

## Lesson Adaptation as a Tool to Aid Reading Comprehension in Students with Learning Difficulties

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When you google reading comprehension worksheets, you are inundated with passages followed by questions. Familiar sight?! Questioning is often seen as the only way to approach reading comprehension. And inevitably, it is in context to English as a subject, maybe extending to the social sciences - God forbid were we to see it in math class or in the chemistry question paper! Levity apart, this mode of the passage- followed -by -questions is mostly an evaluation of reading comprehension. What about approaches to explicitly teaching reading comprehension? Before we share our experiences, we would like very briefly, to set the context of reading comprehension and approaches to teaching it; then delve into the core topic of this article.

### Reading comprehension:

The adage 'Reading maketh a man' hasn't gone out of style - The world runs on that constant cascade of information from various sources, from good old fashioned books through to the Kindle. Today's reader requires to manage these complexities. In the order of language skill acquisition, reading and reading comprehension is sandwiched between oral language and written expression. It is regarded as the bridge between these two essential skills of communication, knowledge acquisition and literacy of course.

Reading comprehension is a complex process, being the relationship the reader has with the written word. The reader constructs deep meaning from what is being read. The content of meaning is influenced by the reader's prior knowledge, experience and setting in which the reading takes place. The situational context or setting: whether the home or classroom, in a quiet space like the library, during a test, affects how text is comprehended while reading. Automaticity in decoding, print orientation and knowledge, fluency, vocabulary skills, attention and memory are pre-requisites to reading comprehension as is fluency, though it is not the same as automaticity. Fluency is the reading, connecting and reading in-text material effortlessly and with expression. Vygotsky's social construct and context of learning deserves mention here. While

reading comprehension is an individual activity, it can be enhanced when part of a social activity, as in a classroom, where teachers and students, or parents and children read together and construct meaning through discussion together.

Reading strategies and learning are interwoven, that is if a learner has failed to understand the content of the text or tasks, learning will be, if not a challenge, impossible. As the student advances through school, the content becomes more complex, more in-depth and requires far more proficiency in reading and accuracy. The better the reading strategies, the earlier acquired, the higher the chances of effective learning. For struggling readers, comprehension of the text may be impacted due to lack of varied and rich vocabulary, deficits in the phonological processes, deprivation of adequate teaching comprehension strategies, lack of motivation and inattention.

Brindavan Education Trust is an exclusive remedial centre for students who have been diagnosed with severe specific learning difficulties, Attention Deficit Hyperactivity Disorder (ADHD), high functioning children on the Autism Spectrum, disorders such as school refusal and other psychological disorders. The junior programme focuses on academic skill development and concept learning according to relevant scope and sequence. The senior programme focuses on teaching select NIOS (National Open Schooling) subjects for secondary and senior secondary grades (10th and 12th classes). Curriculum - based skill development continues since students continue to have difficulties with academics.

Since the focus is on taking exams, teaching reading comprehension plays a huge role in the day-to-day teaching at Brindavan. Reading comprehension in context to academia needs to be explicitly taught to be developed in a systemic way. Most text is divided into narrative or expository. Through many years of continual research, teaching trial and error and training Brindavan follows the solid practice of teaching and using strategies to enhance reading comprehension in their students, a few of which are: activating prior knowledge, graphic organisers, concept mapping, webs.



- Questioning ( Bloom's Taxonomy) – Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation
- Creating mental or visual images
- Summarising – cloze passages
- Metacognitive Strategies – self- regulatory checklists, journals
- Reciprocal teaching
- Technology support
- Analysing text structure – chunking, lesson adaptation

The focus of this article is primarily on lesson adaptation, which is the child of differentiated teaching instruction, as a tool to enhance reading comprehension and aid learning. It is the standard required practice of meeting diverse learning needs especially in a classroom with special education needs and is a given at Brindavan. The approach to reading and comprehension is the three step approach – pre- reading, reading and post - reading.

Our typical class strength is eight students per classroom. In comparison to sixty neurotypical students, this is a very small number. However, catering to each learner's diverse complex needs requires teaching individually and in small group setting.

In the context to reading and reading comprehension, adaptation is not to be confused with adapted texts – where literary classics, such as Tolstoy's War and Peace, are officially adapted, published and sold so as to reach a wider audience including children.

