HYPOTHESIS

Explicit small group teaching of the RIDER (*R*ead, *I*magine, *D*escribe/*D*raw, *E*valuate, *R*ead On) strategy will improve visualization skills and the ability to comprehend text.

ABSTRACT

Reading is a complex and challenging process. Yet for many students with learning difficulties there is an issue of underperformance rather than ability. Recurrent experience of failure and negative perceptions of themselves as a reader are major obstacles for their learning. Students who believe they are poor readers simply read the words because they are told to read, they do not read with a purpose of finding out. They 'bark' text and can not make a connection between the text and comprehension of what is being read.

Good readers are able to use a variety of strategies to comprehend what is read, they monitor their reading and are able to decide when to re-read or self-correct their reading. They are purposeful and active. A student with sound reading strategies can create images in their minds to represent the ideas presented as they read.

This study examines the use of small groups in the classroom to explicitly teach the RIDER strategy to three grade five and grade six students. It investigates the improvement of reading comprehension through the use of visualization. This study highlights evidence from researchers who have found that when students use visual cues and self-questioning strategies their ability to comprehend improves.

Research has shown that working in small groups in a literacy classroom ensures active participation of students. Group work enables students to move from receiving knowledge to generating knowledge. Through talk students are able to personalize their knowledge and scaffold their thinking processes and understandings to assist with their comprehension.

This study has implications for teaching in the Literacy classroom. Students with learning difficulties need explicit small group focus and time to practice. They need to be given adequate time to respond to questions based around comprehension of the text so that new skills become resident and a natural part of their thinking. The necessity of the use of visualization strategies in today's classroom and the implication of such teaching are discussed.

INTRODUCTION

The underlying problem

Schools continue to provide programs based on research, designed to improve the outcomes of students at risk. For many, particularly in the middle school, literacy is an area of learning where students fail to meet satisfactory standards. Professor Peter Hill and Carmel Crevola from the University of Melbourne developed the CLaSS project in 1997 and worked closely with the Catholic Education Office to provide professional development for teachers. Its focus, however, is on word decoding for students in the first three years of schooling. Subsequently, from this primary focus students become word callers, a word caller merely states words and is unable to understand the meaning of the stated words. (Raines,2004) According to the simple view of reading proposed by Hoover and Gough, (1990) and refined by Chen and Vaellutino (1997), reading can be divided into two parts; decoding and comprehension. Therefore to be a proficient reader an individual needs to be capable of decoding at word level and at deciphering meaning from print. Students need further support at all levels to bridge the gap to better comprehension and learning. A lack of understanding of what is being read leads to a lack of interest in reading and an increase in reluctant readers.

Current Relevant Research

There is a vast amount of research related to reading acquisition, reading difficulties and strategies used to help improve the reading process. This paper addresses a small constituent within this research.

The primary purpose of reading is to extract meaning from text. Understanding text involves the ability to identify words, attach correct meaning to those words, relate the ideas to prior knowledge and keep the train of thought active enough to process the information in short term memory. Comprehension also involves the recall of facts,

identification of main ideas, inference, prediction, evaluation and drawing of conclusions. As Rubin (2000, p171) states, reading comprehension is a 'complex intellectual process involving a number of abilities.'

Sometimes comprehension difficulties arise from the student's lack of vocabulary knowledge. If there is a serious mismatch between a student's own expression and receptive vocabulary level and words used in the text, the student will obviously have difficulties understanding. According to Lubliner and Smetana (2005), students with poor vocabulary find it difficult to read and alternatively resist reading, learn fewer words in the classroom and consequently fall further behind. There is therefore a need to devote more time to word study and vocabulary building when comprehension activities are used and a necessity to pre-teach unfamiliar vocabulary to students before a text is read.

Reading occurs by processing text on a number of different levels. The Multiple Levels of Text Processing [MLOTP] model (Munro, 2005) is a framework that outlines these levels and demonstrates developmentally how we acquire literacy knowledge. The model can be aptly used to pinpoint reading problems which then enables the teacher to develop an effective teaching strategy for the student concerned. The model confers that existing knowledge is a priority in the development of reading.

The model describes text processing at five different levels. In order to be a competent reader a person must process at the word level, the sentence level, the conceptual level, the topic level and the dispositional level. When working at the sentence level a good reader is able to visualize and paraphrase. They know that using the strategy of translating mental images into simple drawings and mind movies through visualizing helps to support reading comprehension. At the conceptual level a student will be able to link ideas and sentences and can confidently predict, anticipate and infer ideas and feelings.

Hibbing & Rankin-Erickson (2003) found that students who lack the ability to create visual images in their head when reading were also those who experienced comprehension difficulties. It was noticed that many reluctant and low ability readers with comprehension difficulties were unable to describe the pictures in the minds as they read. Research on students' use of mental imagery demonstrates that comprehension of

text is enhanced when the students are prompted or taught to use mental imagery. (Hibbing & Rankin-Erikson, 2003)

If students are able to develop mental movies in their mind as they read, then their potential for understanding the text is increased. If students are not able to develop images because they are using all their mental energy to decode words or their personal experiences have limited their background knowledge, external visual images can be used to support comprehension. By supporting students with picture books, sketches or movies it provides students with information to build their internal images and assist them respond to the text.

Hibbing & Rankin-Erickson (2003) use the analogy of a television in the mind to help students to realize that there is more going on than just reading the words. They emphasis the importance of the pictures readers make matching the words that they read. Drawing a sketch can inform the teacher about a students' level of understanding of a text and also assist the student with the holding of information.

Training students in visual imagery has been a successful technique designed to enhance the comprehension of low progress students. Teaching children to construct mental images as they read enhances their ability to generate inferences, make predictions and remember what has been said. (Gambrell, 1981; Gambrell and Bales, 1986; Pressley, 1976; Sadoski, 1985)

Research by Harvey and Goudvis (2004) regarding visualization techniques and the readers ability to 'carry on an inner conversation with the text' is supported by Wood & Endres (2004) who taught the elements of imagine, elaborate, predict and confirm strategy to students before, during and after reading to enhance comprehension. It focuses on children closing their eyes and using their senses to imagine an event or character and enables students to become engaged participants while reading. It emphasizes the importance of discussing text as it is read and how the recall of prior experiences can assist with understandings when pausing before, during and after reading.

Clark, Deshler, Schumaker, Alley and Warne (1984) devised the RIDER strategy to assist students with poor visual imagery skills. The strategy consists of:

Read   Read the first section of the text.

Imagine   Try to place a picture in your mind

Describe   Describe your image (or draw it)

Evaluate   Evaluate the image for completeness. Adjust the image if content from the sentence is missing.

Read On   Read the next sentence and repeat the steps.

The RIDER strategy targets the visual imagery component of reading comprehension. The students read a passage and create visual images by visualizing the content. The use of an acronym RIDER teaches text processing strategies that promotes comprehension and self regulated monitoring. Children who experience comprehension difficulties need explicit teaching of the strategies of paraphrasing and verbalizing. Teaching children how to identify and select appropriate strategies to use when reading assists with their ability to attend to detail more closely, describe main ideas in their own words and process the content of the text.

Present Study

The purpose of this study is to investigate whether the explicit teaching of visualization through the RIDER strategy will improve student comprehension. A salient feature of poor comprehenders is their failure to remember and understand connected text. This study covers the researcher's analysis after working with students of average ability at the word level, but with poor reading comprehension. The students do not appear to make inferences when reading, nor do they integrate ideas from different sections of text to form a coherent representation in the same way as more able comprehenders do. The independent variable for this study is the ability to visualize with the support and understanding of the RIDER strategy. The dependent variable is improvement in levels of comprehension.

