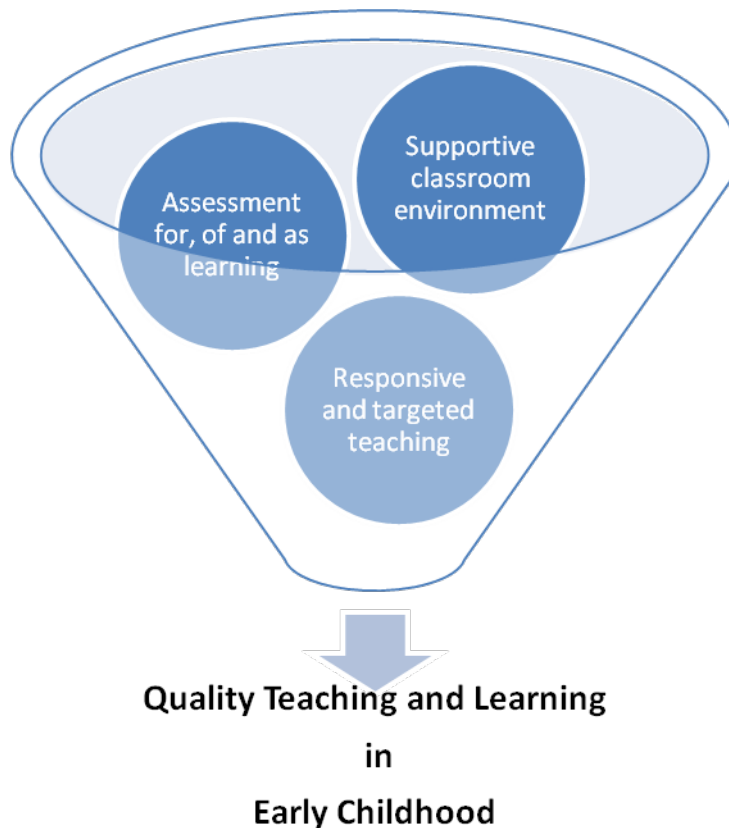
Introduction

Purpose

This document is intended for use by early childhood educators working with students from Kindergarten to Year 1. It provides a guide to the understandings of students within the early childhood band of development, and links appropriate teaching strategies to these understandings.

The document is based on the assessment items students undertake in the *Performance Indicators in Primary Schools* (PIPS). PIPS assessment program can assist with:

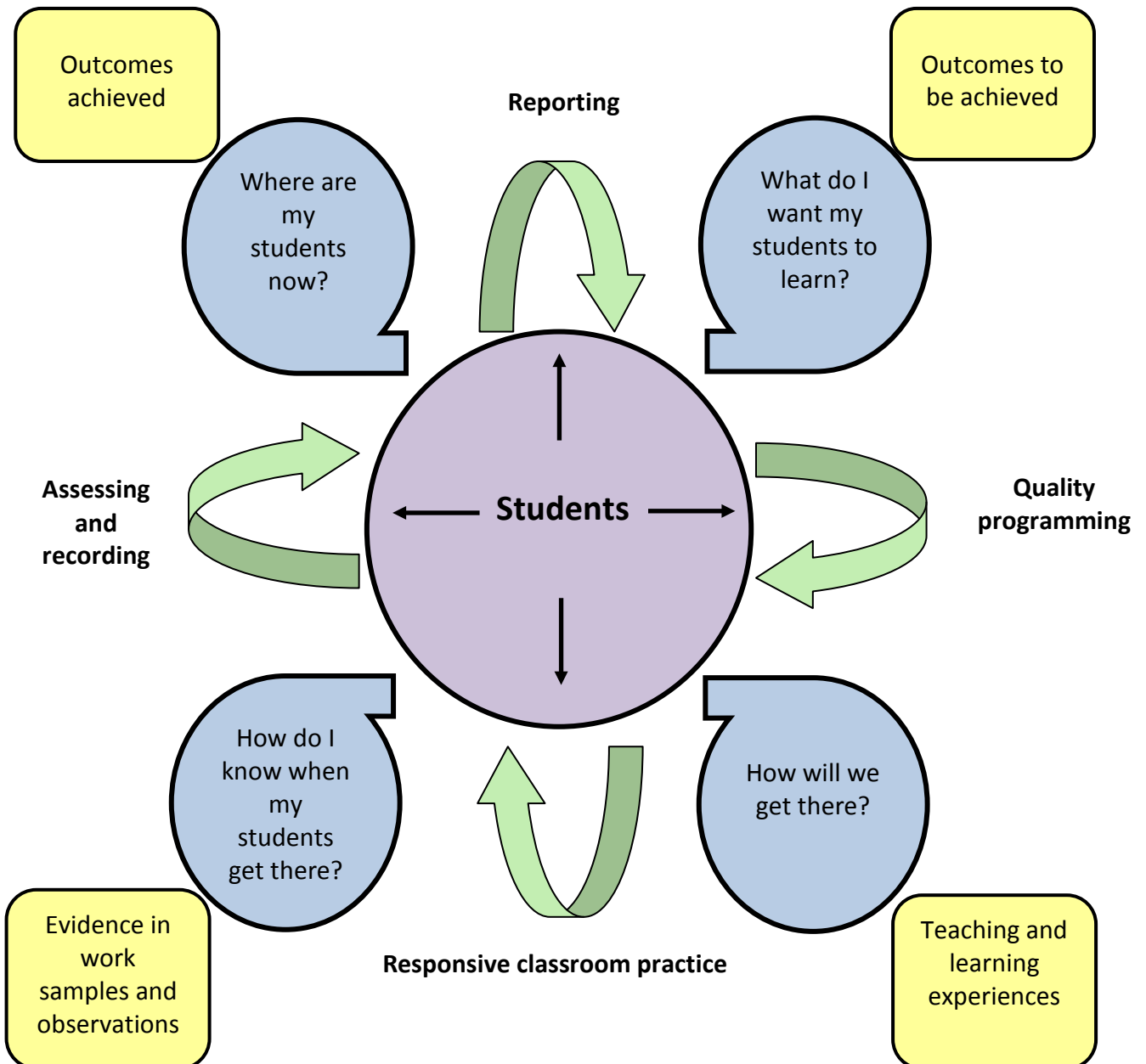
- determining what kindergarten students know when they enter primary school
- assessing the progress of students in literacy and numeracy and phonological awareness (sounds in language)
- diagnosing individual student work and providing information to indicate what students are achieving or understanding
- predicting future performance and identifying students who might benefit from early intervention or enrichment.



The Teaching and Learning Cycle

The teaching and learning cycle represents the various stages that occur in the design and delivery of quality classroom tasks that are targeted to student needs. The cycle has no start or end point, with each step informing the next. It is the process of gathering data and reflection that dictates where in the cycle you need to be operating.

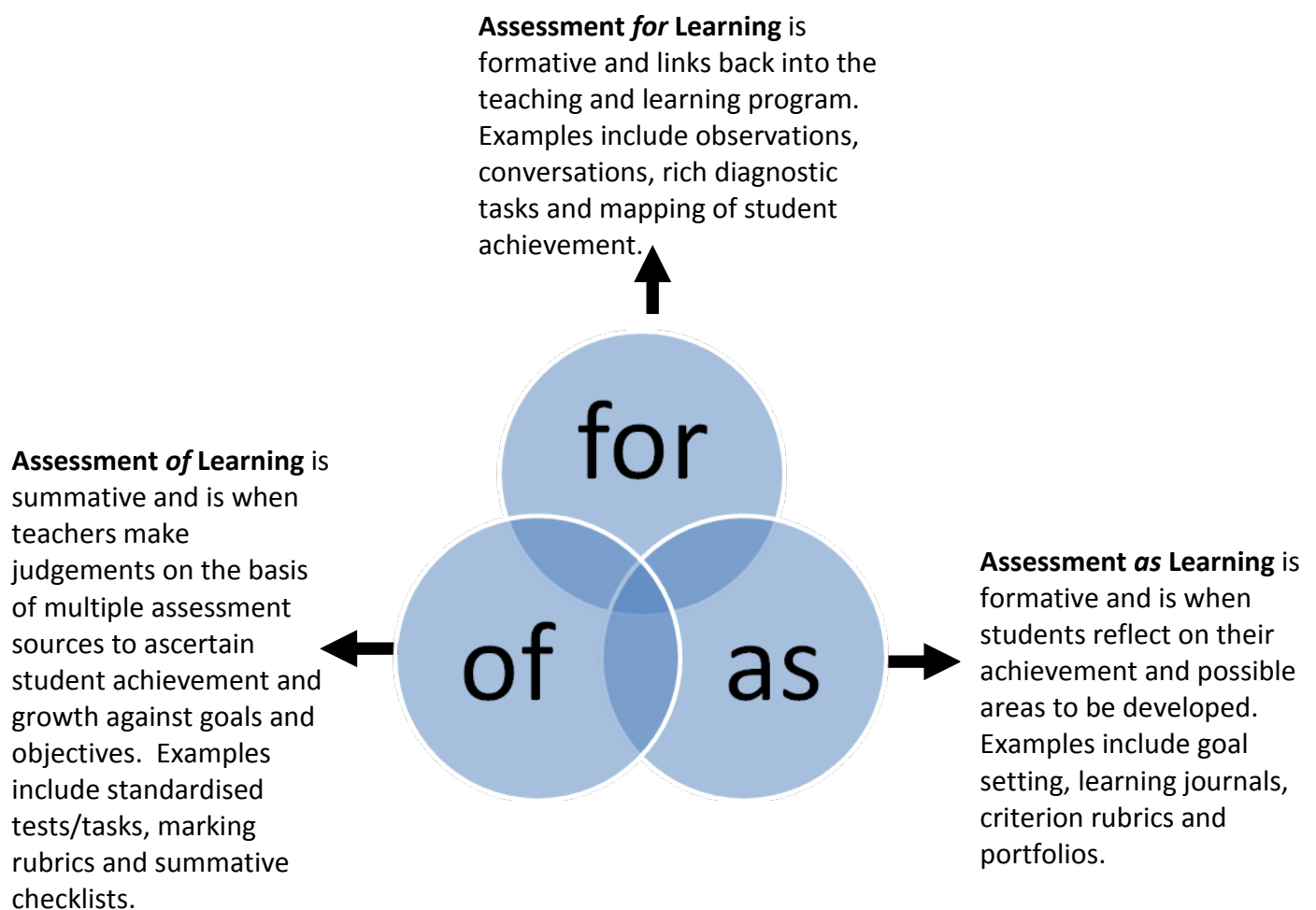
PIPS is conducted in a supportive environment, and is an integral part of the teaching and learning cycle.