Academic Lesson adaptation is a strategy, method, a tool to modify lessons for better learning. Adaptations can be across three domains – we have further explained it in context to reading and reading comprehension.

- a. Content – the actual text that student needs to learn. Content can be adapted to keep key concepts and vocabulary intact. This reduces reading load on the student. This is especially useful for students with dyslexia. The text can further be adapted to suit a specific learner's needs.
- b. Process - of instruction or reaching, teaching the text to students. This involves the student to engage with the text. One of the best approaches to reading comprehension is the three stage approach – pre-reading, reading and post-reading. The reader is scaffolded with

the aforementioned strategies to master the text to the best of their capability.

- c. Product – evaluation of the text where the student is provided with the opportunity to demonstrate what has been learned. Levels of difficulty, group or individual work, learning style can all be adapted to assess text comprehension.
- d. Learning Environment – this includes physical and affective aspects of classroom adaptation and management. Creating a safe learning environment boosts motivation which is a huge component of reader engagement. The classroom can be adapted to accommodate a reading corner, seating to accommodate collaborative learning.
- e. Here are two samples of how text is adapted for teaching . We hope to successfully demonstrate the teaching process and strategies to enhance reading comprehension and aid learning. The first one is adapted for the Pre – NIOS level ( roughly grade 9) from the NCERT textbook. The second sample is for the Junior NIOS ( 10th grade) class in English.

### Sample 1 - THE THAR DESERT

**Thar Desert**, also called Great Indian Desert,

The Indian desert lies towards the western margins of the Aravalli Hills. It covers the state of Rajasthan and parts of Gujarat. It is an undulating sandy plain covered with sand dunes called Barchans (crescent shaped dunes).



## Glossary

1. Undulating – up and down, wavy form like waves in an ocean
2. Crescent shaped -

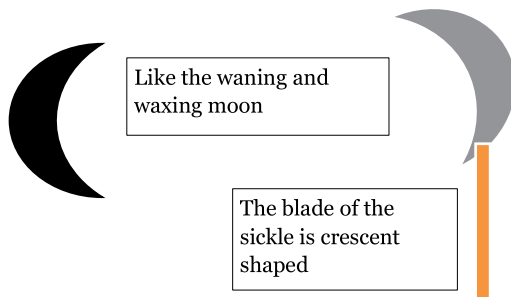


Fig. 2

Fig. 2 Crescent shaped sand dunes – Barchans

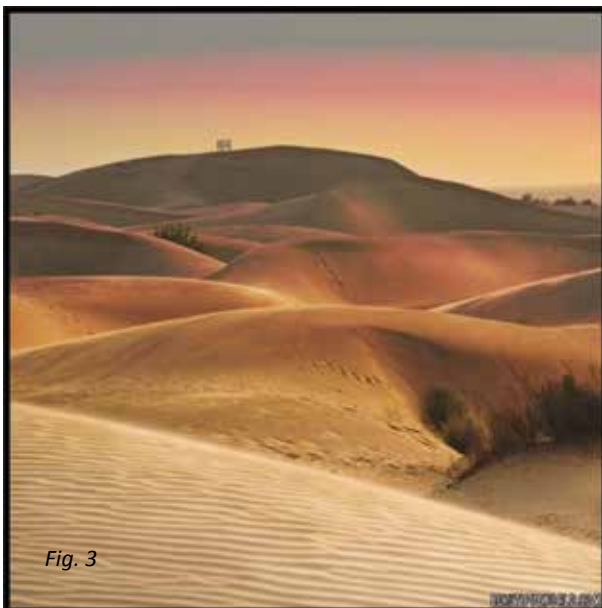


Fig. 3

Fig. 3 The undulating sandy plains

This region receives very low rainfall below 150 mm per year. It has arid climate with low vegetation cover. Streams appear during the rainy season. Soon after they disappear into the sand as they do not have enough water to reach the sea. Luni is the only large river in this region.