The hypothesis:

Explicit small group teaching of the RIDER strategy will improve visualization skills and the ability to comprehend text.

METHOD

DESIGN: The investigation uses an OXO design where students will be explicitly taught to use the RIDER strategy to improve literal and inferential comprehension. It is evident that there is some discrepancy between student comprehension levels and reading fluency. Poor readers have less than adequate self management strategies in place and therefore require additional small group support. Progress development was monitored through small group lessons with students in Year 5 and Year 6 who performed poorly in literacy indicating weaknesses in reading comprehension skills.

SETTING:

This study took place in a Primary School in the Eastern area of Melbourne. The school has an enrolment of approximately 196 students. There are both composite and straight grade year levels with one class of Year 5 and one class of Year 6 students. Both senior classes have 23 students. The school is situated in a high socio-economic area with a low level of multiculturalism or learning difficulties. There are high expectations of teaching and learning placed on both teachers and students.

PARTICIPANTS:

Three students were chosen from the Year 5 and Year 6 classrooms (6 in total – three males and three females). Results from the 2008 beginning of year testing indicated that these students were "at risk", they were the same students who received intensive small group Literacy intervention in the middle years of schooling. These students produced results evident of poor Literacy learning in all areas of the curriculum, however there were particular weaknesses in their ability to respond to text. Two of the Year 6 females have received one on one additional literacy comprehension and vocabulary support and assistance during their time at school and three of the six students were participants in the Reading Recovery program. Two of the six students had failed to meet the Year Five Literacy Benchmark at the end of 2007 and were offered funded tutoring through the Department of Education to support their learning. The group all displayed low self efficacy scores and poor self management skills. They expressed their dislike of reading because they gained little enjoyment from it. It is interesting to note that two of the students also entered the junior school from other schools where literacy problems were also highlighted.

The Year Five and Year Six class results were combined during this project and the lowest six were chosen for further investigation. Three students were randomly selected to be in the intervention group and the other three were used as the control group. The purpose of the control group during the project was to have data to compare with the intervention group to assist with determining whether teaching visualization techniques through the RIDER strategy actually improved student's levels of comprehension.

Students' Name	Age	Male or Female	Reading Level	Background Information
STUDENT A	11ys 10mths	Male	28	He has experienced difficulties in reading since the beginning of school. He participated in the Reading Recovery Program for 20 weeks in 2004 at his previous school. He has worked in small group literacy groups since 2005, he has not been withdrawn for additional literacy support due to behavioural issues. He says he likes reading but he is 'no good at it' and he forgets easily. He has a low self efficacy which is also attributed to his general school behaviour. In 2008 he works with a tutor at home once a week. They work on word attack skills as he relies almost exclusively on distinctive visual features to decode.
STUDENT B	10yrs 8mths	Female	27	She is one of the youngest students in the class. She has received extra literacy support in small group situation since 2006. She participated in the Reading Recovery Program for 20 weeks in 2004. She has had additional support with the comprehension programs STARS and CARS and was withdrawn from the classroom in 2006 to participate in a Corrective reading Program. Student B displays problems across all levels of the Munro MLOTP model. She has low self

				efficacy and there is little indication of self management skills. She achieved below the expected benchmark standards in Year Two. She says sometimes she can't remember what she reads and she gets confused about what some of the words mean.
STUDENT C	11yrs	Male	28	He has experienced difficulties in reading since the beginning of school. He received additional support in small group situations from 2006-2008, focusing on word attack skills. He has had additional support with the comprehension program STARS and CARS where focus has been on reading strategy skills. He is disinterested in reading and in some areas of school life. He experienced a family loss during 2006 which affected his learning and desire to learn. Student C does not have a good grasp of oral language and has difficulty articulating his ideas clearly. He experiences short term auditory memory problems.
STUDENT D	12 yrs 1mths	Female	27	Student D dislikes reading, finds it boring and avoids reading where possible. She has a poor attitude to learning and low self efficacy. Her articulation when reading is poor and she reads in a monotone voice without any expression. Although she has difficulties in reading she was never offered Reading Recovery. She is part of small group intensive literacy sessions in the classroom where her oral language knowledge and word level skills are targeted however high absenteeism from school inhibit progression in her learning.

				There is little support from home. In 2007 she was offered tutoring support through the Department of Education as she failed to reach the National Standards Benchmark however this was not taken up at home.
STUDENT E	12 yrs 2mths	Female	26	Student E has experienced learning difficulties from the beginning of school (not just in literacy). In 2003 she was part of the Reading Recovery Program. In the classroom tasks are broken up in more manageable parts to scaffold her learning and she requires explicit instruction in decoding and comprehension skills and constant focus to complete tasks. She works through an Individual Learning Program. She has good oral language skills and finds conversing with adults easy. She demonstrates problems at the word, sentence and conceptual level of the Munro MLOTP model. She has trouble decoding words which inhibits her comprehension. She has struggled to reach the expected benchmarks in reading in all years of schooling and has a low self efficacy.
STUDENT F	11yrs 9mths	Male	27	Despite Student F's learning difficulties, he has a good attitude to learning. He is aware of his weaknesses and happy at school however he is very critical of his own ability and often comments on the response being wrong before a discussion or correction takes place. He has not been a part of the Reading recovery Program and has not participated in specific intervention in or outside the classroom.

MATERIALS

The following materials were used:

PM Benchmark Kit 1 & 2

The PM Benchmark kit has 30 leveled texts that can be used as a basis of assessment for literal and inferential comprehension. The kit provided meaningful unseen texts for the students during their small group instructional sessions. It assesses the literal and inferential comprehension and spontaneous retelling of students. The kit has books leveled using the Fry's Readability scale. PM text levels 29 & 30 were used for pre and post testing respectively.

Torch (Tests of Reading Comprehension) Second Edition.

Torch provides teachers with assessment data on the student's ability to construct meaning from a text. The test is conducted as a cloze reading activity. The test was administered to Students A-F as a pre and post assessment tool. The post testing provided information on the student's growth in reading comprehension levels.

PROBE

PROBE measures literal, reorganization, inference, vocabulary, evaluation and reaction comprehension skills. This was used for pre and post testing purposes. Passages were selected based on their reading age. In addition the Guided Comprehension questions supplied in the manual, which measured comprehension at the literal, inferential, vocabulary, evaluation, re-organisation and reaction levels. Students were also asked to give a spontaneous retelling of the story and this was analysed according to comprehension at the literal level only.

John Munro Spontaneous Retelling Analysis

This test was used to record and assess the main ideas students were able to recall. It was used as a pre and post test analysis.

RIDER cue cards

Students designed their own cue cards to use during their instructional sessions. This helped them to commit the RIDER acronym to memory.

PROCEDURE

For this research task, the following tests were administered during pre testing.

1. Self Efficacy Test – to gage an understanding of the children's thoughts on themselves as a reader.

1. TORCH Tests of Reading Comprehension. 2nd Edition
("Donna Dingo" & "Cats")
2. John Munro Spontaneous Retelling Analysis
3. PROBE Reading Assessment (Triune 2002)
4. PM Benchmark Tests. Kit 1 & 2.

Pre testing all students in both intervention and control groups took place one week before the Intervention group of students commenced. The intensive intervention was administered in a small group situation. This was decided partly due to time constraints and partly because it provided scope for reciprocal learning.

