

**Teaching Year 5 and 6 students, who have comprehension difficulties, visualizing strategies when reading, will improve their level of comprehension.**

**ABSTRACT**

Comprehension is often a difficult exercise for children in the middle to upper levels of primary school. Many of these students can successfully decode text but are unable to simultaneously gain the necessary meaning from the text. It has been recognized that children need to be taught specific comprehension strategies so they can understand what they are reading.

The hypothesis for this study is that teaching Year 5 and 6 students, who have comprehension difficulties, visualizing strategies when reading, will improve their level of comprehension.

In this study the students were taught the R.I.D.E.R. method of visualization over ten teaching sessions. The children were a group chosen from a year 5 and 6 class with the majority of the group being from year 5. They were withdrawn from the classroom situation and taken to another part of the school for the teaching sessions. A control group was taken from another year 5 and 6 class to compare results. Children with similar reading difficulties were chosen to be part of this control group.

Students were introduced to the R.I.D.E.R. strategy. Discussing and drawing their mental images was an important part of the sessions.

**R**ead  
**I**mage  
**D**escribe  
**E**valuate  
**R**ead on

Results indicated support for the hypothesis by increasing the majority of the students' comprehension levels. It also showed that by teaching this strategy the students' ability to visualize also increased. It suggested that teaching visualization helps children to improve reading comprehension.

## INTRODUCTION

Students in the upper levels of primary school often experience difficulties with comprehending texts. Many of these children are fluent oral readers with adequate word recognition but are unable to demonstrate a good understanding of what has been read. A common occurrence in primary schools is that teachers presume that as children's decoding skills and word recognition increases so do their ability to comprehend what they are reading. It has been suggested that some teachers assume that reading comprehension will develop naturally in children without any direct teaching of comprehension (Boulware-Gooden et al 2007). Teaching reading should not stop when children can decode words, they need to be taught how to understand what they are reading.

Often by the time a child enters the middle to later years of primary school there is a presumption that being able to read means being able to comprehend. King (2006) noted that comprehending a text is not just about being able to transform symbols into letters and words but is about the depth of what the individual reads. The difficulty comes when children are not able to engage with the text and its message and do not naturally apply the necessary strategies to gain meaning from print.

Research shows that explicit teaching of comprehension strategies helps students to better understand what they are reading. Alder (2004) refers to explicit teaching as a four step process involving:

- The teacher explaining the purpose of the strategy and when to use it.
- Modelling how to apply the strategy
- Helping the children as they read, how and when to apply the strategy.
- The teacher continually helps the children to practice the strategy until they are able to do it without assistance.

As educators we can assist our students to become better readers by supporting them in their understanding of what they are reading. Explicit teaching of a comprehension strategy will help them acquire greater depth in their reading and assist them to remember what they have read. Reading comprehension instruction is not merely answering questions at the end of a reading passage. As teachers we need to teach them the strategies that they can apply independently in their daily lives.

Comprehending strategies are the actions used by readers to help them understand the ideas put forward in a text so they make sense. These strategies include visualizing, inferring and summarizing. In my Action Research I have decided to focus on visualization as an important and effective strategy needed to successfully comprehend texts.

Visualization is the ability to create mental images of a text to help with meaning. Teaching children visualization skills has been discussed by many writers as an important way of greatly improving comprehension when reading. Keene and Zimmerman(1997)

referred to visualization as allowing children “the ability to become more engaged in their reading and use their imagery to draw conclusions, create interpretations of the text and recall details and elements from the text”

Cook(1995) designed a study which focused on the importance of mental imagery instruction and its effect on reading comprehension. The study involved six classes of eighth grade students, three of which were taught mental imagery instruction and three classes who were not. The children were pre and post tested in the oral and written form. It was found that the mental imagery instruction had a positive effect on reading comprehension. It increased comprehension by increasing the visualization of what they were reading. It was reported that the children’s enthusiasm for reading also increased.