Assessment in the early childhood classroom

Assessment

Assessment is an integral part of the teaching and learning process. It is the process of identifying, gathering and interpreting information about students' learning. Assessment should be embedded within daily practice and provide important information that enables teachers to plan teaching and learning experiences that directly support students at their point of need. A range of data collection devices should be utilised to develop a comprehensive and complete picture of each child. It is important that the tools utilised are "valid, educative, explicit, fair and comprehensive" (Annandale, K; et al; 2003, p85). Assessment has three overarching purposes:



Assessment Approaches

1. Assessment *for* Learning

- Is on going and occurs during the unit
- Information gained from assessment activities is used to shape the teaching and learning process
- Learning outcomes and expectations are shared with students
- Constructive and clear feedback helps students understand and plan the next steps in their learning.

2. Assessment *as* Learning

- Students are involved in self-assessment and peer-assessment
- Students reflect on and monitor their own progress to inform their future learning goals
- Students consider strategies for learning and implications for future learning.

3. Assessment *of* Learning

- Determines a student's level of performance on a specific task or at the conclusion of a term/unit/year
- Teacher judgements on student achievement is made against goals and standards
- Involves a moderation process.

Assessment is a continuous process so every activity given to students should provide some information on their learning. The most valuable benefit of a multifaceted assessment program is its impact on subsequent teaching and learning. A clear understanding of the impact and the effects of planned and focused teaching and learning experiences is needed. This can lead to more effective lessons and activities. Ongoing assessment allows for decisions to be made immediately as patterns in students' strengths and weaknesses are observed which then informs future planning.

Using the PIPS assessment tool to inform teaching and learning in the early childhood classroom

PIPS Assessment

Performance Indicators in Primary Schools (PIPS)

The early years assessment program uses Performance Indicators in Primary Schools (PIPS) to assess early reading, phonics and numeracy skills of students in their first year of school. There are two assessments, the first occurring within the first two weeks of school and the second occurring in the first two weeks of term four. The PIPS data is used to identify, as early as possible, students who may need extra support or enrichment. The PIPS data helps teachers plan appropriate learning experiences for every child in the class.

Purpose of the Assessment

The intent of any assessment is to determine what an individual knows in an area. The PIPS assessment is different from other assessments as the focus is not solely on what the student knows and can answer correctly, but how the student goes about determining the answers. Teachers can gain valuable insight through the one-to-one administration of the assessment.

PIPS gives an indication of individual student needs in early literacy and numeracy development. The assessment predicts future performance and assists teachers to identify students who might benefit from early intervention or extension programs. The final assessment provides information on how well students have progressed during the year relative to their starting point. Schools can use this data as one tool to monitor and revise their teaching programs in the next year of schooling.

The results obtained from the assessment can be used to inform teaching practices relevant to the needs of the individual child. It is **one** piece of assessment that provides a snapshot of what is happening for a child at a particular time in their learning. It is important that this assessment is used alongside other forms of assessment. These will include, but are not limited to, teacher judgement, anecdotal records, checklists, observations, running records, letter and number identification and work samples.

PIPS involve **assessment for** and **of learning**. In the first assessment we complete the assessment and use it for learning. It is crucial that teachers use the information they obtain from this assessment to inform future planning for students. The second assessment that is completed later in the year reflects assessment of learning. This information also captures pertinent data for the following years teacher.

This package has been designed to provide teachers with a lens to begin planning effectively to meet the diverse needs of students within a balanced program. It provides a starting point with ideas and links to useful sites and resources to support the development of an inclusive program that addresses the diverse needs of all students.

Links to Every Chance to Learn

The ACT Curriculum Framework identifies the learning that is essential for students as they progress from preschool to year 10 through 25 Essential Learning Achievements. Essential Learning Achievements are statements of what is essential for ACT students to know, understand, value and be able to do from preschool to year 10.

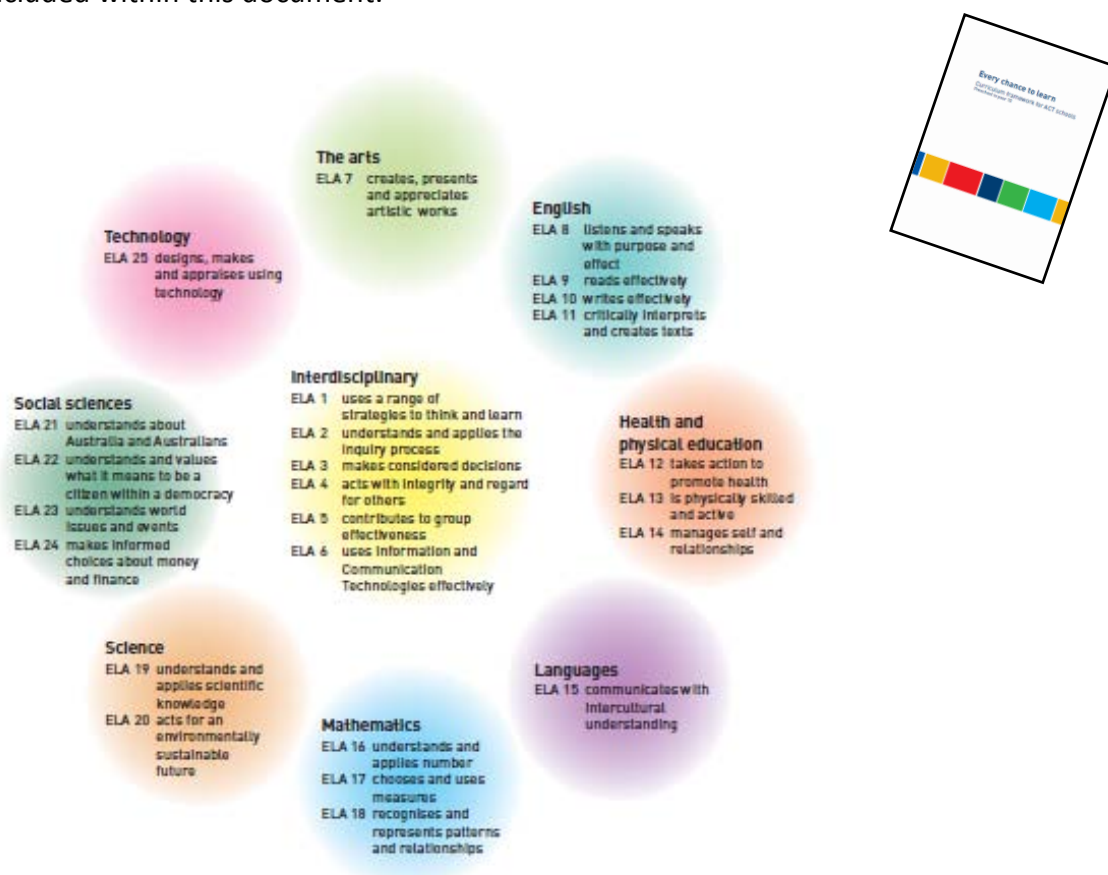
The Essential Learning Achievements for literacy referred to in this document are:

- ELA 8. The student listens and speaks with purpose and effect
- ELA 9. The student reads effectively
- ELA 10. The student writes effectively
- ELA 11. The student critically interprets and creates texts

The Essential Learning Achievements for numeracy referred to in this document are:

- ELA 16. The student understands and applies number
- ELA 17. The student chooses and uses measures
- ELA 18. The student recognises and represents patterns and relationships
- ELA 24. The student makes informed choices about money and finance

The ELAs for both literacy and numeracy have been linked to the assessment task in PIPS and provide the direction for the teaching and learning understandings, strategies and skills that have been included within this document.



Links to the Quality Teacher model

Research has consistently shown that it is the quality of teaching that most directly and powerfully affects the quality of learning outcomes that students demonstrate. Quality teaching is based on the pedagogy that teachers use within their classroom. The pedagogy encompasses the activity that takes place in the classroom and the nature of the learning and assessment tasks set by teachers. In this document the Quality Teaching model has been linked to the planned learning that will result to improve students' understandings, strategies and skills in response to their results in PIPS.

There are three dimensions to the Quality Teaching model.

1. Pedagogy that promotes high levels of ***intellectual quality***
2. Pedagogy that establishes a high ***quality learning environment***, and
3. Pedagogy that generates ***significance*** by connecting students with the intellectual demands of their work.

Intellectual quality and ***significance*** are addressed within the section on teaching strategies. Establishing a high quality learning environment relies heavily on teachers working alongside their students to create positive and productive learning environments that focus on sustained learning. This is difficult to reflect within the strategies, but has been touched on in the section that looks at quality learning environments. Establishing a high quality learning environment contributes to developing and using opportunities for teaching and learning.

Teachers should ensure that all teaching and learning experiences strengthen students' problem solving and reasoning processes as well as representing, communicating and connecting ideas.

Quality Learning Environments

Establishing a quality learning environment is an essential component that contributes to the success of any program. It involves the physical environment as well as establishing routines and building positive and sustainable relationships. When we spend time setting up routines and structures at the beginning of the year, the rest of the program follows. The teacher has an important role in establishing an environment where children are free to learn. Considering Cambourne's Conditions of Learning is one way we can achieve this. They include:

1. Immersion
2. Demonstration
3. Responsibility
4. Expectation
5. Approximation
6. Practice
7. Feedback

The Quality Teaching model has one element that specifically addresses the importance of establishing a quality environment that is conducive to learning. This element says that the element "***Quality learning environment*** refers to pedagogy that creates classrooms where students and teachers work productively in an environment clearly focused on learning. Such pedagogy sets high and explicit expectations and develops positive relationships between teachers

and students and among students” (2006, p9 – ACT DET - A classroom practice guide – Quality teaching in ACT schools).

An environment where there are high expectations, explicit quality criteria, high levels of student engagement, increased time on task and considerable social support provides a safe and supportive place for learning to occur. Research indicates that environments that reflect this have improved student outcomes.

In setting up a supportive physical environment we need to consider:

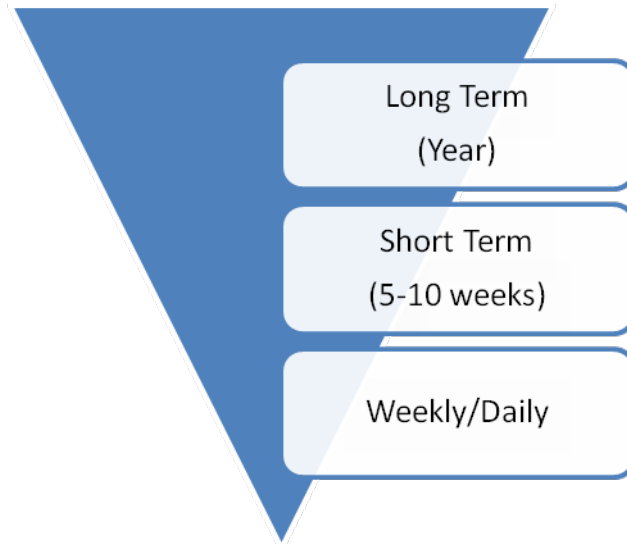
- furniture and space - set up clear spaces where the group can meet together as well as quiet and more active spaces where students can work in small groups. Use the furniture to help create defined areas in the room
- materials and equipment – organise materials and equipment so they are easily accessible to students. Encourage them to accept responsibility for setting up and putting things away. Ensure equipment and materials are clearly labelled. This may include visuals along with labels to assist everyone in storing equipment and materials
- activity or task boards assist everyone to understand what is required for each session. Visual prompts along with individual name labels that can be moved and changed as necessary are helpful.