Students from Year Five and Year Six classrooms participated in five sixty minute sessions over a two week period. The sessions were held in the classroom as part of a small group literacy rotation activity. The double sessions were conducted three times a week from 9:20 – 10:20am. During the intensive sessions students were taught the RIDER strategy and familiarized themselves with the acronym to assist them with their reading comprehension skills. Work was also completed as a whole class using the strategy allowing the intervention group to practice their new skills.

PRE TEST

- **Torch Test – "Donna Dingo" & "Cats"**
- **Five Self Efficacy Questions developed by the researcher**
- **PROBE Reading Assessment (Triune 2002)**
- **Spontaneous Oral Retell using PM Benchmarking Kit 1 Book –"65 Million Years Ago" Level 30**

The researcher facilitated the sessions as part of the normal classroom routine. To commence students engaged in a short discussion about Reading and how they view

themselves as a reader. The following questions were asked to gain information about their self efficacy.

- Do you enjoy reading?
- What part of reading do you find difficult? Why?
- What do you do when you read?
- What are some of the things that help you to work out difficult words?
- What are some of the things you do to help you remember what you read?

The focus of the first two sessions (lessons 1-4) was the explicit teaching of the visualisation strategy. The reading strategy used was 'Reading To' students. The focus of the third session (lessons 5-6) was having students apply the techniques to reading with teacher and peer scaffolding. This was a 'Shared Reading' approach to the sessions. The fourth, fifth and final sessions (lessons 7-10) were the independent use of the strategy to assist with comprehension. The strategy was a 'Guided Reading' approach. At the conclusion of each session students attempted to retell the text.

At the end of the teaching sequence, students were tested on an individual basis and discussions were held about what they had learned during the sessions. The PROBE test was the final test administered to both the intervention and control group, to assess any gains made by the students following the intervention. The students in both the intervention and control group were asked to read a Narrative, selected according to reading age, pause at intervals and complete the steps involved in the RIDER strategy and retell.

At the end of the ten teaching lessons all students in both Intervention and Control Groups were involved in post testing one week later.
All students (both in the Intervention and Control Group) were administered the following tests during Post Testing:
POST TEST

- **TORCH Test – "Donna Dingo" – Seen Text & "Cats" – Seen Text**
- **Five Self Efficacy Questions developed by the researcher**
- **PROBE Reading Assessment (Triune 2002)**

- **Spontaneous Oral Retell using PM Benchmarking Kit 1 Book – "65 Million Years Ago" Level 30.**

Comparative Data was collected during pre and post testing for all Students. Anecdotal notes were made during lessons about the student's achievements during the Intensive teaching phase for the Intervention Group (Students A-C).

STEPS FOLLOWED

Step One: **R**   Read passage to the students

Step Two: **I**   Break down information into smaller parts and ask students how they might draw or imagine each piece of information within the text. A discussion was held with students about how a picture of what was read could be made in their minds. They were asked to imagine the picture and draw it ensuring they include all they can remember from the image created in their minds. The mind was referred to as a television screen where a movie of the text could be played. Eventually they would just use the image in their mind.

Step Three: **D**   The students were asked to cover their drawing and describe what it was they had drawn, again ensuring that all details were included. Later they simply described what they had in their mind ensuring the skills of visualization are embedded into their working memory and it can become automatised.

Step Four: **E**   Re read the information they have described together as a group. Discuss whether they have left out any relevant information. Evaluate responses and decisions together.

Step Five: **R**   Continue to read on and revisit the process after each section of information has been read.

PRE TEST DATA for TORCH [Intervention (A-C)and Control group(D-F)]
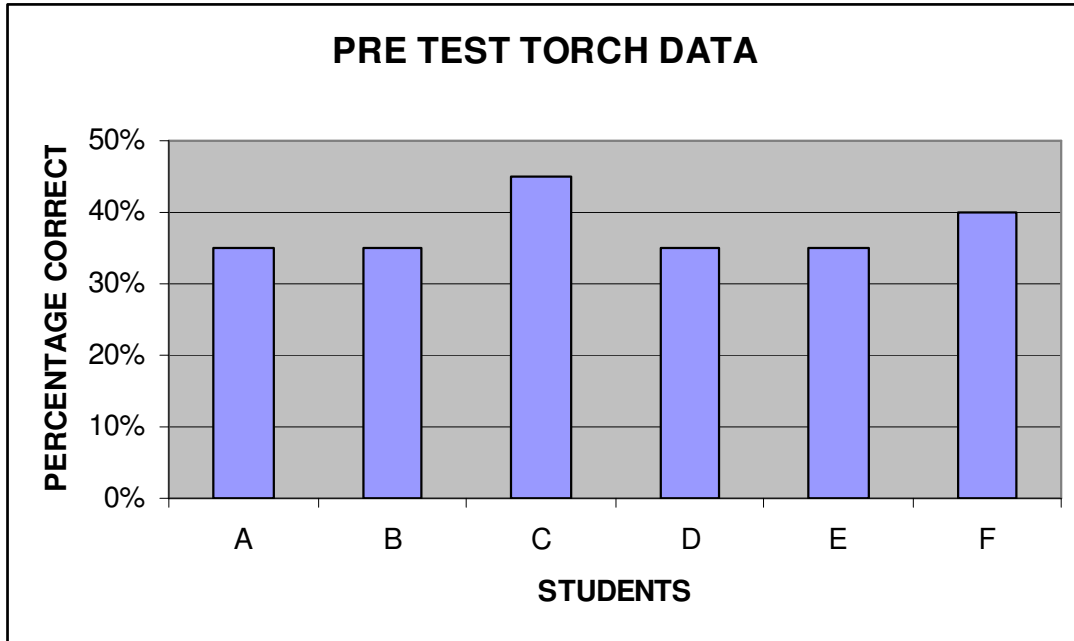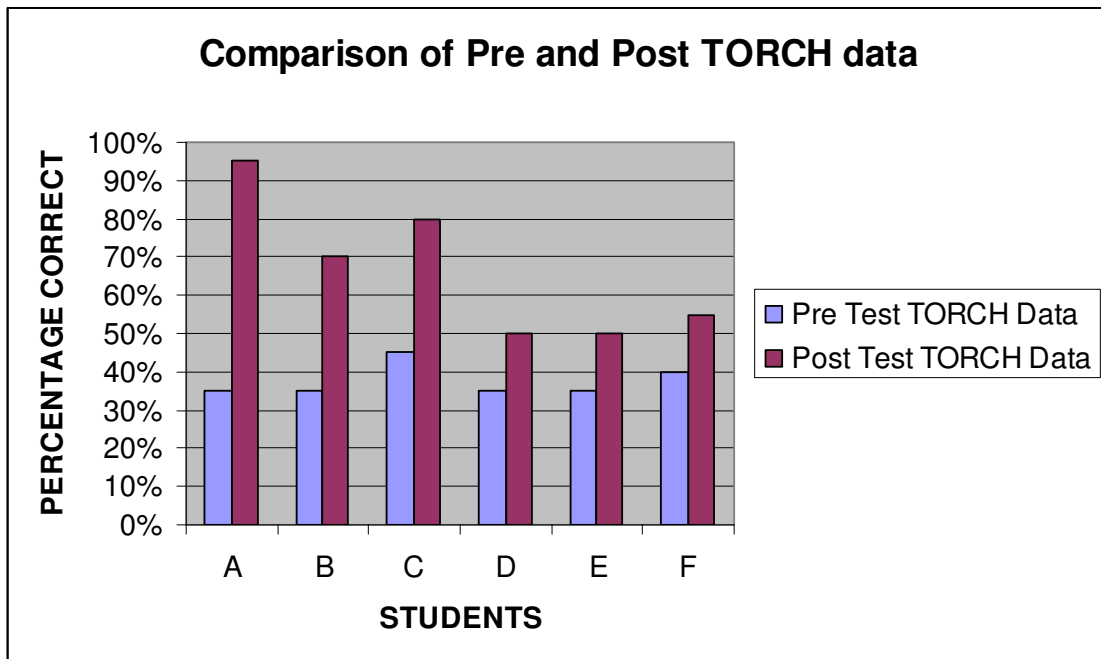
Figure 1:

Figure 1 shows that the six students chosen from the Year Five and Year Six classrooms performed low level comprehension after analysis of the TORCH test. The intervention and control group all hover around the 40% mark for comprehending and responding to text.