Nelson(2005) in her study investigated the use of the visualization strategy and its effects on improving students comprehension ability. The strategy was implemented over a period of three weeks. Students were also pre and post tested. After the lessons were completed it was found that students answers to comprehension questions improved. Most of the answers had become more in-depth and the children were also showing a more positive attitude to reading.

Danko (1992) in her study of using visual imagery to improve comprehension selected a group of fourth and fifth grade readers who were explicitly taught the comprehension strategy of visual imagery and verbal rehearsal by self-questioning. The children were taught to visualize by means of pretending to be a video camera. Record, rewind and playback features of the camera were used to help with recall of reading materials. The playback feature of the camera was to review the recording in the mind using self questioning. The test results showed improvements in comprehension exercises and the improvement in the students’ attention to detail was particularly noticeable.

Smith and Sensenbaugh (1990) discussed the idea of generating images as a strategy to help struggling readers improve their understanding of text. The reader must be able to have sufficient word recognition to be able to form these mental images. The struggling reader’s understanding of text can be improved by being taught to apply visualization rather than being involved in abstract discussions.

The project aims to investigate the effectiveness of explicitly teaching a visualization strategy to Grade 5 and 6 children on improving comprehension. In my investigation I have chosen to teach the R.I.D.E.R. strategy to children at this level with comprehension difficulties. The R.I.D.E.R. is an acronym for Read, Image, Describe, Evaluate, Read. It requires the reader to :

- Read** -Read a sentence
- Image** -Make a picture in your mind
- Describe** -Describe your picture
- Evaluate** -Check your description
- Read** -Read on and repeat the steps

The R.I.D.E.R. strategy is beneficial to students to help them create a picture in their mind of what the text is saying. The students are cued in to be able to imagine, describe and evaluate their images to assist with understanding of reading material.

It is predicted that the participants in this study will become more engaged in what they are reading by participating in the explicit teaching sessions using this visualization strategy. As a result students will independently be able to apply the R.I.D.E.R. strategy to all future reading situations resulting in improved comprehension skills.

The hypothesis is:

**Teaching Year 5 and 6 students, who have comprehension difficulties, visualizing strategies when reading, will improve their level of comprehension.**

## **METHOD**

### **Design**

This study uses a case study OXO design, in which the R.I.D.E.R technique is used to teach children to visualize with the outcome of improving reading comprehension. Observations and Pretesting of data were undertaken first, followed by Intervention and the Post Assessments completed the study. The study compared two groups of children. One group was involved in the explicit teaching sessions and the other group served as a control group and was not involved in the teaching sessions. The purpose of this group was to measure assessment results of the teaching group against other children of similar abilities who were not involved in the lessons.

### **Participants**

The participants used for this study were two groups of Grade 5/6 children. I chose 14 children from two separate classes. The intervention group consisted of 7 children from the same class. The other 7 children were from another class which formed my control group. Unfortunately the control group became 6 children as one of the children left the school after the intervention was already underway. All of the students selected for the study were students who had poor results in recent comprehension assessment. These students, however, could accurately decode when reading but had low scores on the Torch Comprehension Test administered one month earlier.

**Table 1:** Students Participating In The Research / Pre Test Data

*Intervention Group*

<b>Student</b>	<b>M / F</b>	<b>LBOTE Yes=1 No=0</b>	<b>Age (months)</b>	<b>TORCH Torch Score</b>	<b>TORCH Percentile</b>	<b>Visualising Task</b>
1	F	No	147	33.1	2%	19
2	M	No	141	36.8	6%	12
3	M	No	126	38.5	22%	17
4	M	No	129	40.2	28%	4
5	M	No	134	28.2	4%	11
6	M	No	133	43.5	39%	8
7	M	No	126	43.5	39%	22