## Glossary

**Arid** – hardly any rainfall, dry, hardly any vegetation

**Vegetation** – what naturally grows in a particular area; not cultivated

**Desert vegetation**

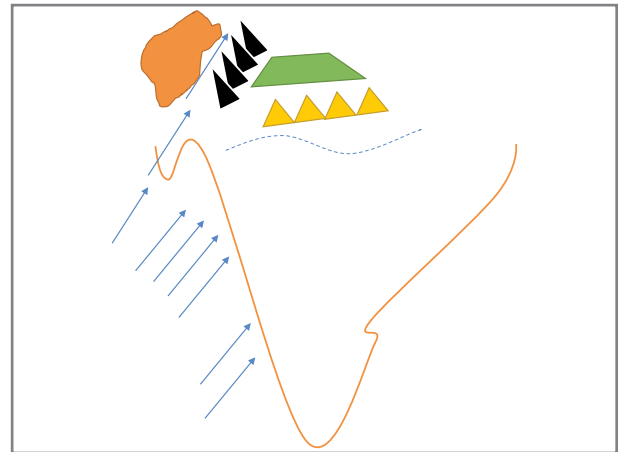


Fig. 4 Sketch

The rain-bearing winds go past the Aravallis because of their position. Had the Aravallis been positioned differently (see fig. 5) there is a high possibility that it would have received heavy rainfall.

(The teacher draws sketches and gets the children to draw it, to aid comprehension. Fig. 5 is a non – example which will help to deepen the understanding of the concept)

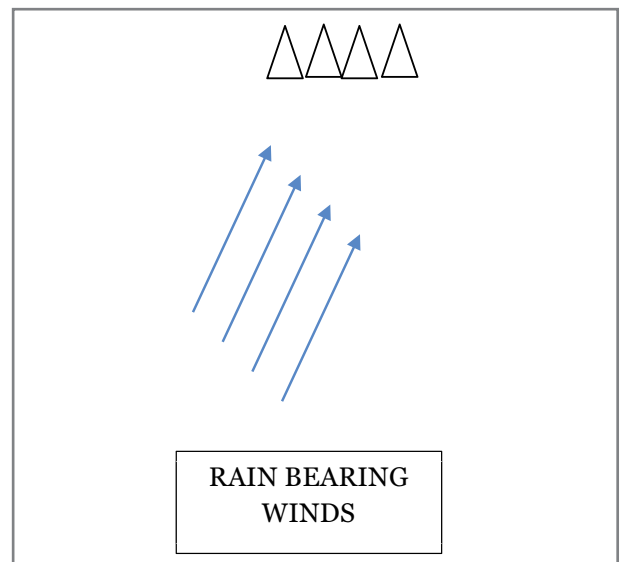


Fig. 5 Sketch2

## Lesson plan – Thar desert

Objectives	Activity and strategy	Accommodations	Material	Evaluation
Pre – reading: To establish prior knowledge of desert	<b>Strategy:</b> Brainstorming  <b>Activity:</b> Word association – Think of words that you would associate with a desert.  <b>Skill development</b> Vocabulary Reading comprehension	Provide prompts for those who need it	Black board on which the words are written – either by teacher or student	Draw a desert using the words on the board.  OR  Write brief description of a desert (given to students who cant draw)
During reading activity –  To gain knowledge about the location of the Thar desert.  To gain understanding of why this area is a desert	<b>Strategy:</b> Teacher explanations using visual aid;  Chunking – (3 Paras) the students read the portion from the text. Oral questions are asked for comprehension  <b>Activity:</b> Students will place cones depicting the position of the Aravallis and explain why the Thar desert gets less rainfall. (instead of cones students themselves stand as a representation of the position of the mountains, winds and its effects)  <b>Skill development</b> Listening comprehension Reading comprehension Oral language Spatial and motor skills	Provided pictorial representation of keywords  Larger sketches	Maps of India depicting Thar desert  Sketches depicting the position of the Aravallis and its effect on rainfall <b>For keywords</b> Glossary Word wall Flash cards	On a given outline map of India mark the following – Thar Deseret  The Aravallis  The direction of the southwest monsoons  Give reasons for the Thar Desert being a desert.