Figure 2:

After Pre and Post testing with all Students A – F and the ten intensive teaching lessons to the Intervention Group Students A – C were completed some interesting results were observed. In Figure 2 above, the graph shows that all students made improvement in the TORCH test measuring comprehension on the text – Donna Dingo(yr5) & Cats(yr6). This test was first administered one week before the formal teaching and then again three weeks later. During the Pre Testing phase Student B, E & F did not attempt to fill all of the gaps. Student B & F were deemed to be feeling under pressure and anxious about the testing at the conclusion. Student B failed to attempt five of the 19 answers, Student E failed to attempt four of the 19 answers and Student F failed to attempt three. The results show that whilst all students made gains students that received the intension teaching made the most significant. Student A made gains of 60% on the post test approximately three times greater that his initial attempts. Student B and Student C increased by 45%. It was encouraging that all Students were able to answer all questions the second time.

PRE AND POST TEST RESULTS – PROBE [Intervention (A-C)and Control group(D-F)]

Figure 3:
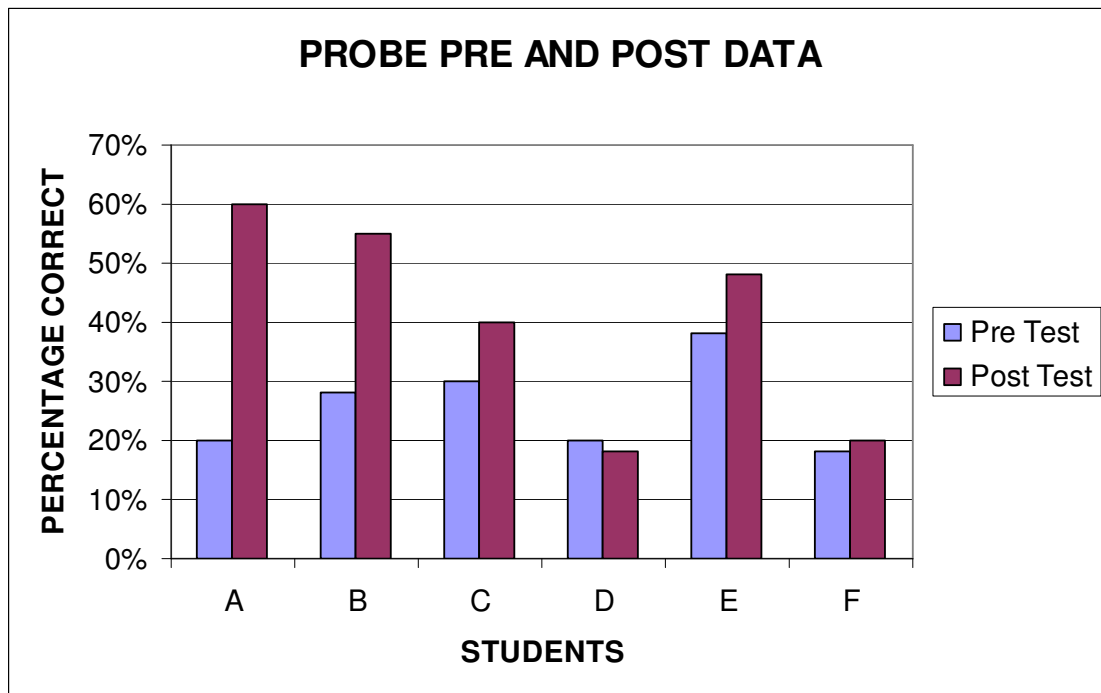
This graph shows the results of Unseen Texts using PROBE to measure gains in comprehension of text. An oral reading record was also taken during the testing to assess fluency and word decoding skills.

Student A's PROBE post test score showed a remarkable improvement after using the RIDER strategy to assist with his comprehension skills. An increase of 40% accuracy also attributed to the increase in his confidence and the feeling of success as a reader he began to experience as he moved through the guided teaching phase. Gains were not as great in the control group with Student D actually regressing slightly during the post testing. Student F made only a small gain of 1%.

PRE AND POST TEST RESULTS – SPONTANEOUS RETELL
[Intervention (A-C)]

Figure 4:
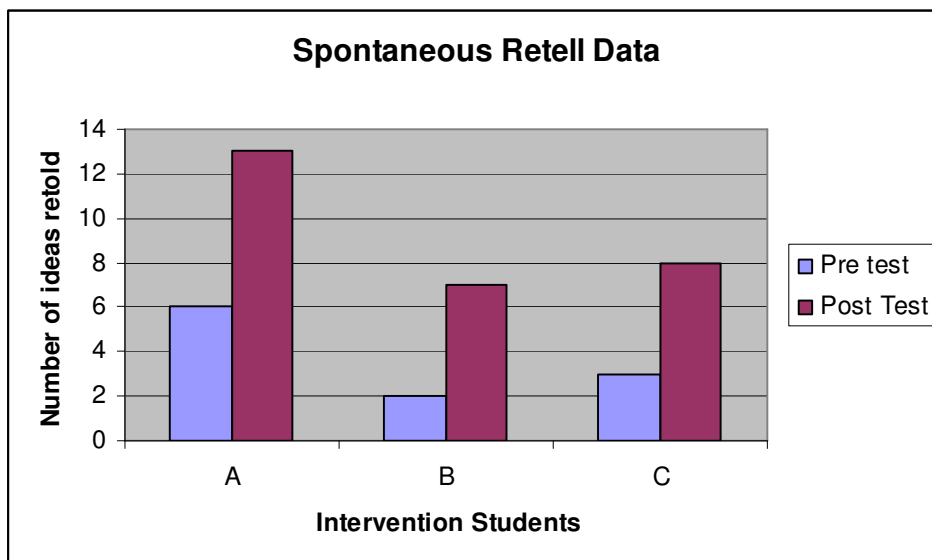
On the spontaneous retell test all students made considerable learning gains. Student A increased their recall by over 100% and Student B increased her recall of the text by 250%. Student C increased his recall by more than 166%. This was achieved after the intensive small group teaching.