*Control Group*

<b>Student</b>	<b>M/F</b>	<b>LBOTE Yes=1 No= 0</b>	<b>Age (months)</b>	<b>TORCH Torch Score</b>	<b>TORCH Percentile</b>	<b>Visualising Task</b>
1	F	Yes	131	43.5	39%	2
2	F	No	136	40.2	28%	4
3	M	No	126	35.0	13%	4
4	M	No	129	41.8	33%	17
5	M	No	134	41.8	33%	10
6	F	No	143	38.5	9%	18

**Materials**

Materials used include the following:

- Visualizing Task- Group Administration (Munro 2006). This test consisted of 16 questions with a possibility of scoring up to 2 points for each question. The test was scored from 0 to 2:
  - 0- image did not match the sentence
  - 1- image partially matched the sentence
  - 2- image fully matched the sentence
- TORCH Test –“Cats” (Pre and Post)
- R.I.D.E.R. cards (A4 size for teaching sessions)  
(smaller cue cards for students to retain)

- Alpha Assess Student Books Level 18-28
  - “Having Fun” by Claire Halliday
  - “Saving Water” by Claire Halliday
  - “Flying With The Wind” by Jenny Feely
  - “Tigers, the Big Cats” by Jenny Feely
  - “Hungry Crocodiles” by Emma Rossi
  - “Surviving The Storm” by Jenny Feely
  
- Whiteboard and paper for drawing the images.

### **PROCEDURE**

The intervention program was undertaken over 10 sessions during a three week period. The children were withdrawn from their class and taken to the library for each session. The lessons were approximately 35-40 minutes duration. Each of the seven children were present for all of the teaching sessions.

The tasks were administered to students in the following order:

- Torch Test of Reading Comprehension administered to all students.
- Visualization Task administered to all students.
- Teaching Sessions were delivered to Teaching Focus Group
- Post Testing of Torch Reading Comprehension Test to all students
- Visualization Task re-administered to all students.

I selected “The Cats” from The Torch Test of Reading Comprehension to use for my pre and post testing of comprehension skills. This test is the test designated for use at the Grade 5 level as part of the school assessment schedule. The Visualization Task was administered to the group as a whole. I spoke to the student’s class teacher to make sure that all students would be able to confidently write for themselves.

Each of the teaching sessions followed a very similar format (Appendix 1). At the first session the R.I.D.E.R. strategy was introduced with emphasis on making mental pictures of recent life experiences. The students were not involved at this point with individual reading of text. The emphasis was with the teacher modelling a particular piece of text which she read aloud to the group. I particularly chose an easy fiction text which the children would be easily be able to relate to their daily lives. The particular book chosen for this first lesson was “Having Fun” by Claire Halliday. The remainder of the sessions followed the following format:

1. Revision of the strategy from the previous lesson.
2. Introduce the text and teacher modelling the strategy using some of the text.
3. Students to read the next part of the text and discuss the picture they have imagined about the text.
4. Students were then encouraged to refer back to the text and evaluate or check their initial pictorial responses.
5. Students read on and continued to follow the same steps.
6. Teacher reviewed the steps and students describe what they have learnt at the end of the lesson.

Lessons 2 -5 used small passages of text that were cut out and mounted on coloured card. During these lessons students were asked to draw their responses to text illustrating the pictures in their mind. The pictures were discussed with the group and comparisons were made. Cue cards were given out to each student and these were retained by the student to refer to in subsequent class reading sessions.

During each session notes were recorded by the teacher about student's participation and responses given in the sessions. I particularly thought it relevant to note how cooperative and enthusiastic the individuals in the group were. Discussions were also held with the student's classroom teacher during and after the intervention to note any changes in reading behaviour and reading progress.

## RESULTS

The results of the Pre and Post Visualisation Test for the teaching group showed an improvement in the children's ability to visualize (see figure 1). This showed that the explicit teaching of visualizing in a very structured way (see Appendix 1) has made a difference to the children's ability to visualize.