Objectives	Activity and strategy	Accommodations	Material	Evaluation
Post reading activity –  To get the students to apply their knowledge of the Desert	<b>Strategy:</b> Visualization  <b>Activity:</b> “if you were stranded in a desert how will you survive?” They will be asked to write their story based on what they have learnt from the concept. And read them out  <b>Skill development:</b> Creative writing Reading comprehension Written expression Sequencing	Scribe for a student with dysgraphia  Oral answers – recorded or expressed in class  Express through illustrations	Cloze passage – sample attached below	Read the adapted lesson two times. Keep it away and answer cloze passage  Read the newspaper article summarize and frame questions for the same (the article will act as a precursor for the research based activity that have been planned for the future)

### Cloze passage Sample

**Fill in the blanks with words given in the box to complete the summary.**

The Thar desert is situated on the western margins of the (a) \_\_\_\_\_. It is found mainly in the states of (b) \_\_\_\_\_ and (c) \_\_\_\_\_. It consists of (d) \_\_\_\_\_ crescent shaped (e) \_\_\_\_\_ called Barchans. It is an (f) \_\_\_\_\_ area that receives very (g) \_\_\_\_\_ rainfall. There is sparse vegetation. It is the (h) \_\_\_\_\_ of the Aravallis that result in the southwest monsoons to pass by (i) \_\_\_\_\_

Accommodation: recorded text for a struggling reader, text in larger font for a student with vision disabilities. (this accommodation is given so as to help the students with challenges work independently)

### Newspaper analysis.

Read the following passage. Create at least three relevant questions based on the passage. Not long ago, the remote communities in Jaisalmer district, Rajasthan, made a living from a single annual crop of bajra, which was dependent on the mercy of the rain gods. The 48-degree Celsius heat of the harsh summer sun, frequent sandstorms and water scarcity posed a major challenge for survival. Droughts and the spectre of camel and livestock bones strewn on the sand dunes loomed ahead. But the advent of the Indira Gandhi Canal Project (IGCP) in the mid-1980s changed everything. Covering seven districts in the State — Jaisalmer, Barmer, Bikaner, Jodhpur, Churu, Hanumangarh and Sri Ganganagar — the canal transformed the landscape and the lives of its inhabitants. Assured availability of water for drinking and irrigation turned the once-barren fields of north-west Rajasthan into fertile farms, yielding two crops a year. “Now we harvest wheat, guar, mustard, groundnut, cumin and gram,” says Hasam Khan, Sarpanch of Hamir Nada ki Dhani in Mohangarh panchayat, 75 km from Jaisalmer.



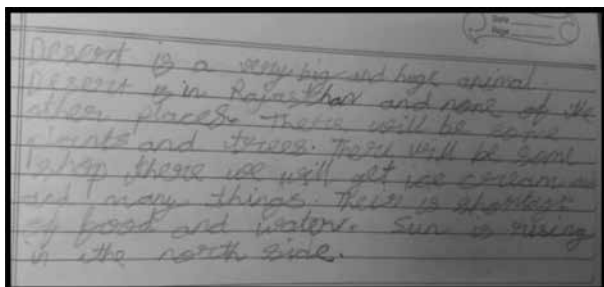
### Self – Reflection:

The class as a whole responded well to pictures and other visual cues provided while teaching the lesson. The brainstorming session and drawing activities kept students engaged and got them thinking about the topic (pre – reading). The process of syllabication and using pictures to explain the meaning of the keywords helped the students understand the meaning of the words. Since the topic was abstract it was chunked into paragraphs, visually represented and involved kinesthetic activities (during reading). A number of post – reading activities the cloze passage helped the students with recall of keywords and the students were able to do so very well. The activities made the children think out of the box with respect to the concept concerned. Here are some of the out of the box responses given by the students for the questions asked. For example, during the discussion some of the questions that the students raised were – (they have been mentioned verbatim)

- a. When the desert is hot people are fair but when you go to Chennai people are dark. Why? Melanin in their body (the desert) should be more to be dark.
- b. Are there fish in the oasis? I will eat the fish to survive