INTERVENTION SESSION RESULTS

Figure 5:
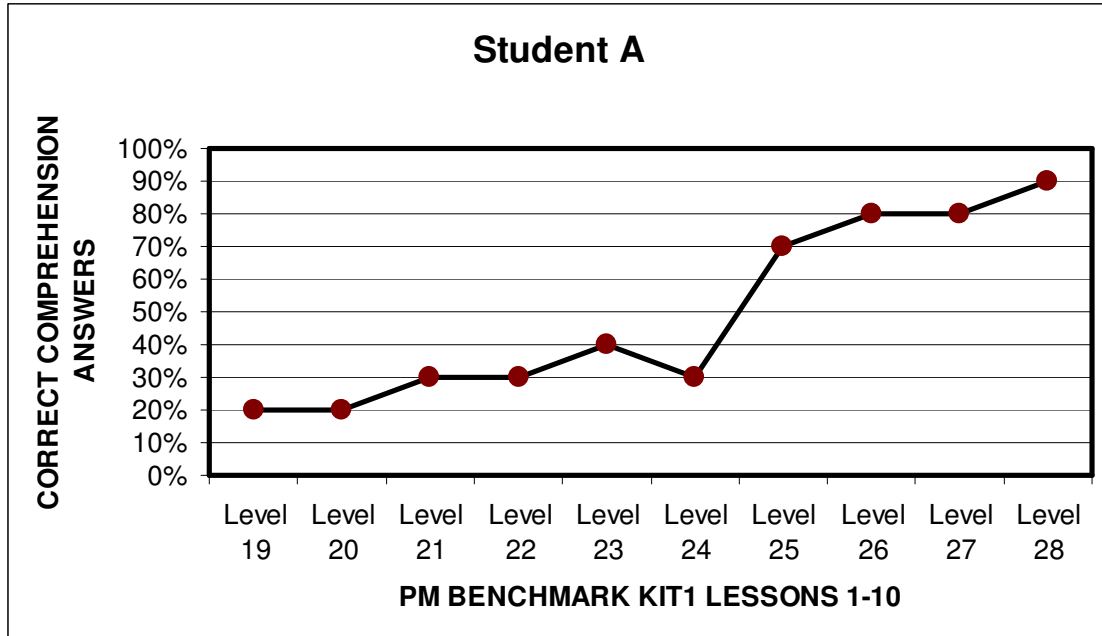
Student A review results indicates gains in spontaneous recall and comprehension at both literal and inferential levels. Once he had mastered the visualization strategy his improvements were almost immediate. There was a gradual gradient increase in ability as his self efficacy improved and he began to use self management skills. He learnt self scripts which assisted him particularly in the after reading component or review stage.

Figure 6:
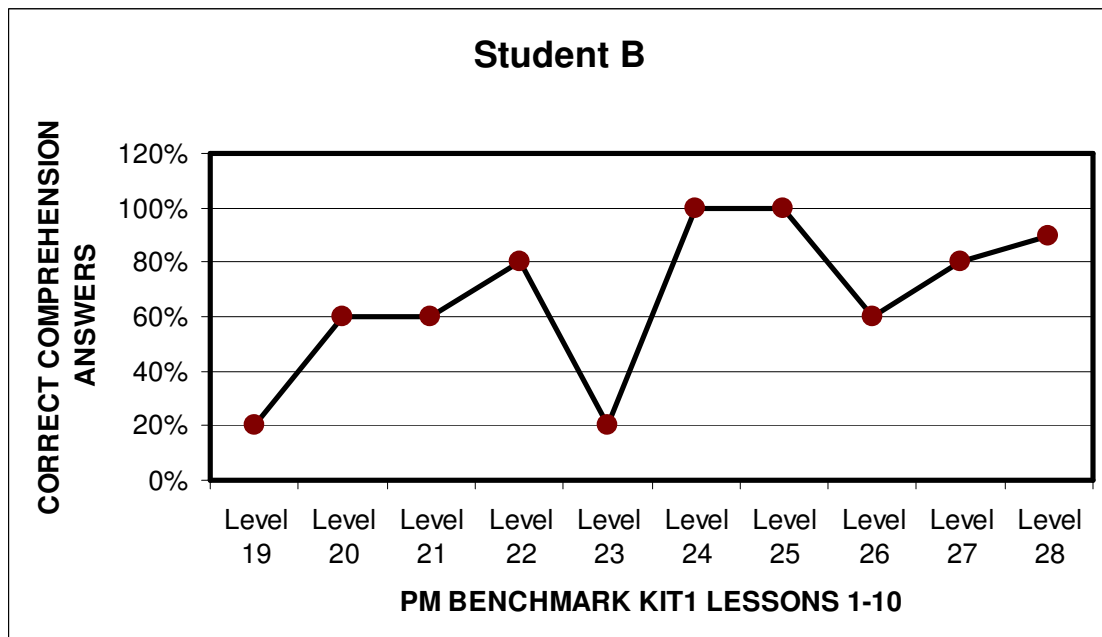
Student B made steady progress and in two of the sessions she was able to answer all comprehension questions accurately. Her results in session five indicated a dramatic drop of 60% accuracy between sessions. The visualization assisted her to link each part of the text by summarizing and paraphrasing the ideas she was forming into images after the drawing component was introduced in session five.

Figure 7:
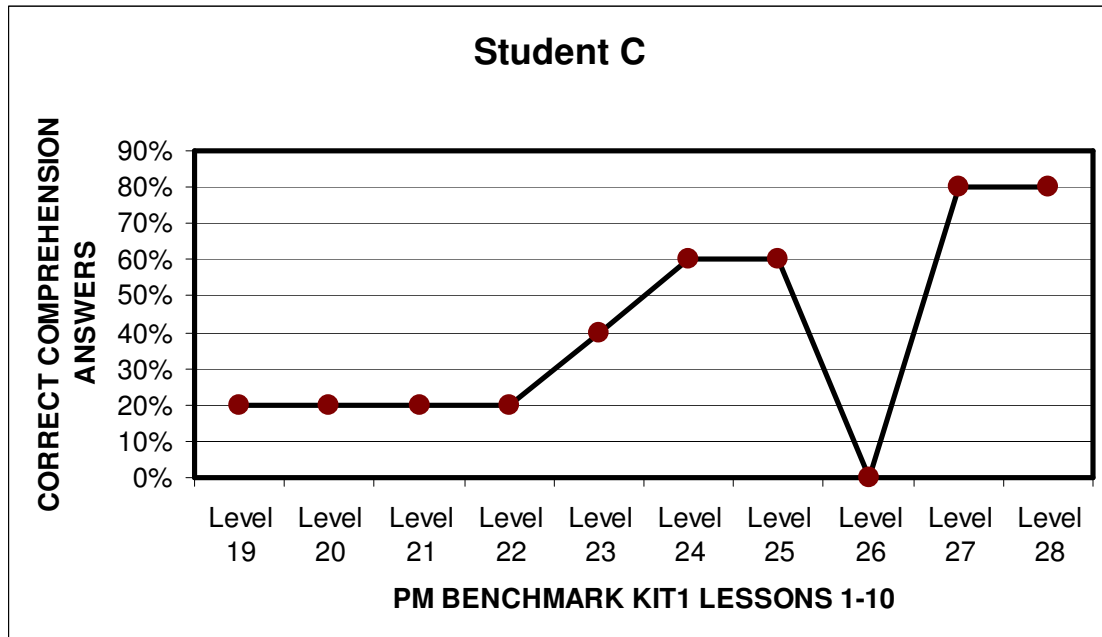
Student C's individual performance across the ten intensive teaching lessons is shown in figure 7. He displayed significant difficulties in inferential comprehension and for the first five sessions there was no real indication that he had developed an understanding of the text at the deeper level in order to make inferences. From the beginning as the sessions became more intense, the text increased in length and the vocabulary required more thought, Student C found the task of retelling more difficult. He would often employ the RIDER strategy when reading silently and yet when it came to recalling ideas in detail he would often identify the beginning events, some of the end and then make the rest up. He would become disinterested in the reading and laugh to hide his embarrassment when responding to questions about what would visualize. Student C would simply say "Sorry, I don't know". The decline in ability during session 8 reflected this attitude. Results in sessions nine and ten reflected a renewed attitude after some one on one time and his true ability once he applied his newly acquired skills.