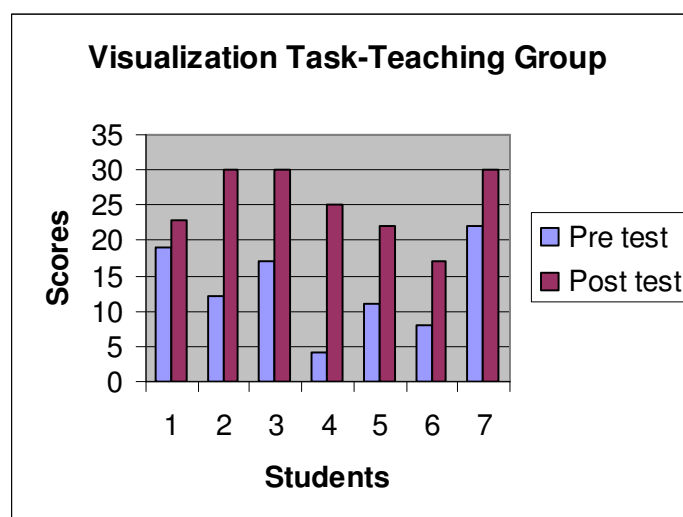


Figure 1

When comparing results of the Control Group (figure 2) it can be seen that the control group, as a group made very little progress. One student achieved the same score; two students achieved a very minimal increase and three students achieved a slight decrease in scores.

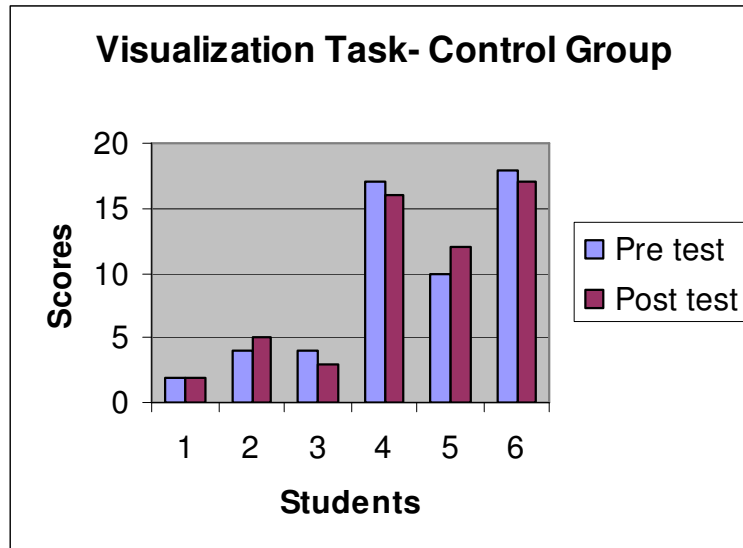


Figure 2

If I compare the pre tests for both groups, it is interesting to note that the students in the teaching group with the lowest pretest scores had made considerable gains in the post test of the visualization task. The students achieving the lowest scores in the control group made little or no gains in the same time frame.

After examining the results of the Visualization tasks it was disappointing to see that a similar degree of improvement was not displayed in post test results of the comprehension task administered (Figure 3).

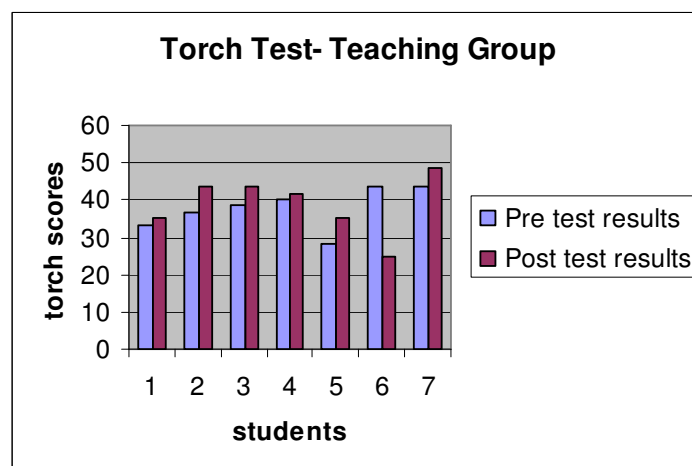


Figure 3



Six out of seven students showed improved scores in the post test, however, one student s (student 6) showed a decrease in scores. This particular student did not score highly on the post visualization task.