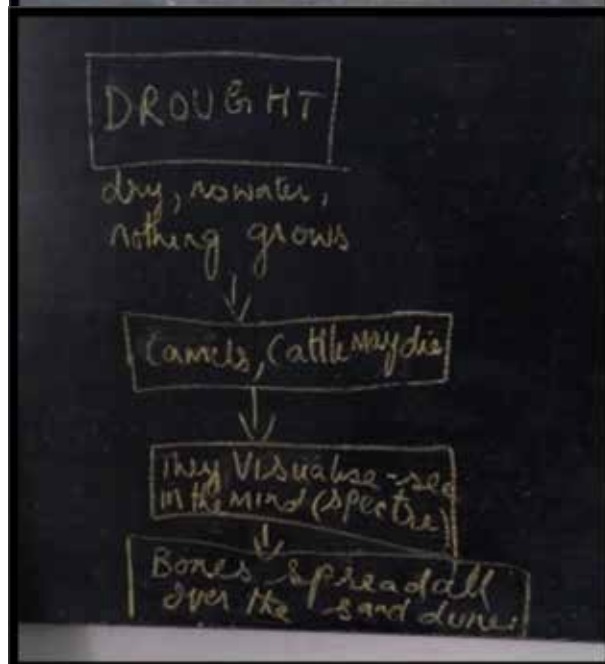
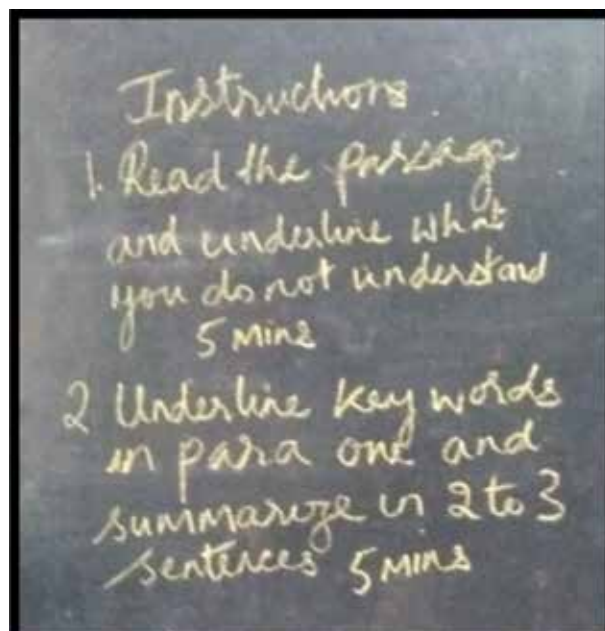


A student's representation of a desert. Some others had also tried to depict a sandstorm in the desert



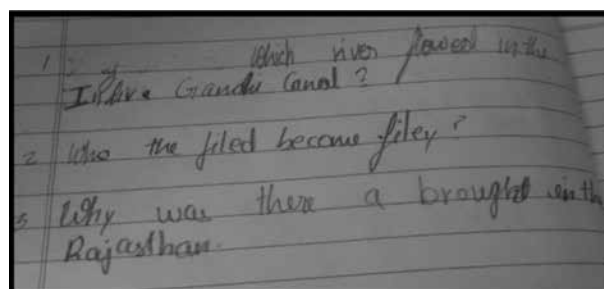
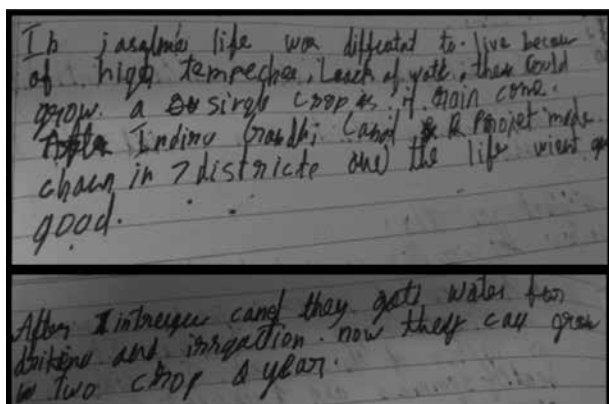
This child had no idea of a desert to begin with. Though the others had written a fairly good description.

The area that the students found challenging was the newspaper analysis section where they were expected to read unfamiliar text. The students faced challenges in reading and understanding unfamiliar words, summarizing. The words were explained by using them in a sentence and questioning to help them arrive at the contextual meaning themselves. The crux of the article was derived in points by the students and represented through a mind map. (pic below)



With respect to summarizing students found it challenging but when the teacher asked questions as cues the students were able to give appropriate answers. In spite of these questions the students found it a challenge to express their thoughts in

their own words. in order to guide the thought process of the students the teacher gave her own version of the summary the students were able to write even after a break. To bring the session to a close the students were asked to come up with 3 relevant questions based on the passage. Samples given below.