DISCUSSION

Providing students with strategy training in visualization using the RIDER method improved the reading comprehension of the Year Five and Six students participating in this study. The results support the use of the visualization strategy to enhance reading comprehension as stated by Aristotle in 328 BC, "It is impossible to even think without a mental picture" (cited in Boon, 2006)

The overall trend of the research proved that whilst all students demonstrated improvement in their ability to comprehend text more meaningfully and make connections 66% of students who were participants in the intervention group made significant gains in both literal and inferential comprehension. Their ability to recall and retell events in greater detail was supported by the gains they made throughout the intensive teaching lessons during the time of the research. Their self efficacy developed and they approached reading with an enhanced enthusiasm. Therefore the performance of Students A & B who received the intervention strongly supported the hypothesis. Student C also made progress but the gains were not as significant.

All three students participating in the intensive teaching sessions began the instructional sessions tentatively. The students self efficacy and self management skills used before, during and after reading were poor. They have now begun to self manage and control their strategy use. The students now use self talk that provides them with a greater ability to self instruct and engage in a personal dialogue to guide their reading.

The significant gains made by the students during the research suggests that their use of visualization is comparatively low and that further training is required to continue to provide these students with strategies to maintain comprehension. The visualization strategy has assisted them to organize the information they gain from their reading into meaningful concepts and provide links between them. This has resulted in the students attempting to correct mistakes by re-reading in an effort to make sense of the information within each linked sentence.

The study demonstrates that decoding, on its own, does not ensure that meaning will be constructed successfully (Garner, 1991). Individuals read at a number of levels and if the primary focus of reading instruction does not include the multiple levels of text processing (Munro, 2002), students will just be word callers, like those presented in this study, who do not have an understanding of the words or ideas presented in what they are reading.(Raines,2004)

Readers need to be able to use a number of strategies to understand what they are reading. Being able to construct images in their mind as students read is the 'value added' aspect of the reading. Reading can show comprehension at the word level through students deciding word meanings and discussing why particular words are used, they can answer simple questions and paraphrase sentences at the sentence level. They begin to infer, anticipate, suggest alternative actions at the conceptual level and at the topic level they now write or invent a similar text or draw comic strips of the main events in the reading.

As was predicted, the effects of the visual imagery training sessions were specific to the improvements made to reading comprehension. Whilst the study proved to be successful, there were some confounding variables that have some impact on the study.

One confounding variable as to why all students did not achieve the same level of success could be attributed to the intensive nature of the lessons. The researcher presented two lessons of 30 minutes per session and ran them directly after one another. This may have been information overload and not enough opportunity to practise the strategy at each individual session.

There are times when students can not create a picture in the mind due to lack of background knowledge or the complexity of the text. Hibbing and Rankin-Erickson (2003) support the idea that students who have inadequate experiences or who have limited vocabulary networks, thus lacking understanding of text, may be unable to develop mental images. Thus discussing vocabulary and defining words by relating them to experiences within the individual sessions assisted with development of understanding in students.

Overall the researcher believes that the study observed that students who were given extra tuition to develop skills of visualization demonstrated their ability to transfer this knowledge and it was apparent they made greater progress than those who were not given this intensive teaching. Students were able to make images in their minds using the RIDER strategy to improve both literal and inferential comprehension. Interestingly, when the RIDER model was adapted in Lesson Five, (where the **D**raw experience was added to the **D**escribe step), the results supported a gain in literal comprehension and retelling of ideas in considerably more detail.

The researcher noticed that the strategic use of visual material can enhance the reading experience of reluctant and low ability readers and indeed, help them become more proficient creators of internal visual imagery that supports comprehension. This was evidenced by the significant group differences on tests (Figure 2) conducted and compared between the intervention and control groups where visual strategies and stimuli were presented to A-C students only.

The TORCH test results as seen in Appendix 3 highlight the increase in percentile rank of all students. The intervention group showed much higher progression in percentile rank from pre testing to post testing. The researcher believes this is largely due to the effective teaching of the use of visualization to improve comprehension and the success of small focus teaching groups. Johnson-Glenberg (2000) questioned whether teaching any strategy to small groups would assist them in becoming more proficient in the skills taught rather than a whole class. The findings were undoubtedly confirmed. The research developed by Johnson-Glenberg (2000) confirmed that small teaching groups demonstrated far superior improvement than that of the control group in the study.

Within this study, whilst the verbal rehearsal of the strategy was not apparent in the hypothesis, during the intervention lessons, it was important that all students rehearsed the steps of RIDER using actions and the visual cues to commit the process to memory. Bell's (1986) program of visualizing and verbalizing suggests that these two strategies go hand in hand and with careful consideration of both of these strategies working concurrently; it is possible to develop more complex skills. Making mental images and rehearsing these in as much detail as possible will lead to significant improvement in literal and inferential comprehension.

The findings therefore support the prediction that teaching students to make images in their head to develop visualization skills using the RIDER strategy will lead to improvement in comprehension at both literal and inferential levels. It confirms that students with learning difficulties can be taught a strategy to enhance their performance which in turn enables them to use this automatically. Whilst this is not the only strategy that these students required to assist them in becoming proficient in comprehension, it developed their ability to learn a thought process that is entrenched in their minds and they have achieved success.

Implications for this study for further teaching would be to include the explicit instruction of the strategy of visualization using RIDER to small groups within the classroom setting across the school. The same level of intervention should be delivered to the control group to map whether the level of success seen in this study where students developed their literal and inferential comprehension skills with the use of the RIDER strategy, is an accurate assumption that all students would benefit from this type of intervention. Students within the Year level should then be exposed to the strategy using small focused teaching groups within their classroom setting. This in turn may confirm that students who are given the opportunity to practice a new skill will improve. It highlights that small group teaching would benefit those students who perform at below the expected level.

Supporting small group teaching of visualization in the school's literacy program is that in a learning strategies intervention program, rather than teaching specific content, teachers teach students how to learn that content. This allows students to use a strategy to attack situations not previously encountered. Students maintain active involvement with the content as they manipulate and integrate information through use of a learning strategy.

Further study would be to present other strategies such as paraphrasing and questioning, advocated by Manzo(1969) and Robinson(1946), and investigate what implications this has on further developing the comprehension skills. Asking students' questions help them to create images. Guiding students with detailed questions that lead to open ended answers helps them to create visual interpretations of the sentence.

The attitude to reading and reading comprehension ability of the three participants improved substantially as they became more confident. They started to find reading more enjoyable and meaningful and finally found they were successful in an area of learning they felt a failure in.

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Appendices

Appendix 1

Teaching Lessons

Lesson 1 Outline - Lesson 1

Before Reading	Ask Students what they think the story is about from the front cover and why they think this. Explain to them that they are going to be learning about visualization. Ask them what they think this word might mean.
During Reading	Read aloud the story "Tom and the Sack" PM Benchmark Kit 1 Level 19 to the group. (modeling) Note reading behaviours of each student.
After Reading	Ask Students to think about the story and draw a picture of what happened in the story. (Literal Comprehension) Ask them to also draw a picture of what will happen next in the story. (Inferential) When Students have finished their illustrations ask them to retell the story and what they have drawn. Ask students comprehension questions taken from the story. Discuss how they remembered parts of the story. Briefly outline Lesson Two (followed directly after lesson 1)

Session outline – Lesson 2

Before Reading	Recap the previous story – what was the title? What happened in the story? What happened next? Give Students a copy of the new story – ask them not to open the story. Ask Students what they think the story is about from the front cover and why they think this.
During Reading	Read aloud a new story "The Roller Blade Twins" PM Benchmark Kit 1 Level 20 to the group. (modeling) Stop at the end of page 6. Ask Students to draw what has happened in the story so far (Literal)
After Reading	Ask Students to think about the story and draw a picture of what happened in the story. (Literal Comprehension) Ask them to also draw a picture of what will happen next in the story. (Inferential Comprehension) When Students have finished their illustrations ask them to retell the story and what they have drawn. Ask students comprehension questions taken from the story. Reflect on what they do as readers and how they remember the story? (Individuals share their reflection) Briefly outline Lesson Three