The control group showed the following results:

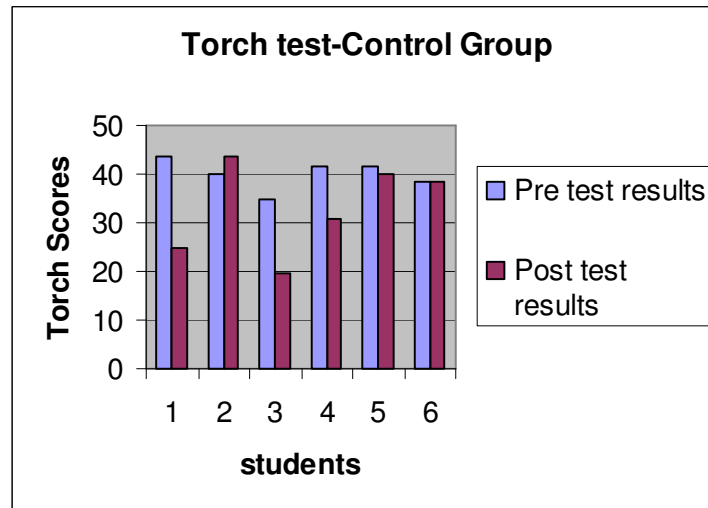


Figure 4

As seen by the above results, there was only one student who made any improvement. Student 2 in the control group's result was slightly improved from pre test to post test. The other five participants scored lower or remained the same from pre to post test.

The scores of the pre test visualization task of both the teaching group and control group indicated the student's inability to create pictures in their mind of a given text. All of the teaching group showed a significant improvement after the ten teaching sessions. Student 2,3 and 4 in the teaching group made significant gains in the post testing of the visualization tasks with slight gains in the post Torch Test.

Student 1 in the teaching group was a very quiet participator and was not confident to share her images with the group. She needed more time than the rest of the group when undertaking the testing and during reading activities. Her results in the Torch Test did not change significantly and she was very hesitant when answering more challenging questions. She would have benefited from a smaller group and easier texts being used during the teaching sessions. Student 2 in the teaching group made the most gains. This student made regular contributions to group discussion and was clearly motivated by what was offered in the sessions.

Student 3 showed little enthusiasm for the activities and was not an active participator during the first few sessions. However his drawings became more detailed as the intervention continued and he began to recall previous sessions and share his knowledge with the group. Student 4 took a while to confidently share responses with the group and seemed concerned about giving the right answers. I had to make sure that I gave

continuous positive feedback and encouragement to this student. Student 5 was also a reluctant participator and tended to give very reactive responses without taking the time to think about the task. Testing was quickly undertaken which was evidenced by his results.

Student 6 showed a decrease in her Torch Results. She was a cooperative student during the teaching sessions but was very unenthusiastic about completing the testing. Her post torch test was completed very quickly and she seemed very preoccupied when undergoing the test. It possibly might have been beneficial to retest her on another day. Student 7 had the highest post Torch Test result and was a keen participator in the group. He was very enthusiastic about sharing his responses and was able to describe quite detailed images that he created from the text.

## DISCUSSION

The data I collected as part of my Action Research Project supports my hypothesis that: *teaching year 5 and 6 children who have comprehension difficulties, visualizing when reading, will improve their level of comprehension.* Six out of seven children involved in the intervention program increased their level of reading comprehension. This indicates that explicit teaching of visualization strategies does have an impact on comprehension ability.