A Checklist for Analysing the Classroom Environment

- Are there well-defined areas for large, small, and independent work?
- Is the classroom library inviting and well organised?
- Are books easy to find and return?
- Are there books integrated into the work centres?
- Are there numerous displays of written language at eye level-print for “reading around the room”?
- Are management tools such as a work board, helper’s chart, or class rules located within easy view without usurping areas needed for “reading around the room”?
- Are pocket charts being used in several locations?
- Are all materials clearly labelled? Are there some simple, written directions where appropriate?
- Are there resources such as poems, charts, big books, and other print materials readily available for children to read?
- Are all materials organized for easy access and return?
- Are furniture and dividers arranged so that the teacher can have a full view of the classroom?
- Is there a comfortable and well-supplied area for independent reading and writing?
- Are noisy and quiet areas separated?
- Are there neat, usable places to store, remove, and replace student work?

Source: Fountas, I. C; & Pinnell, G. S (1996) Guided Reading – Good First Teaching For All Children; Heinemann: Portsmouth, NH, p51

Planning



Long-Term Planning

Long-term planning sets the scene for the year, providing a very broad overview which needs to reflect school requirements. It may include:

- beliefs about learning and teaching that underpin the program
- a profile of student needs and strengths
- assessment tools that will be utilised. How the data will be collected and stored. When assessment will take place
- classroom organisation – timetable and layout
- resources
- curriculum organiser with overview of integrated units
- essential learning achievements that are relevant
- essential content that is relevant to the band of development
- special events throughout the year that the school will be celebrating or involved in.

Short Term Planning

In short-term planning the focus becomes more specific and detailed. It utilises the broad elements from the long-term plan and links this to the ongoing assessment that occurs. Clear links can be made between other key learning areas. Specific resources required are listed and skills to be targeted are stated along with the content, teaching skills and strategies to be utilised.

Weekly or Daily Planning

A weekly plan needs to be developed that provides detailed information of what will be happening in each session of each day throughout the week. In some areas, additional plans will be developed breaking down the planning process further.

A variety of formats are used for recording long term and short term plans. The following link provides some templates that have been effectively utilised as part of the curriculum development process – <http://activated.act.edu.au/ectl/design/planning.htm>.

Gradual Release of Responsibility Model

Quality programs allow students to be supported with the necessary scaffolds for them to achieve success. The Gradual Release of Responsibility Model (Pearson and Gallagher, 1983) addresses this belief and explicitly guides our teaching and learning practices in all learning areas.

Lessons should begin by familiarising students with the concept or strategy. This has also been called 'tuning in' or 'strategic immersion'.

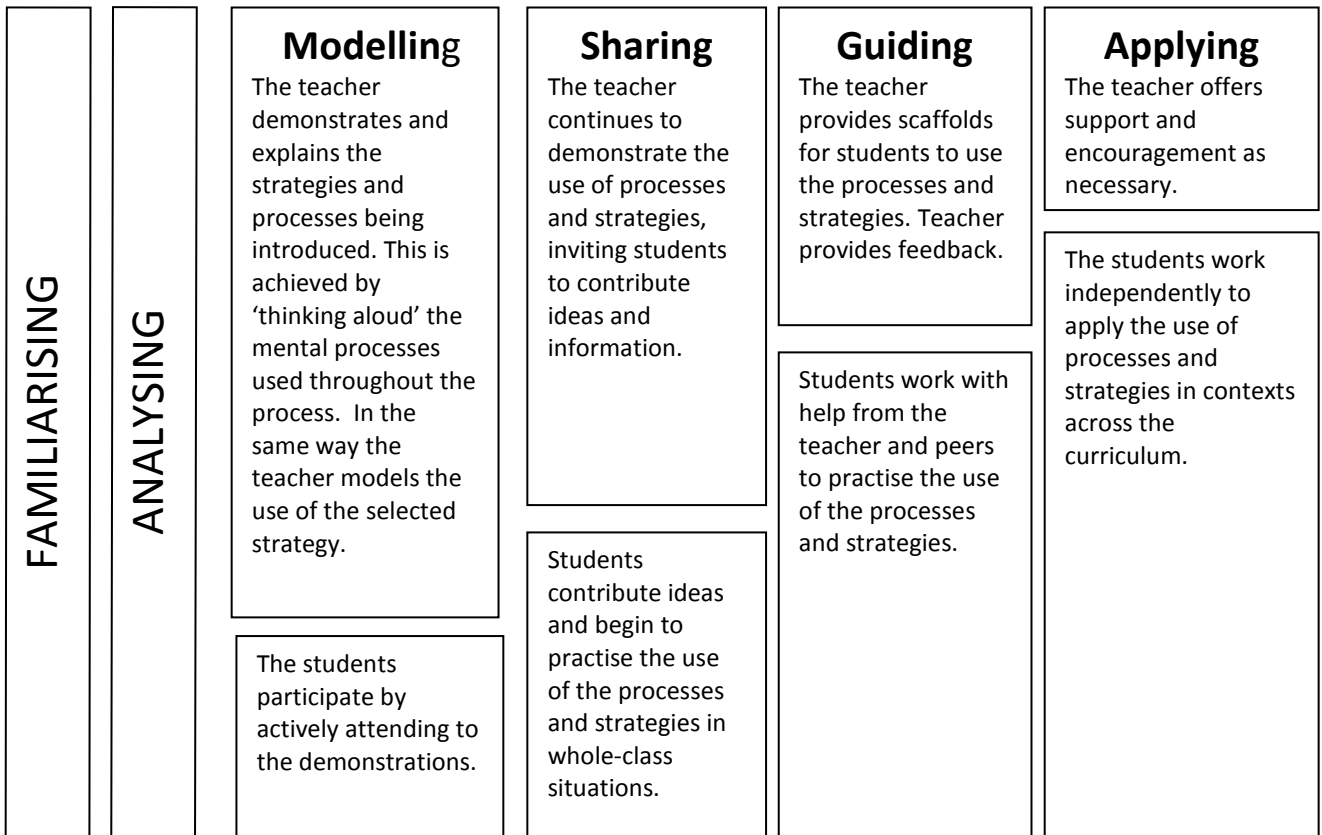
The next step is to analyse the strategy or concept, for e.g. "why is this strategy the most effective to use in this situation?" or "what is the role of the topic sentence at the start of each paragraph?"

Modelling is often used at the beginning of a unit of work or when using specific strategies or processes. While this is vital, it is of paramount importance that the students' need for frequent demonstrations at other key points of the teaching cycle is addressed.

Sharing is when the teacher provides the direction but invites the students to respond. It is an important step in the process of releasing control as students are supported with their ideas.

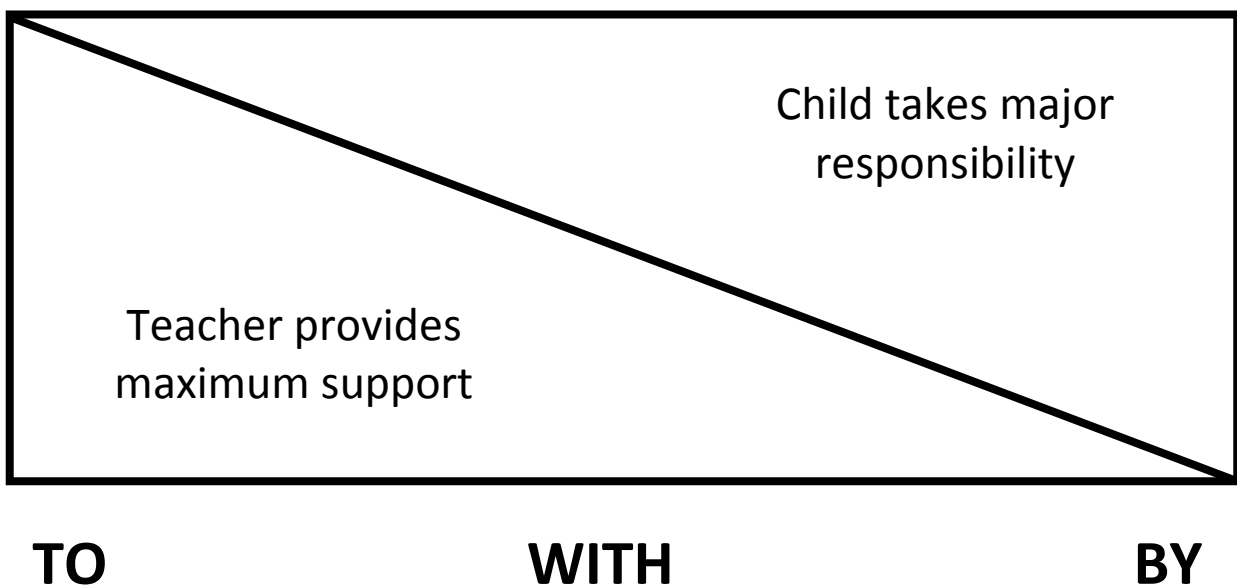
Guiding allows students to 'rehearse' their constructed understandings while having their teacher present and provide feedback.

Applying their understandings and skills independently allows students to be in control of the ideas and information. The teacher continues to support and encourage the students, feeding their observations and evaluations into further planning.



To/With/By Model - Model of teacher /student relationships

Margaret Mooney modified the Gradual Release of Responsibility Model according to the terms "To, With & By" referring to the teacher's role in instructional experiences.



Pearson and Gallagher's (1983) **Gradual Release of Responsibility Model** and the **To/With/By Model** by Margaret Mooney's (1990) both reflect the integral relationship that exists between teacher and student. The way we scaffold learning is crucial to ensure we provide an adequate level of support to ensure students engage with tasks at their optimum level for learning to occur. If there is too much support when it isn't needed we potentially rob students of learning that might have occurred. Alternatively, if we do not provide enough support when a student needs, they become frustrated and shut down. It is our job through careful and continual assessment to know what level of support is required to optimise learning outcomes and success for **ALL** our students. All components of the Balanced Literacy Program are interrelated and support each other.

They link together in two significant ways:

1. by the oral language that surrounds, supports and extends all activities and interactions
2. through the content – what we select as our avenue for learning.

Using this Resource

To assist you in responding to individual and group needs in literacy and numeracy the rest of the document will be broken into different sections as described by the table below.