Session Outline - Lesson 3

Before Reading	Reflect on previous session. Recall details of the story read. Give students new book. Ask Students what they think the story is about from looking at the cover. Read aloud the story "The Wind and the Sun" PM Benchmark Kit 1 Level 21 with the students individually stopping at the end of the second paragraph. Describe what is happening sentence by sentence in the whole group.
During Reading	Ask Students to retell what is happening in detail. What do you think will happen next? Individually retell to the group. Introduce **RIDER strategy. (Modeling)** Ask students to think about what they have been doing in the past two lessons. Elicit discussion that enables them to verbalize that we have been reading and retelling the story and thinking about what will happen next as we are reading. Recap on the word introduced in lesson one, 'visualisation'. Remind them that this strategy helps us to remember what we read by making a picture of it in our minds and describing what we see. Explain the steps of RIDER and go through the questions and process of the strategy. **READ** **IMAGINE** – Close your eyes. Make a picture in your head about the story so far. Think about the story again…what detail have you added to your picture? **DESCRIBE** – What is the picture in your mind – retell. **EVALUATE** – Listen to others retelling and recheck the text to see if you need to make adjustments to your picture. If so retell the detail added. **READ ON/REPEAT** – if you are happy with the picture you now have – read on. When reading, Think about what is going to happen next. Ask children to repeat verbally the steps of RIDER. Students make visual cue cards to assist. Continue reading to the end of the story(fable).
After Reading	Ask Students to retell what happened in the story from the picture in their mind – when they Imagined. (Literal Comprehension) Ask them what they think could happen next if the story was to continue. (Inferential) Ask students comprehension questions taken from the story. Revisit what RIDER stands for and what the steps are. Briefly outline Lesson Four

Session Outline – Lesson 4 & 5

Before Reading	Reflect on previous session. Recall details of the story read previously. Rehearse what the strategy RIDER is. Students discuss each step reflecting on what they have to do. Give student a cue card to use as a prompt. Keep this card beside them to prompt them to think through each step. Give students new text. Do not use the front cover for prediction. Ask the students to read the first paragraph and predict what the story is about. What would be a good title for the book from your reading? Ask the students to verbalize what pictures are in their mind. Begin reading the story. "Tricks with a kite" PM Benchmark Kit 1 Level 22 (Lesson 4) – (Stop at the end of first paragraph) "Giraffes" PM Benchmark Kit 1 Level 23 (Lesson 5) – (Stop at the end of second paragraph)
During Reading	Remind the students to use the RIDER strategy when they are reading. Use their prompt card for guidance. Stop at the end of the set paragraphs. Visualise and describe pairs of sentences in whole group. Ask Students to retell what is happening in detail. What do you think will happen next? Individually retell to the group. Repeat the steps of RIDER Ask them to focus further on their images. Recheck through the story so far and add more detail if necessary. Continue reading to the end of the book. Prompt students to think about what is going to happen next as they are reading.
After Reading	Ask Students to retell what happened in the story from the picture in their mind – when they Imagined. (Literal Comprehension) Ask them what they think will happen next in the story. (Inferential) Students write their responses. Revisit what RIDER stands for and what the steps are. Briefly outline Lesson Six

At the end of Lesson Five have students read the text again silently and individually, ask them to draw a picture of the image they have in their mind. Ask students to cover their picture and describe their image to the small group. Check their use of the strategy.

Session Outline – Lesson 6

Before Reading	Reflect on previous session. Recall details of the story read previously and their drawing.
	Rehearse what the strategy RIDER is and introduce pictures/symbols to go with the words to reinforce this strategy. Students discuss each step reflecting on what they have to do.
	Give students new text - prepare book as text only without supporting pictures.
	Ask the students to read the first paragraph and predict what the story is about. What would be a good title for the book from your reading? Ask the students to verbalize what pictures are in their mind.
	Begin reading the story. "The Cave Beside the Waterfall" PM Benchmark Kit 1 Level 24 stop at the end of first paragraph.
During Reading	Remind the students to use the RIDER strategy when they are reading. Use their prompt card for guidance.
	Stop at the end of the set paragraphs. Visualise and describe the paragraph in whole group.
	Ask Students to retell what is happening in detail. What do you think will happen next? Individually retell to the group.
	Discuss any words that are difficult to understand and as a group discuss the meaning for these words. (reciprocal process)
	Repeat the steps of RIDER Add the dimension of Drawing to the Describe part of the strategy as in lesson five recap. Ask students to add Draw in Detail to prompt them to remember to retain as much detail as possible when reading and visualizing.
	Ask them to focus further on their images. Recheck through the story so far and add more detail if necessary.
	Continue reading to the end of the book. Prompt students to think about what is going to happen next as they are reading.
After Reading	Ask Students to retell what happened in the story from the picture in their mind – when they Imagined. (Literal Comprehension) Ask them what they think will happen next in the story. (Inferential) Students write their responses. Revisit what RIDER stands for and what the steps are. Use cue cards and actions and add to the cue card Draw in Detail. Tell students that from the next session there will be no prompts given. They are to use their cue cards for support. Briefly outline Lesson Seven

Session Outline – Lesson 7 - 10

Before Reading	Reflect on previous session. Recall details of the story read previously. Give students new text - prepare book as text only without supporting pictures. Begin reading the story. "Jack and the Beanstalk" – PM Benchmark Kit 1 Level 25 – Lesson 7 "The Game of Soccer" – PM Benchmark Kit 1 Level 26 - Lesson 8 "Rikki-Tikki-Tavi "– PM Benchmark Kit 1 Level 27 - Lesson 9 "Mount Saint Helens Blows Its Top" - PM Benchmark Kit 1 Level 28 - Lesson 10
During Reading	Read though to the end of the paragraph and describe the image to the whole group. Ask Students to retell what is happening in detail. What do you think will happen next? Individually retell to the group. Continue reading to the end of the book.
After Reading	Ask Students to retell what happened in the story (Literal Comprehension) Ask them what they think will happen next in the story. (Inferential) Draw image of what was read, cover picture. Students write their description and share with small group.

Appendix 2

PM BENCHMARK KIT 1

Title: Tom and the Sack	Reading Age: 8.0yrs	Student		
		A	B	C
Questions to check for understanding:				
1. What was Tom looking for when he first set off down the road?		√		
2. What work did Tom do for the woman?		√	√	√
3. Why did Tom say it would be a mistake to open the sack?		√	√	
4. How do you think Tom got the bees inside the sack?		√	√	
5. What do you think could happen if the woman opened the sack?		√		
Accuracy Level		5	3	1

Title: The Roller Blade Twins	Reading Age: 8.0yrs	Student		
		A	B	C
Questions to check for understanding:				
1. Why did Nick lose his balance and fall into Mrs Miller's garden?		√	√	√
2. Where was dad going to take the twins to roller blade?		√	√	
3. Why were Nick and Sarah disappointed when they got to the park?		√	√	
4. Why do you think there was a sign that said 'No skating in this park'?		√		
5. What do you think could have happened next?		√		
Accuracy Level		5	3	1