At the time of the Intervention Program certain factors may have influenced results. The size of the group versus the needs of the children was an important factor. More than half of the group had poor concentration and three of the seven had behavioural difficulties. Being new to the school and not being the children's teacher influenced the lessons as I had to spend quite an amount of time in the earlier lessons keeping the group on task. Because of the needs of these children I believe that the intervention would have been much more successful in a smaller group with some of the key personalities being able to be split.

During the three weeks that I ran the program the children in Year 5 and 6 went on school camp. This meant that I was only able to conduct two sessions during week two and the children had a six day break (including the weekend) where there was no instruction undertaken. The two sessions in the lead up to camp created difficulties as the children were quite preoccupied about this forthcoming excursion.

I was quite surprised by the children's initial inability to visualize and was pleased with the affect that the sessions had on this ability. I would have expected slightly better results if all the children used the strategy when undertaking the Torch test. From my conversations with the children after the test it was clear that the student whose results decreased did not apply the strategy. I asked her to tell me how she came to some of her answers and her reply was "just from what I remembered reading". I asked student 2 the same question and he replied "I started off looking at the words but then I decided to put

a picture in my mind that helped me with some of the answers". I realized the importance of the children knowing how and when to apply the strategy.

In the last few weeks I have had a conversation with the class teacher from the control group who informed me that on a few occasions some of the children from my teaching group made links from the teaching sessions with the reading activities that have occurred in the classroom. The word visualizing was remembered by the children and the steps taught were applied in a guided reading session in the Year 5/6 classroom on several occasions.

My findings can be supported by Smith, Sensenbaugh who also identified explicit teaching of mental images as a way of helping to make text more meaningful. Studies by Danko (1992) showed an improvement in comprehension abilities by students being taught visual imagery. Cook (1995) reported that studies showed the positive affect that teaching this strategy has on reading comprehension. An increase in the ability to visualize also produced an increase in reading comprehension results. Student 6 whose comprehension results did not improve similarly, did not show the same improvement in her post visualization task results as the other students in the teaching group. This would support the importance of visualization when comprehending text.

As a result of my findings, discussions with the senior literacy coordinator at my school have already commenced. Implications for future teaching involve the Professional Learning Team looking at the comprehension levels of other grades in the school. In term three we have already decided to make the explicit teaching of a comprehension strategy a focus. Visualization will be emphasized as a skill that needs to be specifically taught to children who have reading difficulties. Teachers will be discussing and modelling what that will look like in their classes and how they can plan for this as part of their reading focus groups within their class. It is important to give students plenty of opportunities to practise the strategy in reading sessions. I would see value in taking a group of children and teaching them the R.I.D.E.R. strategy and inviting other teachers to sit in on this session. Steps could be discussed and further explained at the weekly Professional Learning Team Meeting and teachers could then work with a small group in their classroom to practise the strategy.

During the administering of the Post Torch Test, the visual card of the R.I.D.E.R. steps was not displayed. Future research might look into seeing if children's test results would be any different if they were exposed to prompt cards in test conditions. There would be value in taking a smaller group of children of similar grade level and reading ability and teaching the same strategy to these children to see if the size of the group makes a difference to results.

The intervention results have indicated that explicit teaching of a comprehension strategy such as visualization has had a positive impact on students' ability to comprehend text. Revisiting the strategy on a regular basis with children who have comprehension difficulties is necessary so that they will automatically use this when tackling independent reading tasks in the future.

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## APPENDICES

### Appendix 1

#### Teaching Sessions-Visualization

##### Session 1

##### Introduction of the Comprehension Strategy:

I am going to teach you something to help you remember what you read. It is called visualizing. Visualizing is creating a picture or image in your mind after reading a sentence or a group of sentences. After you have created a picture in your mind you need to tell me about what it looks like.