These pictures include a sample of a summary on a newspaper article and the questions they framed on it. In question 2 = who actually means 'how' and in question 3 brought actually means 'drought' (reversals)

**Sample 2:** Text adaptation of the English lesson 'The Indian Weavers' by Sarojini Naidu.

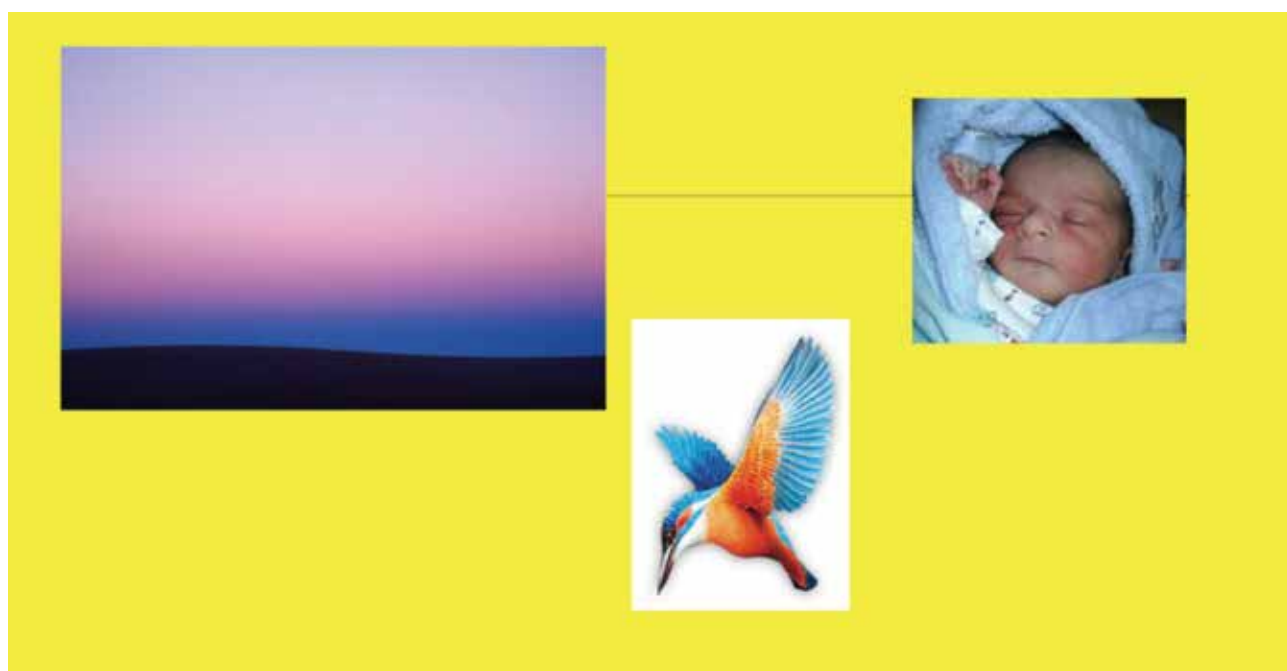
The poem, while short, is rich in imagery and abstract thought. Here's a brief of the poem to give you context. The weavers are weaving various types of cloth in different hues through an entire day. Each colour, time of the day symbolises phases in an individual's life. At dawn, a bright blue coloured cloth is woven for a new born baby symbolising birth and happiness; day/ dusk a bright coloured purple and green cloth for the marriage veil of a queen signifying life's celebrations. Finally, night and twilight a white shroud is woven signifying death. Colours symbolise different feelings, moods and ideas, e.g. red colour symbolizes romantic mood or love and danger. Different times of the day represent different stages of life – morning represents childhood, evening youth and night death, or end of life.

**Reason for adaptation of the text** – Given the student profile and one teaching trial, it was evident that the class found time concepts, rich word imagery such as metaphors, similes and certain unfamiliar keywords difficult to comprehend. To facilitate their learning, the text needed to be adapted.

Here the adaptation was to represent the lesson in a completely different format that would better be understood by the class. Thought the length was short the concepts were complex and abstract. The focus of this section is on the pre-reading stage. The primary strategy is visualisation and word reading drills to build vocabulary and familiarise students with words from the text. The objective was also to demystify the notion of a poem being difficult to understand. Here is the lesson plan for the pre – reading section.