Literacy	Numeracy
<ul style="list-style-type: none">• Beliefs• Balanced Literacy Program• Components of the Balanced Literacy Program• Programming examples• Linking teaching and learning experiences to PIPs items	<ul style="list-style-type: none">• Beliefs• Balanced Numeracy Program• Components of the Balanced Numeracy Program• Programming examples• Linking teaching and learning experiences to PIPs items

Literacy



Beliefs

Beliefs about Literacy Learners that underpin the Balanced Literacy Program

- bring different background knowledge, experiences and language understandings to their literacy learning
- need and deserve support and learning experiences to be scaffolded to ensure success
- can all make progress in learning to read and write
- have varied abilities and learning needs
- have more to learn about reading and writing at every year level of their schooling.

Children learn to read and write by:

- being immersed in a 'print rich' environment in which print is used in a variety of ways
- observing demonstrations of reading and writing in action
- interacting with teachers and each other around texts that are meaningful
- being exposed to a variety of resources and having access to a range of resources
- ensuring a range of scaffolds are provided - a combination of explicit teaching with more challenging texts and independent reading of 'easy' texts
- working in a variety of groupings
- engaging in a variety of learning opportunities within a predictable and stable learning environment.

The Balanced Literacy Program

Language Experience	Reading	Writing	Speaking & Listening	Visual Literacy
	Modelled Reading	Modelled Writing		
	Shared Reading	Shared / Interactive Writing		
	Guided Reading	Guided Writing		
	Independent Reading	Independent Writing		
Reflection				

A Balanced Literacy Program provides:

- opportunities for children to get their ideas together through talk – the importance of oral language in the acquisition of language cannot be underestimated
- development of the specialised knowledge and language needed for reading texts
- help for children to learn writing skills within the context of their own writing
- support for children to make links between first-hand experience, oral language and books.

Reading Block

Essential Elements of a Reading Block	Role of the Teacher	Role of the Students
<p>Explicit Instruction (10 – 20 minutes) The session begins with the teacher explicitly focusing on a key element of the reading process. It may involve modelling or shared reading. Modelling of effective strategies and procedures occurs. The focus will depend on the particular needs of the children and will vary from one session to the next. A number of mini-lessons will occur within a week. Each session has a very specific focus. These may include:</p> <ul style="list-style-type: none"> • Teaching specific strategies –During these sessions we need to talk aloud what we are thinking and doing to let children in on the secret of reading and the purpose of gaining meaning. <p>It is best to focus on one key element rather than try to cover too many different elements. This leads to confusion.</p>	<p>The teacher takes control of this process, slowly releasing control to students. Students are asked to join in the reading process with the teacher.</p>	<p>Students listen actively and share their ideas and make suggestions.</p>
<p>Guided Reading (20 minutes) Involves working with small groups of children with a common identified need. The needs are identified through taking running records and carefully analysing the miscues. Groups are fluid and change as the students needs change. The focus may include:</p> <ul style="list-style-type: none"> • Fluency • Phrasing • Vocabulary • Expression 	<p>The teacher needs to carefully analyse students work to identify common elements for an explicit teaching focus.</p> <p>Teachers need to group students based on a common need.</p> <p>Teachers need to ‘think on their feet’ and support children in successfully engaging in their writing.</p>	<p>Students are more actively involved in this component.</p>
<p>Independent Reading (15 minutes) During this time students have the opportunity to read their own texts and</p>	<p>Engage students in authentic reading tasks.</p>	<p>Actively involved in all reading tasks.</p>

<p>demonstrate their control of what has been modelled to them in previous parts of the session. During this time children read for real purposes and audiences.</p>	<p>Observe and record what is happening for each child.</p> <p>Provide feedback to students.</p>	
<p>Sharing (10 – 15 minutes) This is a crucial part of each session. Students have the opportunity to share what they have done or are working on as well as share what strategies and processes they have used. It is important to spend time teaching the children how to be critical friends to their peers to ensure this is productive.</p>	<p>Put structures in place for effective sharing.</p> <p>Facilitate the process.</p> <p>Provide feedback.</p> <p>Be an active member of the audience.</p>	<p>Share work with others.</p> <p>Provide feedback to others.</p> <p>Be an effective audience member.</p>

Writing Block

Essential Elements of a Writing Block	Role of the Teacher	Role of the Students
<p>Explicit Instruction (10 – 20 minutes)</p> <p>The session begins with the teacher explicitly focusing on a key element of the writing process. It may involve modelling, shared or interactive writing. Modelling of effective strategies and procedures occur. The focus will depend on the particular needs of the children and will vary from one session to the next. A number of mini-lessons will occur within a week. Each session has a very specific focus.</p> <p>These may include:</p> <ul style="list-style-type: none"> • moving through the writing process – planning, drafting, conferring, refining, publishing • teaching specific strategies – predicting, self-questioning, creating images, determining importance, paraphrasing/summarising, connecting, comparing, re-reading, synthesising, sounding out, chunking, using visual memory, using spelling generalisations, using analogy, using meaning, consulting an authority, using memory aids. During these sessions we need to talk aloud what we are thinking and doing to let children in on the secret of writing. <p>It is best to focus on one key element rather than trying to cover too many different elements. This leads to confusion.</p>	<p>The teacher takes control of this process, slowly releasing control to students.</p>	<p>Students listen actively and share their ideas and make suggestions.</p>
<p>Guided Writing (20 minutes)</p> <p>Involves working with small groups of children with a common identified need. The needs are identified through working with the children and analysing their writing on a daily basis. Groups are very fluid and are rarely the same from one day to the next. The focus may include:</p> <ul style="list-style-type: none"> • punctuation • writing a complete sentence • creating paragraphs. 	<p>The teacher needs to carefully analyse students work to identify common elements for an explicit teaching focus.</p> <p>Teachers need to group students based on a common need.</p>	<p>Students are more actively involved in this component.</p>

	Teachers need to 'think on their feet' and support children in successfully engaging in their writing.	
<p>Independent Writing (20 minutes) During this time students have the opportunity to craft their own texts and demonstrate their control of what has been modelled to them in previous parts of the session. During this time children write for real purposes and audiences.</p>	<p>Engage students in purposeful writing tasks.</p> <p>Observe and record what is happening for each child.</p> <p>Provide feedback to students.</p>	Actively involved in all process of writing.
<p>Sharing (10 – 15 minutes) This is a crucial part of each session. Students have the opportunity to share what they have done or are working on as well as share what strategies and processes they have used. They can receive constructive feedback from others on what they can do to improve their writing. It is important to spend time teaching the children how to be critical friends to their peers to ensure this is productive.</p>	<p>Put structures in place for effective sharing.</p> <p>Facilitate the process.</p> <p>Provide feedback.</p> <p>Be an active member of the audience.</p>	<p>Share work with others.</p> <p>Provide feedback to others.</p> <p>Be an effective audience member.</p>

Weekly Literacy Plan Overview K

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Children select texts from their book box on their table to read. Roll, Calendar, Messages etc				
9:15 Modelled & Shared Reading	Introduce new text. Prediction based on title Read text for enjoyment.	Read text - modelling specific strategies. After reading -deconstruct text – characters, setting, time / comprehension.	Read text – encourage students to join in reading of text. After reading – ask students to find words beginning or ending with selected letters within the text / high frequency words etc.	Read text – encourage students to join in reading of text. After reading – cover selected words in text and have students determine suitable words that could replace the original, but maintain meaning. E.g. Tic, Tac, Toe game	Read text – encourage students to join in reading of text.
9:25 Guided Reading & Literacy Rotations	Two guided reading groups each day + meaningful literacy rotations or task for others to engage in whilst you are working intensely with a guided reading group. These may include: <ul style="list-style-type: none"> • browsing boxes – poetry, Big Books, Guided Reading Text • letter or word study • listening centre – Quality literature with CD or Big Books with accompanying audio • literacy games – alphabet or word sorts • response to shared text – story map, story cube, story board, reconstructing text, personal response. 				
9:55	Brain Gym Activities				
10:05 Modelled, Shared or Interactive Writing	<p>Morning message – write a message in front of the class with the children. Read it together. Point to the words. Have children point to the words. Cut up the sentence. Children put sentence back together. Write a message and put it in an envelope. Children recreate the message using magnetic letters. These can then become part of the literacy rotations.</p> <p>Modelled writing – model the strategies and process involved in writing the selected text form. Begin with planning, then drafting, conferring, refining and finally publishing. Various processes may require modelling over a number of sessions. It will take an extended period to develop and build on the text before it is ready for publishing. This provides a foundation for writing at other times of the literacy block.</p> <p>Shared / Interactive writing – after modelling the processes and strategies involved in writing, jointly construct a text with the class that reflects the text form being explored. Provide opportunities for children to share their ideas and to hold the pen and record their attempts.</p>				
10:15 Guided Writing / Independent Writing - Writers workshop	<p>Guided Writing – work with a small group of students (2-4) based on a common identified need. Support the group to individually create their own text. Ensure you have scaffolds ready to support the children.</p> <p>Independent Writing / Writers workshop – set up meaningful tasks for students to engage in related to what has happened in the modelling, shared or interactive writing sessions. If you are modelling planning, then students may be engaged in planning for their own writing.</p>				
10:35	Sharing and Reflection				
10:50	Literacy Game / Song /Poem				

Weekly Literacy Plan Overview Year 1

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Children select texts from their book box on their table to read. Roll, Calendar, Messages etc				
9:15 Modelled & Shared Reading	<p>Introduce new text. Prediction based on title. Read text for enjoyment.</p>	<p>Read text - modelling specific strategies. After reading -deconstruct text – characters, setting, time / comprehension.</p>	<p>Read text – encourage students to join in reading of text. After reading – ask students to find words beginning or ending with selected letters within the text / high frequency words etc.</p>	<p>Read text – encourage students to join in reading of text. After reading – cover selected words in text and have students determine suitable words that could replace the original, but maintain meaning E.g. Tic, Tac, Toe game.</p>	<p>Read text – encourage students to join in reading of text.</p>
9:30 Guided Reading & Literacy Rotations	<p>Two guided reading groups each day + meaningful literacy rotations or task for others to engage in whilst you are working intensely with a guided reading group. These may include:</p> <ul style="list-style-type: none"> • browsing boxes – poetry, Big Books, Guided Reading Text • letter or word study • listening centre – Quality literature with CD or Big Books with accompanying audio • literacy games – alphabet or word sorts • response to shared text – story map, story cube, story board, reconstructing text, personal response. 				
10:00 Modelled, Shared or Interactive Writing	<p>Morning message – write a message in front of the class with the children. Read it together. Point to the words. Have children point to the words. Cut up the sentence. Children put sentence back together. Write a message and put it in an envelope. Children recreate the message using magnetic letters. These can then become part of the literacy rotations.</p> <p>Modelled writing – model the strategies and process involved in writing the selected text form. Begin with planning, then drafting, conferring, refining and finally publishing. Various processes may require modelling over a number of sessions. It will take an extended period to develop and build on the text before it is ready for publishing. This provides a foundation for writing at other times in the literacy block.</p> <p>Shared / Interactive writing – after modelling the processes and strategies involved in writing, jointly construct a text with the class that reflects the text form being explored. Provide opportunities for children to share their ideas and to hold the pen and record their attempts.</p>				
10:15 Guided Writing / Independent Writing - Writers workshop	<p>Guided Writing – work with a small group of students (2-4) based on a common identified need. Support the group to individually create their own text. Ensure you have scaffolds ready to support the children.</p> <p>Independent Writing / Writers workshop – set up meaningful tasks for students to engage in related to what has happened in the modelling, shared or interactive writing sessions. If you are modelling planning, then students may be engaged in planning for their own writing.</p>				
10:45	Sharing and Reflection				