##### Visualization Activity:

Lets think about what you did on the weekend. Choose one activity that you were part of, think about who you were with and what you were doing. Think about what this looked like and create a picture in your mind. Teacher chooses an activity and describes the image by saying “In my mind I see.....”

Individual children are encouraged to describe their images.

##### Reading Activity

Teacher reads a sentence from “**Having Fun**”

-She creates a picture in her mind

-She describes the picture to the class

-Students read the sentence and draw the picture they have created in their mind

-Students work in smaller groups to describe their drawings to a partner, reminded to say “In my mind I see.....”

-Individual students share their images with the group.

-Children read the next key sentence with the teacher, they draw a picture of the image

##### Review

Teacher reminds children of what was done in the session-*we read the sentence and made a picture in our minds of it, making a picture in our minds helps us to understand what the text is saying, this is called **visualizing**.*

## **Session 2**

### Review

Review what was covered in lesson 1

What word did we talk about last lesson?

What does visualizing mean?

How does this help us?

### Steps to Visualizing a Text

Teacher writes the steps to visualizing on the whiteboard

- **Read the sentence**
- **Make a picture in your mind of what the sentence is saying-draw the picture**
- **Describe the picture**

### Reading Activity

The teacher re reads the sentences from lesson one and asks the children to describe the images they created in lesson 1.

Teacher reads the next paragraph from “**Having Fun**”

She asks the children make a picture of each sentence of the paragraph in their mind and then draw their picture.

Students to share their drawings with a partner.

Repeat for the last paragraph

Students to share and describe their drawings with the whole group

### Review strategy

## **Session 3**

Teacher revises the visualizing steps from last lesson

Introduction of the text “**Saving Water**”- Discussion about the topic of saving water.

Teacher reads the first few sentences and describes her image to the students, sentence by sentence

Students read the first paragraph and follow the steps from the first two sessions.

Children encouraged to say “In my mind I see.....” each time.

Review of the lesson

## Session 4

Teacher to review the last 3 sessions

Teacher explains that during this lesson we are going to read a paragraph (2 or 3 sentence) and then visualize what the sentences are saying.

Introduction of R.I.D.E.R. strategy-teacher displays A4 size representation of this strategy on a chart.

**Read**  
**Image**  
**Describe**  
**Evaluate**  
**Read on**

Each step is discussed with the group

Teacher introduces the text “**Flying With The Wind**”

Teacher reads the first 2 sentences and demonstrates the use of R.I. D.E.R. with the group. Emphasis is on **evaluating** to check for meaning.

Students to read 2 sentences and describe their image using the chart as a prompt.  
Students describe the image by saying “In my mind I see.....”

Read on and share their images by drawing and discussing

Review R.I.D.E.R. steps and discuss how this helps to understand what they are reading.

## Session 5 and 6

Review strategies from the last lesson with emphasis on R.I.D.E.R. chart.

Introduce smaller card for each individual child with R.I.D.E.R. steps.

Students read their R.I.D.E.R. cue card

Teacher introduces “**Tigers, the Big Cats**”

Teacher reads aloud 3 sentences and refers to cue cards while doing so.

Children reread each sentence and visualize the three sentences and describe in words.

The descriptions are then shared with the group.

Words such as “endangered” are discussed and synonyms suggested.

Lessons are reviewed

## **Sessions 7 -10**

Texts used

**“Hungry Crocodiles”**

**“Surviving The Storm”**

Each lesson follows the following procedure:

- Review what children have learnt about visualization
- Review the R.I.D.E.R. strategy and when to use it
- Students to read aloud from the text
- Unknown words are identified and synonyms are suggested.
- Students to visualize each paragraph and describe in words using the chart.
- Students to share their images
- Lesson is reviewed



## **Appendix 2**

### **Chart For R.I.D.E.R. Strategy**

Two sizes of same-Bookmark size and A4 paper size

**Read**

**Image**

**Describe**

**Evaluate**

**Read on**