Title: The Wind and the Sun	Reading Age: 8.5yrs	Student		
		A	B	C
Questions to check for understanding:				
1. What were the wind and the sun arguing about?		√	√	√
2. Why did the wind think that he was stronger than the sun?		√	√	
3. What did the man do when the wind blew down on him?		√	√	
4. What do you think the sun meant when he said, "as you can see, I am much stronger than you!"?		√	√	
5. Explain why the argument between the wind and the sun was settled, once and for all.		√	√	

Accuracy Level		5	5	1

Title: Tricks with a Kite	Reading Age: 9.0yrs	Student		
		A	B	C
Questions to check for understanding:				
1. How did Uncle Ken control the kite?		√		√
2. What were some of the tricks that he did with the kite?		√	√	√
3. What happened when Lee tried to fly the kite for the first time?		√		
4. Why do you think Lee and her uncle flew the kite at the beach?				
5. Explain why people often get nervous when they try something for the first time.		√		
Accuracy Level		4	1	2

Title: Giaffes	Reading Age: 9.0yrs	Student		
		A	B	C
Questions to check for understanding:				
1. How tall is a new baby giraffe?		√	√	√
2. What do giraffes eat?		√	√	√
3. Why don't thorns hurt giraffes when they eat from thorn trees?		√	√	
4. Why do you think giraffes can move faster than lions?		√	√	√
5. Explain why most animals have to be careful when drinking at a waterhole.		√	√	
Accuracy Level		5	5	3

Title: The Cave Beside the Waterfall	Reading Age: 9.0-9.5yrs	Student		
		A	B	C
Questions to check for understanding:				
1. How did the children get onto the rocky ledge?		√		
2. Who was last to climb up onto the ledge?			√	
3. What could they see in the distance when they were up on the ledge?		√	√	√
4. What do you think they might discover in the cave?		√	√	√
5. Explain why some people enjoy exploring new places.		√	√	√
Accuracy Level		4	4	3

Title: Jack and the Beanstalk	Reading Age: 9.5yrs	Student		
		A	B	C
Questions to check for understanding:				
1. Why did Jack seize the harp?		√		
2. What gave Jack enough time to get down the beanstalk?		√	√	
3. What did Jack tell his mother to get?		√	√	
4. Why do you think Jack was able to outwit the giant?		√	√	
5. Explain why it is hard to make a decision when you are in a hurry or you are scared.		√		
Accuracy Level		5	3	0

Title: The Game of Soccer	Reading Age: 10-10.5yrs	Student		
		A	B	C
Questions to check for understanding:				
1. How many players are in a game of soccer?		√		√
2. Where should the ball go for a point to be scored?		√	√	√
3. Which player is allowed to catch the ball?		√	√	√
4. How do you think a good goalkeeper can help his team?		√	√	√
5. Explain why it is important for all members of a team to cooperate.		√		
Accuracy Level		5	3	4

Title: Rikki-Tikki-Tavi	Reading Age: 10-10.5yrs	Student		
		A	B	C
Questions to check for understanding:				
1. What was Rikki-Tikki-Tavi?		√		√
2. How did Rikki-Tikki-Tavi attack Nag the cobra?				
3. What happened to Riki-Tikki-Tavi when the cobra tried to free him?				
4. What do you think might have happened if Rikki-Tikki-Tavi had let go?				
5. Explain why small animals will sometimes attack animals larger than themselves.		√	√	
Accuracy Level		2	1	1

Title: Mount Saint Helens Blows Its Top	Reading Age: 10.5-11.0yrs	Student		
		A	B	C
Questions to check for understanding:				
1. What happened before Mount Saint Helens erupted?		√		√
2. What did the volcano look like after it exploded?		√	√	√
3. Why were the towns in Washington State in near darkness?		√	√	√
4. Why do you think Harry R Truman didn't want to leave his home?		√	√	
5. Explain why helicopters play an important parting rescue missions.		√	√	√
Accuracy Level		5	4	4

Title: PRE TEST Unseen 65 Million Years Ago	Reading Age: 11.5-12yrs	Student		
		A	B	C
Questions to check for understanding:				
1. What formed a crater in Mexico millions of years ago?		√		√
2. How did the climate change after the meteorite hit Earth?				
3. Why were some animals able to survive?				
4. Why do you think it is important for plants and animals to have sunlight?				
5. In your opinion, explain how dinosaurs became extinct.		√	√	
Accuracy Level		2	1	1

Title: POST TEST Seen 65 Million Years Ago	Reading Age: 11.5-12yrs	Student		
		A	B	C
Questions to check for understanding:				
1. What formed a crater in Mexico millions of years ago?		√	√	√
2. How did the climate change after the meteorite hit Earth?		√	√	√
3. Why were some animals able to survive?		√	√	√
4. Why do you think it is important for plants and animals to have sunlight?		√	√	√
5. In your opinion, explain how dinosaurs became extinct.		√	√	
Accuracy Level		5	5	4

Appendix 3

TORCH – Test of Reading Comprehension Second Edition

Raw Score & Percentile Rank of Students A – F for Performances on Pre & Post Tests

Student	Pre Test Unseen Donna Dingo/Cats Raw Score out of 20	Percentile Rank %	Post Test Seen Donna Dingo/Cats Raw Score out of 20	Percentile Rank %
A	7	11	19	93
B	7	11	14	51
C	9	19	16	66
D	7	6	10	17
E	7	6	10	17
F	8	9	11	22

Appendix 4 Spontaneous Retell Pre and Post DATA

STUDENT A

The Main Ideas in the Text "65 Million Years Ago"	Pre Test	Post Test
Remains of an ancient crater	√	√
Formed by a meteorite	√	√
Millions of tons of burning rock turned to smoke		
Meteorite struck the earth 65 million years ago		√
Fine material thrown into air by explosion		
A dense black cloud formed around earth		√
Turned day into night	√	√
The earth grew cooler because of the cloud		√
Plants die without sunlight	√	√
Plant eating dinosaurs with could not find food		
When plant eating dinosaurs died meat eaters starved		√
Small animals with small appetites survived	√	√
Other animals could survive the changing climate		√
Dinosaurs were not built for the cold		
It was years before sunlight returned		√
The dinosaurs perished because the climate changed	√	√
The climate changed because of the meteorite made a crater		

STUDENT B

The Main Ideas in the Text "65 Million Years Ago"	Pre Test	Post Test
Remains of an ancient crater		√
Formed by a meteorite		√
Millions of tons of burning rock turned to smoke		√
Meteorite struck the earth 65 million years ago	√	
Fine material thrown into air by explosion		
A dense black cloud formed around earth		√
Turned day into night		√
The earth grew cooler because of the cloud		√
Plants die without sunlight		
Plant eating dinosaurs with could not find food	√	
When plant eating dinosaurs died meat eaters starved		√
Small animals with small appetites survived		
Other animals could survive the changing climate		
Dinosaurs were not built for the cold		
It was years before sunlight returned		
He dinosaurs perished because the climate changed		
The climate changed because of the meteorite made a crater		

STUDENT C

The Main Ideas in the Text "65 Million Years Ago"	Pre Test	Post Test
Remains of an ancient crater	√	
Formed by a meteorite		√
Millions of tons of burning rock turned to smoke		
Meteorite struck the earth 65 million years ago		√
Fine material thrown into air by explosion		
A dense black cloud formed around earth		
Turned day into night		
The earth grew cooler because of the cloud		√
Plants die without sunlight		√
Plant eating dinosaurs with could not find food	√	√
When plant eating dinosaurs died meat eaters starved		√
Small animals with small appetites survived		√
Other animals could survive the changing climate		√
Dinosaurs were not built for the cold		
It was years before sunlight returned		
He dinosaurs perished because the climate changed		
The climate changed because of the meteorite made a crater		