Objectives	Strategy/Activity	Material	Evaluation
<ul style="list-style-type: none"> <li>Students will be shown pictures the poem is read</li> <li>Students will read keywords</li> <li>Students will match keywords to respective pictures</li> </ul>	<p><b>Strategies:</b> Show and tell Flashcards</p> <p><b>Activity:</b> With each stanza being read by the teacher, reading cards are shown. Reading cards are flashed as the presentation is played with teacher explanation.</p>	<p>Power point presentation</p> <p>Text</p> <p>Reading cards</p> <p>Stanza 1 - Break of Day, New Born, Halcyon</p> <p>Stanza 2 – Fall of night, plumes , Marriage veil</p> <p>Stanza 3 – Shroud, Night, moonlight chill</p>	<p>Flashcard reading the keywords.</p> <p>Given words on reading cards , students should be able to label the respective pictures</p>

Objectives	Strategy/Activity	Material	Evaluation
<ul style="list-style-type: none"> <li>Students will sequence time line of the day</li> </ul>	<b>Strategies:</b> Tactile Learning Sorting Discussion - daily routine  <b>Activity:</b> Students will read and sort words related to the day.	Reading cards Individual pictures Scissors & Glue	Using reading cards and pictures , students should be able to sequence time line of the day
<ul style="list-style-type: none"> <li>Students will map emotions to colours in the text</li> </ul>	<b>Strategies:</b> Role play Teacher Modelling intonation  <b>Activity:</b> Mime out emotion mentioned Small passage is read out and the students are asked to name the emotion.	Colour cards Reading cards – Keywords Reading Cards – Emotions Passages of 3 sentences each. E.g. – Raja missed all his busses back home. He met a close friend who offered to drop him home.	Demonstrated an emotion, Students should be able to use text based emotion word, put up the appropriate reading card.  Given the emotion reading card, student should be able to match the respective colour card & vice versa.



Pic. 1





*Pic. 2*



*Pic 3: Presenting the pictures aided in developing vocabulary and concept understanding.*

## Text Representation:

**Indian Weavers: Sarojini Naidu**

**DURING READING: 1**

POEM Word	Meaning
break of day	dawn
garment	cloth
new-born	baby
fall of night	dusk
plumes	feather

**Objectives:** Should know – poem, rhyming, emotions  
Will understand – main idea via pictures, table – compare & contrast, explanation

Weavers, weaving at break of day,  
Why do you weave a garment so gay?  
Blue as the wing of halcyon wild  
We weave the robes of a new-born child.

Weavers, weaving at fall of night,  
Why do you weave a garment so bright?  
Like the plumes of a peacock, purple and green  
We weave the marriage veils of a queen

Weavers, weaving solemn and still  
What do you weave in the moonlight chill?  
White as a feather and white as a cloud  
We weave a dead man's funeral shroud.

Stage of life	Time of day	cloth	colour	Compared to	emotion	Occasion	Person
1. Birth	break of day	robe	blue	Halcyon	Gay	birth	new born
2. Youth	fall of night	veil	purple & green	Peacock	Excitement	wedding	queen/bride
3. Death	moonlight	shroud	white	Feather & cloud	Solemn & still	funeral	dead man