Writing Plan

Phase: Experimental Writing Form: Recount	Major Teaching Emphasis	Teaching and Learning Experiences	Resources
<p>Purpose: To describe an event</p> <p>Audience: Teacher and peers</p> <p>Writing Strategies:</p> <ol style="list-style-type: none"> 1. Predicting 2. Self-Questioning 3. Creating Images 4. Determining Importance 5. Paraphrasing / Summarising 6. Connecting 7. Comparing 8. Re-reading 9. Synthesising 10. Sounding Out 11. Chunking 12. Using Visual Memory 13. Using Spelling Generalisations 14. Using Analogy 15. Using Meaning 16. Consulting an Authority 17. Using Memory Aids 	<p><u>Contextual Understanding</u></p> <p>Discuss the purpose and audience for a recount.</p> <p>Use of Texts</p> <p>Continue to teach students the metalanguage associated with writing and encourage its use.</p> <p><u>Processes and Strategies</u></p> <p>Model simple ways to plan for writing, e.g. talking, drawing.</p> <p><u>Conventions</u></p> <p>Continue to build phonological awareness and graphophonic knowledge, such as:</p> <ul style="list-style-type: none"> – segmenting words into sounds – linking letters with their regular sounds – representing sounds heard in words with letters written in the order they are heard – recognising that the same letter represents different sounds. 	<ul style="list-style-type: none"> • Morning Message – a message aimed at getting them to begin thinking about their writing to set the scene of a recount • Model planning for writing a recount • Act # 5 (p146) Explorer’s Circle (p146) – Students explore the layout, features and language of a recount. Read a shared text and deconstruct this as a group using visual cards. • Familiarising / Analysing • Planning / Drafting / Conferring / Refining / Publishing • Modelling • Explore the following questions: <p><u>Purpose and Audience</u></p> <ul style="list-style-type: none"> ➤ Why am I writing this text? ➤ Who am I writing for? ➤ What do they already know? ➤ What kind of language do I need to use? <p><u>Content and Form</u></p> <ul style="list-style-type: none"> ➤ What do I want to tell them? ➤ What ideas do I need to include? ➤ What is the best way to get my message across, e.g. letter, list? ➤ How will I organise my ideas? • Model writing a recount based on visual plan. • Shared / Interactive Writing • Create a jointly constructed text • Guided Writing • Based on identified student needs. Conduct a mini-lesson specific to focus area, e.g. extending basic sentences or re-reading what they have written to ensure meaning is maintained • Independent Writing • Children sit knee to knee with a partner and talk to them about the purpose and audience for their recount. • If suitable, children complete a visual plan for their 	<p>Morning message</p> <p>Example of a recount</p> <p>Plan for writing</p> <p>Large sheets of paper and markers for writing</p> <p>Journals for each child</p>

		<p>recounts including – who, when, where, what, why & how</p> <ul style="list-style-type: none"> • Develop a family message journal for each child in the class – Act # 1 – Family Message Journal (p108, Writing Map of Development). When children have written an entry send home for a response. Children can use the response to their entry as a stimulus for their next entry or may choose a new audience and purpose for the next and subsequent entries to their journal • Create a class news book – Act # 9 – Class News Book (p102, Writing Map of Development). 	Class news book
Sharing / Reflection	<ul style="list-style-type: none"> • Provide a variety of opportunities for children to reflect on their learning and explain what they have learnt. Each child shares what we have written orally. 		

Teaching Strategies

Skill Focus: Fine Motor Skills

Strategy

Measures quality of a child's writing-evenness, correct letters and appropriate use of capital letters, incorporating use of fine motor skills.

Activities to support the strategy

Fine Motor Development

Children should have strength and dexterity in their hands and fingers before being asked to manipulate a pencil on paper. Please see attached list of activities that will support the development of fine motor muscles. These can be useful at the start of the day and as an integral part of literacy centres.

Modelled / shared writing

During modelled writing segments within the literacy block each day, explicit teaching of letter formation can become a teaching focus. The teacher will model and also talk aloud what they are doing – how the writing implement is held as well as the way the letter is formed.

Modelled lessons with explicit criteria and expectations for what students will be required to do when they are independently writing. Prior to independent writing students will practice correct letter formation in the air, on a friends back, on the carpet, on small whiteboards, and on the IWB.

Rhymes can also be helpful in assisting students with how to sit correctly – 1, 2, 3, 4 are your feet flat on the floor, 5, 6, 7, 8 is your back up nice and straight, 9, 10, 11, 12 show me how your pencil is held.

Interactive writing

Students can practice correct letter formation when they are contributing to the written text.

Guided writing

The teacher supports students to practice writing using correct letter formation.

Independent writing

Students practice what they have learnt through the teaching cycle. Develop explicit criteria with students regarding expectations.

ELA 10 – The student writes effectively

10.EC.14

Form letters legibly and fluently when handwriting texts, and develop basic keyboard skills for writing electronic texts.

Item

Handwriting 1

QTm Links

Quality Learning Environment

2.1 Explicit Quality Criteria:

Students are given explicit quality criteria in relation to the expectations for writing their own name.

Teaching Strategies

Skill Focus: Vocabulary

Strategy

These screens indicate a student's general vocabulary knowledge and life experiences.

Activities to support the strategy

Later success in schooling is closely linked to early language acquisition. Three elements that are believed to contribute to literacy development and later success include:

- exposure to varied vocabulary
- opportunities to be part of conversations that use extended discourse
- and home and classroom environments that are cognitively and linguistically challenging (sited in First Steps 2nd Edition Speaking and Listening Map of Development p73)

Ways in which we can support the development of vocabulary include:

- sharing rich texts
- through play and social interactions with peers and adults
- participating in speaking and listening regularly with a range of people in varying settings
- model the varying choices of words for different purposes and audiences
- scaffolding new experiences through providing names for new objects or experiences, providing explanations and building on meaning
- provide new experiences to teach new words – picture discussions as well as shared experiences such as excursions, cooking etc that will provide an opportunity to learn new vocabulary for a real purpose
- picture talks
- sorting and classifying activities
- playing games:
 - What can you hear?
 - Guessing Games
 - Comparison Activities
 - Telephone Talk
 - What Did You See?
 - My Grandma Went Shopping

(For further information see the First Steps 2nd Edition Speaking and Listening Map of Development; 2006).

ELA 8 – The student speaks with purpose and effect

8.EC.7

Ask questions, contribute information and ideas, express opinions relevant to the topic, and use statements, questions and commands.

Item

PV Kitchen
PV Country
PV Toy Shop
PV Bedroom

QTm Links

Intellectual Quality

1.6 Substantive

Communication:

Students will be engaging in substantive communication about the ideas and concepts they are encountering.

Teaching Strategies

Skill Focus: Concepts of Print

Strategy

These two screens and items indicate a student's knowledge of concepts of print based on Marie Clay's research.

Additional assessment may be required to identify which concepts need to be focused on for explicit instruction to support the individual needs of the students you are teaching. Marie Clay's "Concepts About Print" assessment task is ideal.

Activities to support the strategy

Modelled and shared reading is a powerful strategy for explicitly teaching children concepts of print. Students need to be able to engage successfully with texts. When a responsive teacher who understands the needs of students, reads and rereads shared books, they explicitly teach concepts of print. An opportunity arises for us to focus discussion and analyse texts with the children.

As we move through the recursive cycle of *reading to, with and by children* opportunities arise for children to learn about:

- "book and print conventions (through the talk that accompanies choosing a book, looking at the cover, reading the title, talking about the pictures, turning the pages, noticing letters, and identifying words)
- point to words as you are reading
- punctuation
- phonemes
- letter and sound relationships
- words
- syntax (as it is modelled)
- semantics (as it is used to predict)
- how readers read (as it is modelled)
- the joy and enlightenment that comes from reading" (Parkes, B; 2000; p26).

When we are reading texts we can develop concepts of print by:

- writing a sentence from the text or a morning message. Read the sentence pointing to each of the words with the children several times. Give individual children the pointer to read. Cut up the sentence. Give each word to a child. Put it back together encouraging pointing at words when reading texts.

ELA 9 – The student reads effectively

ELA – 9.EC.4

Conventions of print (e.g. left page before right, left to right and top to bottom direction of print, sentences, words and spaces, letters and letter order in words, basic punctuation, how illustrations relate to the print).

Item

IAR Classroom & IAR Book

QTm Links

Intellectual Quality

1.2 Deep Understanding:

Students demonstrate deep understanding as they explore deep relationships and explore problems in meaningful and relevant tasks.

Teaching Strategies

Skill Focus: Phonological Awareness & Articulation

Strategy

Gives an indication of a student's understanding of sounds and phonological awareness. Phonological awareness is an important variable in later reading ability. The Repeating Word screen may indicate a more serious problem of speech or hearing.

Further assessment may need to occur to determine the specific needs of a student. It may be necessary to seek a speech assessment with a speech therapist. Therapy ACT has a drop in service and provides excellent professional support to teachers.

Activities to support the strategy

Phonological awareness instruction should be explicitly taught and sequenced in a logical manner. The teacher directs students to identify specific elements of phonological awareness. For instance, if you are looking at rhyme, you may ask the student to provide another word that rhymes with the selected word. You may also ask them to identify the two words within a text that rhyme. Elements that will be explored include:

- rhyme, alliteration, oral blending, oral segmentation, phonemic manipulation.

Activities that will assist in developing these skills include:

- rhyme and Alliteration Activities
- Mr Tongue's House activity
- oral segmentation activities
- phonemic Manipulation Activities
- oral Blending Activities.

ELA 9 – The student reads effectively

ELA – 9.EC.6

Words commonly used in the texts they read (reading vocabulary), and the ways in which sounds are organised in spoken language (phonemic awareness) and represented by letters and letter clusters in print (phonics).

Item

Repeating Words & Rhyming Words
Splitting Words, Making Words & Hearing Sounds

QTm Links

Intellectual Quality

1.4 Higher Order Thinking:

Students are required to organise, reorganise, apply, analyse, synthesis and evaluate their knowledge and understanding of the varying elements of phonological awareness that are explicitly focused on.

Teaching Strategies

Skill Focus: Phonological Awareness

Strategy

The mixed selection of upper case and lower case letters are ordered in difficulty. A child's ability to give the letter or sound name is a good predictor of later attainment.

Additional assessment may be required to determine exactly which letters and related sounds students are able to identify.

Additional assessment can be done and recorded using:

- Marie Clay's Letter identification assessment
- attached letter and sound identification recording sheet.

Activities to support the strategy

Alphabet knowledge and being able to name letters is closely associated with later success in reading. The ability to discern sounds is crucial to later reading success. This needs to be taught directly in context in a meaningful way. Always start with the known and then move to the unknown. Start with the child's name and then move to family members or other words that are important to the child.

Ensure the alphabet is displayed in the room and charts are also visible around the room.

The teaching of phonics should not be in isolation. For it to be most effective it should be taught alongside other cueing systems. It is one important aspect of reading and should not be overemphasised at the cost of the other cues.

Modelled / Shared Reading & Writing

Sharing rich texts provides an excellent opportunity to focus on letter names and associated sounds in context. This can then be followed up through activities throughout the literacy block.

Guided Reading - focus on common letter patterns that occur in the text. Play 'I Spy' to find words that begin with a particular letter or sound

Literacy Rotations

- include alphabet puzzles
- alphabet matching games
- hanging the alphabet on the line
- magnetic letters
- alphabet games – commercial and made (e.g. Bingo)
- picture sorts
- marching around the alphabet.

ELA 9 – The student reads effectively

ELA – 9.EC.6

Words commonly used in the texts they read (reading vocabulary), and the ways in which sounds are organised in spoken language (phonemic awareness) and represented by letters and letter clusters in print (phonics).

Item

Letters

QTm Links

Intellectual Quality

1.3 Problematic Knowledge:

Students address multiple perspectives or solutions, recognising knowledge is constructed and open to question through exploring different perceived relationships.

Teaching Strategies

Skill Focus: Word attack skills

Strategy

Measures reading and word attack skills. It becomes more difficult with harder distracters (e.g. second letters are the same).

Activities to support the strategy

- Visual discrimination activities using texts during modelled, shared and guided reading sessions. Explicitly focusing on elements that are the same and those that are different (see attached handout – Strategies for solving words)
- Physical manipulation of letters in words
- Word study and word sorts to distinguish specific features in words (see handout on word study and word sorts)
- Explicitly teaching graphophonic cues in context and ensuring students are exposed to sophisticated strategies beyond sounding out – think aloud the strategies you are using
- Modelled, Shared and Guided Writing – after jointly creating text:
 - ask students to put a line under a selected word
 - highlight common word patterns
 - find words that sound the same but are spelt differently
 - create lists of words found with a common feature.

ELA 9 – The student reads effectively

ELA – 9.EC.12

Decode new and unfamiliar words using common letter-sound relationships, common visual letter patterns, simple tense and plural endings and a base word, and similarity to other known words.

Item

Words 1 & Words 2

QTm Links

Intellectual Quality

1.4 Higher-order thinking:

Students are encouraged to manipulate and transform information based on the lesson focus.

Teaching Strategies

Skill Focus: High Frequency Word Recognition & Blends

Strategy

Includes words that are common to most reading schemes, those identified as sight reading words for kindergarten as well as phonic blends learned in spelling.

Activities to support the strategy

- Modelled, shared and guided reading on a daily basis (see handout describing each of these)
- Highlighting high frequency words from texts used in modelled, shared and guided reading sessions
- Tic, Tac, Toe – can be played on the completion of reading a shared text. Say the jingle:
“Tic, Tac Toe, Here I go, Where I stop I do not know” as you point to the words in the text. When you land on the word the children need to tell you the word and how they worked it out. What strategies did they use?
- Word walls displayed around the room that are easily accessible and built with the children
- Literacy rotation activities
 - Fishing for high frequency words that have been commonly featured in modelled, shared and guided reading texts
 - Print walks around the room
 - Sight word Bingo
- Word sorts (see handout titled “Word study and word sorts”)
- Flash cards – these need to reflect the words that are in the text that you are reading
- Find little words inside big words – I, at, on, in, am, an, he, she, to, as, and, be etc.

ELA 9 – The student reads effectively

ELA – 9.EC.6

Words commonly used in the texts they read (reading vocabulary) and the ways in which sounds are organised in spoken language (phonemic awareness) and represented by letters and letter clusters in print (phonics).

9.EC.12

Decode new and unfamiliar words using common letter-sound relationships, common visual letter patterns, simple tense and plural endings and a base word, and similarity to other known words.

Item

Story 1

Story 2

QTm Links

Intellectual Quality

1.2 Deep understanding:

Students are encouraged to make connections between central ideas and the relationships between and among these ideas.

Teaching Strategies

Skill Focus: Reading

Strategy

Assesses reading skills

Activities to support the strategy

Opportunities for children to engage in purposeful reading on a daily basis are essential if they are to become proficient and effective readers. Throughout the daily literacy block opportunities arise for children to develop their knowledge, skills and understanding of the reading process. Teachers play a crucial role in scaffolding learning experiences to suit the diverse and varying needs of all students. Using the gradual release of responsibility framework to plan experiences ensures we provide the required support to ensure students are successful. The role of the student and teacher varies throughout the elements of the literacy block (see attached handout). We need to plan experiences during:

- modelled reading
- shared reading
- guided reading
- independent reading.

Focused explicit teaching of a specific skill or strategy that reflects the needs of students is crucial. Keeping the focus narrow is also useful to avoid overload and confusion in students.

ELA 9 – The student reads effectively

ELA – 9.EC.11

Use strategies to self-monitor their reading for meaning and to search for and use meaning, word order and visual information (or cues) to detect and self-correct errors when meaning is lost.

9.EC.13

Read texts in a phrased and fluent way to gain meaning and enjoyment.

Item

Sentences

QTm Links

Quality Learning Environment

2.3 High Expectations:

Identify prior learning of students and monitor their progress in order to develop high levels of conceptual risk with the students learning.

Teaching Strategies

Skill Focus: Word selection to maintain meaning / word identification / Word selection

Strategy

Similar to cloze test but students are given a choice of words

Activities to support the strategy

Use Big Books, shared texts or guided reading material. After the children are familiar with the text, cover selected words (cloze) and talk about the words that would fit in there. Talk about how we could work out an unknown word. The following process outline by Garry Carter (1990, p23) will assist:

- Predict what the unknown word might be by considering:
 - What word would make sense?
 - What word would fit the language structure?
 - What word would start or finish with the letters in the word?

Variation

- Try the 'bionic person' trick:
 - Cover the unknown word.
 - Pretend you have a bionic eye and see through the post-it note.
 - Predict what would make sense and fit the language.
 - Expose the first letter and match the prediction.
 - Match prediction with the other letters.

Ask the questions:

- Does it look right?
- Does it sound right?
- Does it make sense?

Explicitly teach reading strategies that will assist students in decoding unknown words, whilst maintaining meaning. These are clearly outlined in First Steps 2nd Edition Reading Resource Book (2004, pg 114-123 & p169). These include:

- predicting
- re-reading
- reading on
- adjusting reading rate
- sounding out
- chunking
- using analogy
- consulting a reference.

It is important that you think aloud the strategies you model.

ELA 9 – The student reads effectively

ELA - 9.EC.11

Use strategies to self-monitor their reading for meaning and to search for and use meaning, word order and visual information (or cues) to detect and self-correct errors when meaning is lost.

9.EC.13

Read texts in a phrased and fluent way to gain meaning and enjoyment.

Item

Walking to school
Cats

QTm Links

Intellectual Quality

1.4 Higher-order thinking:

Students respond to questions that can have multiple answers or possibilities within the reading experience.

Numeracy



Beliefs about the Balanced Numeracy Program

- Opportunities for all children to explain their mathematical thinking (metacognition)
- A variety of learning opportunities
- A range of representations of the same concept
- A balance of explicit teaching, jointly constructed understandings and independent learning
- A growing sense of mastery in numeracy

The Balanced Numeracy Program

In the primary school classroom a balanced numeracy program will provide students with the opportunity to develop the specialised knowledge and language needed for conceptual understanding and applying mathematical concepts. Students will be presented with a range of representations of the same concept. Delivery will include a balance of explicit teaching, jointly constructed understandings (modelled and guided) and independent learning. A variety of opportunities for students to work mathematically and explain their mathematical thinking would be provided and be reflected in the range of assessment tools used.

When referring to a 'balanced numeracy program the term 'balanced' does not necessarily imply 'equal' but suggests a range of competing components that must be taken into account.

Warm Up	Whole Class Activity	Modelled Maths	Reflection
		Guided Maths	
		Independent Maths	

Components of the Balanced Numeracy Program

Warm Ups

The numeracy block starts with the whole class working together. This is a warming up or tuning in experience where students work together on a strategy or skill that will be developed further in the whole class activity.

Examples could include:

- finger plays
- skip counting
- chants
- songs
- big book
- movement activities (make a group of 4, make a small shape etc)
- counting with the 100's chart
- flash cards
- number games (Guess my number)

Whole Class Explicit Teaching

The whole class focus builds a community of mathematics learners focused on a common aspect of numeracy. This may be a modelled approach where the teacher introduces or revisits a new concept. It could also be a shared approach where the teacher and students jointly work through the process. When using a shared approach the teacher prompts students, questioning and supporting them as they reinforce, modify and extend their skills and understandings.

Modelled/Guided/Independent Maths Groups

Groupings occur with the approach determined by the needs of the students.

Modelled maths is brief and dynamic. The teacher introduces the learning experience, demonstrates effective strategies and makes explicit the mathematics to be focused on in the session. The teacher “thinks aloud”. The students observe, ask questions and, directed by the teacher, model the strategies for themselves, explaining their workings.

Guided maths involves the teacher guiding a small group of students with like needs as they think, talk and work their way through a mathematical experience. Following a brief introduction by the teacher, students have the opportunity to choose strategies and materials they will use. The teacher elicits responses from the students to determine their concept development (and misunderstandings!) – it has to be more than “I did it in my head”.

Independent maths follows directly after a guided maths session where students work individually with the teacher prompting and helping at each student’s point of need. Students engage in independent mathematics directly related to the work they were doing in their small teaching group.

Reflection

Reflection or whole class share time can be done in many ways. It may be recording the strategies they used in a maths journal, articulating to the group the process or problem-solving technique they used in the session or the teacher might record the key concepts in a class big book.

Teachers might also use a cooperative learning tool or structure to allow students to reflect on their understandings.

It is the teacher's role to:

- emphasise connections
- encourage sharing of strategies
- make the mathematics explicit
- raise challenges
- promote a language to talk about mathematics
- encourage students to reflect on what they have learned, how they learned and what assisted them in their learning.

How?