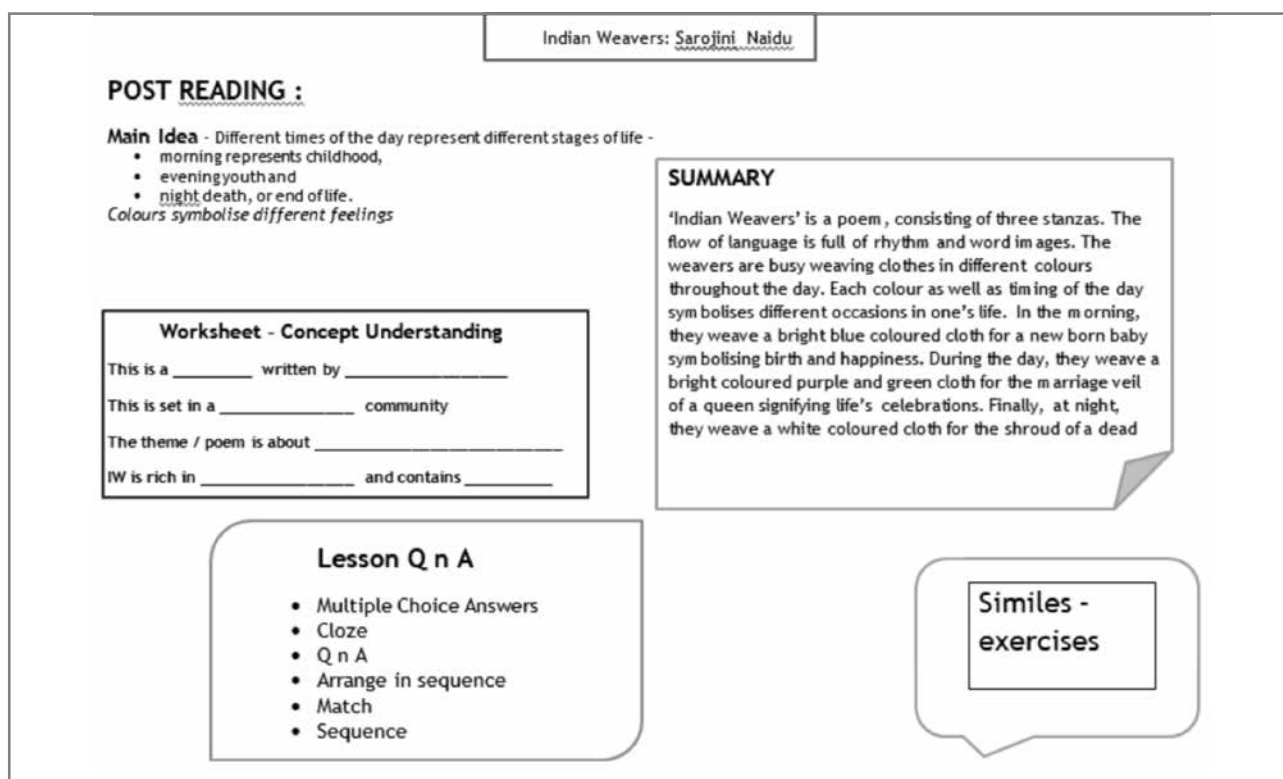
Pic 4: The entire poem was represented as a table as shown in the picture above. This format of representation, chunking and the preceeding pictures helped during reading and explanation of text. However, one student was unable to still comprehend the text given all formats. He didn't have issues with word attack. However, he found it difficult to copy and translate text into tabular format. He fared better in the following activity that combined listening comprehension as well.

**Indian Weavers: Sarojini Naidu**

**During Reading 2- Read each stanza. Discuss questions that follow:**

<p><i>Weavers, weaving at break of day,</i> <i>Why do you weave a garment so gay?</i> <i>Blue as the wing of halcyon wild</i> <i>We weave the robes of a new-born child.</i></p> <p>1. Who is the poet addressing? 2. When are they weaving the cloth? 3. What is being compared? 4. What is the weavers' reply?</p>	<p><i>Weavers, weaving at fall of night,</i> <i>Why do you weave a garment so bright?</i> <i>Like the plumes of a peacock, purple or green</i> <i>We weave the marriage veils of a queen</i></p> <p>1. State the time mentioned in this verse 2. What type is being woven here? 3. What is the colour of the plumes? 4. What is the veil?</p>	<p><i>Weavers weaving solemn and still</i> <i>What do you weave in the moonlight chill?</i> <i>White as a feather and white as a cloud</i> <i>We weave a dead man's funeral shroud</i></p> <p>1. Mention the time of reference 2. What is the colour of the cloth? 3. What is the weaver's reply? 4. Trace the words in the stanza that mean a) calm      b) serious</p>
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Pic 5: with teacher modelling reading and questioning, all students were able to map pictures to keywords and used these aids as prompts to boost reading comprehension



*Pic 6: this is an outline of the post -reading tasks that will lead to evaluation. At Brindavan we also explicitly teach students to read and understand questions in question papers. The NIOS pattern of questioning is mostly application- based questions. Hence a crucial part of reading comprehension program is an emphasis on understanding instructions because that determines accurate output.*

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