Warm-Up:

- partner Bunny Ears showing number combinations to 20
- forward and backward number word sequences
- guess my rainbow pair (near the middle? odd or even?)
- stand up count up (number facts to 20).

Whole Class Experience: (modelled / shared maths)

- recognising the different ways we can make 10
- number facts to 20 using rainbow facts poster, and a variety of concrete materials such as unifix cubes, paddle pop sticks, rainbow cards. This strategy is related to the more sophisticated bridge-to-ten addition and subtraction strategy (students will work with this strategy throughout year 1 and 2)
- articulating that two odd numbers can make 20 or two even numbers can make 20 (if appropriate/needed engage in discussion around whether 0 is an odd or even number – it is neither and works as a place holder).

Teacher Group

- | | | | |
|--|--|---|---|
| <input type="checkbox"/> Koala ten frames (numeral recognition)
<input type="checkbox"/> Ten frame jigsaw | <input type="checkbox"/> Monkey Maths balance
<input type="checkbox"/> Ten frame jigsaw | <input type="checkbox"/> Monkey Maths balance
<input type="checkbox"/> Number bond join up on 100s chart | <input type="checkbox"/> Rainbow Cards (to 20)
<input type="checkbox"/> Looking at further number bonds (to 30,40, 50 etc) |
|--|--|---|---|

Groups

Blue	Green	Orange	Purple
T	Gingerbread man to 20	Problem Solving Mat	Lolly Jar Game
Subitising Memory	T	Gingerbread man to 20	Before and After (skip counting)
Butterfly Match Up to 10	Before and After (to 20)	T	Problem Solving Mat
Gingerbread man to 10	Butterfly Match Up to 20	Lolly Jar Game	T

Reflection:

- brain Microphone
- class Reflection Book
- puzzle picture.

Skill Focus: Ideas about Maths - Measurement

Size

Key ideas include:

- focus on language of comparison, e.g. heavy/light, long/short, full/empty, deep/shallow and bigger/smaller
- provide opportunities to compare objects using informal units, e.g. hand spans, feet, steps taken, paddle pop sticks, jugs, jars etc. This develops early concepts needed to understand attributes such as formal units.

Teaching Strategies:

- drawing around hands and feet – to recognise size ('big' and 'little') and to decide which objects are big and small in relation to self
- using blocks to make paths and discuss whether students have made long paths or short paths
- estimating and comparing foot length and height
- cutting out two different sized triangles and superimpose to find out which one has the greater area
- predicting which container will hold the most beans.
- taking turns to decide who has the heaviest and lightest bags
- predicting whether four objects are heavier, lighter or about the same as another student's four objects. Objects could include feathers, shoes, hats, cotton balls, leaves etc.
- making growing patterns that increase (or decrease) by more than one and start with numbers/quantities other than one or zero
- using scales to compare objects.

ELA 17 the student chooses and uses measures.

17.EC.4

Identify, distinguish and name the attributes of shapes and objects with respect to length, area, mass, capacity and volume.

17.EC.5

Directly compare shapes and objects through physical manipulation, estimation and measurement using informal units, and use various strategies to judge whether a measure is 'less than', 'about the same as' or 'more than' a given unit.

17.EC.8

Use concrete materials and measuring equipment (e.g. balance scales) to explore and represent equivalence.

17.EC.9

Use appropriate language when comparing and ordering objects in relation to the same attribute (e.g. 'the same', 'more than', 'less than', 'longer', 'shorter', 'wider', 'narrower', 'larger', 'smaller', 'heavier', 'lighter', 'holds more', 'holds less', 'before', 'after').

Item from PIPS:

Ideas About Maths (IAM)

QTm Links

Intellectual Quality

1.4 Metalanguage:

Teachers and students are engaged in high levels of talk about language.

Skill Focus: Ideas about Maths - Number

More/Less Than

Key ideas include:

- encouraging multiple representations in number, e.g. symbols, pictures, stories, physical objects etc
- language development for comparison, more than/less than, the same as
- in number, students should be provided with opportunities to compare group size by subitising, counting and one-to one-matching.
- Compare:
 - Objects with objects: *Which has more?* ●●● or ●●
 - Objects with symbols: *Which has more?* ●●● or 3
 - Symbols with symbols: *Which has more?* 5 or 8

Teaching Strategies:

- number line coat hangers – forming number lines from understanding, can use objects to support concept
- comparisons using subitising cards
- counting and comparing groups of objects
- using objects in their direct environment, e.g. are there more boys or girls? Are there more chairs or tables? Using big book pictures for stimulus etc
- comparisons using IWB activities, using the screen shade for covering and revealing.

ELA 16 The students understands and applies number

16.EC.1

The concepts of counting and ordering whole numbers.

16.EC.6

The language of numbers to do with counting, naming and ordering.

16.EC.9

Make whole numbers larger or smaller by adding or subtracting 1, 10 or 100.

16.EC.16

Talk about their observations and ideas about situations involving number in their own words.

Item from PIPS:

Ideas About Maths (IAM)
Counting

QTm Links

Intellectual Quality

1.3 Metalanguage:

Teachers and students are engaged in high levels of talk about language.

Skill Focus: Identifying single, double and triple digit numbers

Key ideas include:

- multiple representations of numbers, i.e. words, symbols, pictures
- matching the number name to its symbol
- develop understanding in the following sequence
 - 1-4
 - 0
 - 5-9
 - Multiples of 10
 - Teen numbers
 - Other two-digit numbers
 - Three-digit numbers.

Teaching Strategies:

- using ten-frames
- number cards matching to various forms, i.e. dots, pictures, symbols, words etc. and games such as snap, concentration, go-fish etc.
- order numbers in their various forms, using washing lines or physical number lines as examples
- state missing numbers in sequences
- Bingo
- using MAB to develop language around conceptual understanding
- bundles of straws to build multiples of tens
- songs and rhymes around number naming.

ELA 16 The students understands and applies number

16.EC.6

The language of numbers to do with counting, naming and ordering.

16.EC.8

Say, read, write, count and order whole numbers to at least 1000.

16.EC.16

Talk about their observations and ideas about situations involving number in their own words.

Item from PIPS:
Numbers

QTm Links

Intellectual Quality

1.2 Deep Understanding:

Students demonstrate deep understanding as they explore problems in meaningful and relevant tasks.

Skill Focus: Counting

Key ideas include:

- learning number names
- number sequence (initially from 0 to 20) (Forward Number Sequence, then Backward Number Sequence)
- one-to-one correspondence when counting
- last number in the count is the total
- counting on from any starting point
- writing number symbols (initially from 0 to 20)
- instantly recognising collections of up to 6, i.e. not by counting.

Teaching Strategies:

- provide opportunities to count collections (forwards and backwards)
- include counting in daily routines such as marking the roll
- identify numerals in a variety of situations
- recognising numbers in the environment and discussing their meaning
- songs and rhymes to develop the number sequence and one-to-one correspondence
- subitising with more than one collection, i.e. one group of 2 and one group of 3, with a total of 5
- concentration , snap and matching games, matching objects to objects , and objects to symbols
- using an IWB to count collections, include covering up of objects
- use picture books and big books
- use 5 and 10 frames
- count on number tracks and number lines
- board games such as snakes and ladders
- kinesthetic activities e.g. get into groups of 4, counting steps
- 100's chart games and exploration
- SCOOTLE learning objects e.g. number trains, scale matters: ones.

ELA 16 The students understands and applies number

16.EC.1

The concepts of counting and ordering whole numbers.

16.EC.6

The language of numbers to do with counting, naming and ordering.

16.EC.8

Say, read, write, count and order whole numbers to at least 1000.

16.EC.10

Count collections fluently by ones, twos, fives and tens.

Item from PIPS:

Numbers
Counting

QTm Links

Intellectual Quality

1.2 Deep Understanding:

Students demonstrate deep understanding as they explore problems in meaningful and relevant tasks.

Skill Focus: Simple Number Problems

Key ideas include:

- understand the language around addition, subtraction and sharing
- recognise symbolic representations for addition and subtraction
- use basic strategies such as counting on from the larger number to solve (think big, count small)
- count back by ones and developing more efficient strategies
- partitioning and combining numbers in a variety of ways
- recall facts to 5 and develop facts to 10
- bridging to nearest 10.

Teaching Strategies:

- Hands-on materials to model number problems in a variety of contexts
 - Subtraction as a difference (add-on)
 - Subtraction as a take-away
 - Subtraction as a count-back
 - Addition as a total of two sets
 - Addition as counting on
 - Addition as combining more than two sets
- counting on into a container that already has contents inside
- using 2 ten-frames to demonstrate bridging to 10
- bundling of materials into groups of 10
- using materials to partition numbers in different ways, i.e. 8 is 5 and 3, and also 6 and 2
- using stories to build language of addition and subtraction
- subitising and describing how students view the number represented
- songs and rhymes to help with forward and backward number sequence
- using hand puppets for turn-around facts to 5
- hands for make 10 facts
- IWB for manipulating objects, making different groups and strategy building and discussion
- acting out stories that involve number problems
- using a number line as a tool, i.e. physically, written, IWB, counters on a number line etc.
- dice games – using dot and symbol dice.

Some Material Examples:

- unifix cubes, counters, paddle-pop sticks, sand and water play, puppets, pencils, clothing, pencils, food items and trays, toys – big and small, various representations of number lines such as washing lines.

ELA 16 The students understands and applies number

16.EC.7

Create, interpret and solve practical problems involving whole numbers.

16.EC.12

Create problems based around addition or subtraction and use concrete materials, sketches and diagrams to model and solve them.

16.EC.13

Recall addition and subtraction facts to 20 or use efficient strategies to work them out.

16.EC.14

Calculate mentally using tens and ones appropriately.

16.EC.16

Talk about their observations and ideas about situations involving number in their own words.

Item from PIPS:

Sums A

Maths 1

QTm Links

Intellectual Quality

1.4 Higher order thinking:

Students are required to organise, reorganise, apply, analyse, synthesise and evaluate their knowledge and understanding of number in a range of contexts and problems.

Skill Focus: 2D Shapes

Key Ideas:

- identify common two-dimensional shapes using everyday language
- draw 2D shapes
- sort 2D shapes according to their properties
- identify 2D shapes by their geometric name.

Teaching Strategies:

- use the language of 2D shapes (circle, round, square, rectangle, straight, diamond, corner, triangle)
- identify shapes in illustrations, stories, school environment
- make shapes using their bodies
- make shapes using objects such as rope, toothpicks and straws
- mystery bag- students feel a shape inside a bag or with their eyes closed and describe it's properties
- make pictures from 2D shapes (e.g. pattern blocks) and describe what they have used
- shape bingo
- sing songs and rhymes about shapes
- match shapes and their names
- use a IWB to rotate shapes and discuss how it does / does not change
- use IWB to sort shapes according to their properties – choose classification properties themselves as well as teacher directed
- barrier games – whereby a student describes a hidden shape to another
- trace common shapes.

ELA 18. The student recognises and represents patterns and relationships.

18.EC.2

Common 2D shapes and 3D objects.

18.EC.13

Recognise, sort, group, draw and make models of common 2D shapes and 3D objects and describe them using everyday language and geometric names.

Item from PIPS:

Shapes

Matching shapes to the groups they belong to

QTm Links

Intellectual Quality

1.4 High order thinking;

Students are required to organise, reorganise apply, analyse, synthesise and evaluate their knowledge and understanding of shapes in a range of contexts.

Skill Focus: Formal Mathematical Concepts - Fractions

Key Ideas:

- a fraction is part of a whole
- half is 1 of 2 equal size pieces
- a quarter is 1 of 4 equal size pieces.

Teaching Strategies:

- model and describe half/quarter of a whole object, e.g. a cake, pizza or a collection of objects
- cut shapes and boxes in half
- match fractions together to make whole shapes/collections
- recognition of one half of a shape and one half of a group – pictures – organise and sort into correct categories
- write a story about a half – draw pictures. Cut and paste the pictures on coloured paper etc. Share. Make into a wall chart
- use IWB to halve objects and match 2 halves together
- highlight examples of ‘doubles’ in everyday events and objects, reflect on how doubles relates to halves
- students make their own doubles domino cards using sticky dots
- encourage students to find, make, draw and show doubles using materials and pictures e.g. egg cartons, calendars
- model doubles with MAB, money words and symbols
- reflect on fractions we see in everyday life, e.g. half a sandwich, quarters of oranges etc.

ELA 16 The students understands and applies number.

16.EC.3

The fractions of a half and a quarter.

16.EC.6

The language of numbers to do with counting, naming and ordering.

16.EC.11

Recognise representations of halves and quarters (e.g. by halving objects and collections and quartering by repeated halving) and mixed numbers involving these fractions.

16.EC.16

Talk about their observations and ideas about situations involving number in their own words.

Item from PIPS:

Sums B

QTm Links

Intellectual Quality

1.4 Problematic Knowledge

Students address multiple perspectives or solutions, recognising knowledge is constructed and open to question through exploring different perceived relationships.

Skill Focus: Formal Mathematical Concepts – Knowledge of patterning

Key Ideas:

- understand that pattern is the arrangement of shapes, numbers and actions that follow a given criteria
- identify and describe patterns for example colours, shapes
- continue a pattern.

Teaching Strategies:

- clapping simple rhythms and discussing the pattern
- creating action patterns (hop, skip, hop, skip)
- discuss repetitive features of stories and big books e.g 'We're Going on a Bear Hunt'
- line-up patterns such as boy/girl/boy/girl, stand/sit/stand/sit
- use the IWB to demonstrate patterns have students predict what comes next and reveal
- use IWB have students drag objects to continue a pattern
- string beads to make patterns
- arrange classroom objects to make a pattern e.g. counting bears, coloured counters
- follow directions to create or continue patterns
- use printing material to create artworks representing patterns
- take photos of patterns in the school area and put them on the IWB for discussion
- explore odd and even number sequence
- number pattern investigations using hundreds chart and number lines
- buzz games
- explore learning objects in SCOOTLE e.g. monster choir, colour patterns etc.

ELA 18. The student recognises and represents patterns and relationships.

18.EC.1

Patterns and sequences involving repetition and regular increase and decrease.

18.EC.10

Explore strategies such as searching for similarity, difference and repetition and use these to make sense of the mathematics they are learning.

18.EC.11

Recognise, describe and create patterns and sequences and identify whether they involve repetition or regular increases or decreases.

18.EC.12

Analyse patterns, determine the rules that apply and continue and create patterns.

18.EC.18

Create and follow step-by-step instructions about simple procedures where order or the sequence of actions is important.

Item from PIPS:

Sums B

QTm Links

Significance

3.5 Connectedness

Students engage in learning that has value and meaning beyond schooling.

Skill Focus: Formal Mathematical Concepts – Mental Computation Strategies

Key Ideas:

- providing students with mental images efficient for calculation e.g. number line, 10-frames
- partitioning numbers for efficient calculation.
e.g. $7 + 4$ is the same as $(=) 7 + 3 + 1$
or $12 + 21 = 10 + 20 + 2 + 1$
or $18 + 14 = 20 + 12$

Teaching Strategies:

- develop subitising
- use of 10 frames, hundreds charts and unifix
- ask questions to develop thinking strategies not just an answer
- learning objects on Count Me In Too website
- use verbal stories
- ask students to form mental images in head. E.g. Show five ducks on the IWB. Ask students to imagine 2 have flown away. How many are left?
- use a number line to check mental counting on and counting back
- use 10 frames and number cards with dots to develop doubles and near doubles
- explicit teaching of strategies:
 - think big, count small (counting on from larger number when appropriate)
 - counting on in efficient partitions (jump method)
 - using known number facts (doubles, near doubles, make ten facts)
 - number partitioning (split method, not just tens and ones however) and recombining
 - use commutative property where appropriate
- for further strategies see 'simple number problems'.

ELA 16 The students understands and applies number.

16.EC.4

Operations of addition and subtraction with two-digit numbers and strategies for solving addition and subtraction problems, including counting, using concrete materials, and breaking apart and combining numbers.

16.EC.9

Make whole numbers larger or smaller by adding or subtracting 1, 10 or 100.

16.EC.13

Recall addition and subtraction facts to 20 or use efficient strategies to work them out.

16.EC.14

Calculate mentally using tens and ones appropriately.

16.EC.16

Talk about their observations and ideas about situations involving number in their own words.

Item from PIPS:

Maths 1
Sums B

QTm Links

Intellectual Quality

1.2 Deep Understanding:

Students demonstrate deep understanding as they explore problems in meaningful and relevant tasks.

Skill Focus: Formal Mathematical Concepts – Knowledge of Money

Key Ideas:

- recognise coins and notes
- understanding that to buy something money needs to be exchanged.

Teaching Strategies

- role play – using money in ‘real life’ situations
- modelling and painting – printing with coins, coin rubbings, moulds in modelling dough
- play trays – sorting coins into groups
- construction technology – making simple money boxes big enough for 10 coins
- desk to counting activities – counting 10c coins in groups of ten, laying coins in a pattern
- excursions to the school canteen
- IWB coins – shop background, drag and choose items.

ELA 24 The student makes informed choices about money and finance.

24.EC.1

Forms of money e.g. coins and notes, plastic cards).

24.EC.3

The meaning of prices (e.g. the amount of money you need to buy particular goods and services).

24.EC.7

Recognise Australian coins and notes.

24.EC.8

Use money to buy basic goods and services (e.g. identify price and money at hand, check change given).

24.EC.9

Compare prices of similar items.

Item from PIPS:

Sums B

QTm Links

Significance

3.5 Connectedness:

Students engage in learning that has value and meaning beyond schooling.

References

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Websites:

Websites are a great way of quickly accessing resources from all over the world. There are many interactive games that easily highlight difficult concepts in both literacy and numeracy that are great to use within your balanced literacy and numeracy program. However, it is vital that you review each website you are intending to use BEFORE using it in the classroom, looking not only for developmentally appropriate material but checking for advertisements and pop ups as well. Please use your professional judgment when reviewing these websites, as websites change rapidly and not all of the websites listed below are based in Australia nor controlled by the ACT Department of education.

ACT Department of Education and Training – Balanced Literacy

[www.det.act.gov.au/teaching_and_learning/literacy_and_numeracy/early_literacy_and_numeracy_officers_elno/elno - literacy program](http://www.det.act.gov.au/teaching_and_learning/literacy_and_numeracy/early_literacy_and_numeracy_officers_elno/elno_-_literacy_program)

This link will take you to the ELNO - Literacy Program page. The ELNO program ended in 2009 to be replaced by Field Officers. On this page you will find a brief description of each of the essential elements of the Balanced Literacy Program. For further information or Professional Learning in this area, look on the Professional Learning Calendar or contact the Literacy and Numeracy section.

ACT Department of Education and Training – Balanced Numeracy

[http://www.det.act.gov.au/teaching_and_learning/literacy_and_numeracy/early_literacy_and_numeracy_officers_elno/elno - balanced numeracy](http://www.det.act.gov.au/teaching_and_learning/literacy_and_numeracy/early_literacy_and_numeracy_officers_elno/elno_-_balanced_numeracy)

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Therapy ACT Phone (02) **6205 1277**

<http://www.dhcs.act.gov.au/therapyact>

Therapy ACT is a program area of the Department of Disability, Housing and Community Services. It provides a range of multidisciplinary therapy and support services for people with delays in development and developmental disabilities aged from birth to age 65. On this website you will find contact details (south and north side), information about drop in clinics as well as a description of the range of services offered including speech pathology, physiotherapy and autism assessments.

Jenny Eather Maths Dictionary

www.teachers.ash.org.au/jeather/maths/dictionary.html

This is an interactive math dictionary for kids and teachers. A number of mathematical terms from all strands are listed and in most cases an interactive pictorial example is given. Technical language is used in most definitions so this website can be a great support to your explicit teaching of mathematical terms and concepts.

BBC Schools Ages 4-11

www.bbc.co.uk/schools/websites/4_11/

This is a UK website produced by the BBC. It provides links to many different resources that could be used by teachers to support their classroom practice, parents to support their child's learning at home or students during their independent learning or free time. Most pages include lesson plans, a 'how to' guide, an interactive site and follow up work sheets. Please be advised that as this page essentially links you to many other pages, you will need to review the websites each time before using them in the classroom.

Be a Mathematician

www.beam.co.uk

Be A Mathematician – the Early Years and Primary maths specialists – is a website based in the United Kingdom. Their website has links to free resources as well as an option to subscribe to updates and newsletters.

Scoutle

www.scoutle.edu.au

Scoutle is the portal used to access Learning Federation objects. Most ACT teachers would be familiar with the MyClasses website and the problems between MyClasses and Learning Federation – Scoutle has solved this. Your school will need to register in order to access Scoutle and each teacher will have their own log on. It is a completely free resource and at the time of publishing does not contain any advertising material. Teachers can design a 'learning path' for students to follow based on a series of learning objects. To register

Count Me in Too

www.curriculumsupport.education.nsw.gov.au/countmein/

This website is a NSW based website for the count Me In Too program. It has great interactive activities that can be used as a diagnostic assessment for that area or as activity as part of a math rotation. There are also links to resources that can be purchased through NSW DET and professional readings. A great website to use and refer throughout the year.

Woodlands Junior

www.woodlands-junior.kent.sch.uk/

Woodlands Junior School in Kent, UK has a range of interactive websites and games listed on their school webpage. Down the right hand side is a box titled 'student pages', of which both the 'literacy zone' and 'math zone' are listed. These 'zones' provide links to a number of websites, organised under topic headings and some with brief descriptions. Lots of handy sites to use as part of a literacy or numeracy rotation.