TEACHING INFORMATIONAL TEXT READING STRATEGIES USING RECIPROCAL TEACHING

A Resource Guide for Intermediate Elementary Grade Teachers
Dedication

I dedicate this book to my nana for working hard to provide me with an education and my husband for his patients for the last ten years.
Dear Intermediate Elementary Teacher,

The intended purpose for this project is to increase a teacher’s knowledge on how to implement informational text strategies. Students entering fourth grade struggle with comprehending informational text since they are unable to easily apply the familiar narrative strategies to different text structures. Within my first year of teaching, I noticed how many of my fourth and fifth grade students struggled with comprehension questions after reading informational text. Many students were unable to identify the specific text features such as picture captions nor did they have the ability to interpret graphs. When I asked them to answer comprehension questions and refer back to the text in order to prove why that answer was correct, many students were unable to do so. This initiated my quest to find, study, and implement instruction that will help students comprehend nonfiction text. I have included a description of several different informational reading strategies and illustrated how a combination of these strategies can be effective within the classroom setting to enhance students’ comprehension. It is important to teach the students all the strategies and then work on combining them to form a successful comprehension instruction.

Best of Luck,

Krystal

4/5 elementary teacher
Abstract


There are numerous ways teachers can teach reading comprehension. During primary years, teachers focus instruction on stories with predictable narrative structures. When students enter intermediate elementary, they struggle with the different text structures found in informational text since they do not follow the same patterns. The purpose of this professional project was to create a resource guide to help intermediate elementary teachers explore different kinds of informational text reading strategies and combine those strategies to create and execute a successful reading comprehension program using reciprocal teaching. Included in the resource guide is an explanation of reciprocal teaching, suggested teaching methods to implement the strategies within the classroom, and how to get students to eventually become metacognitive readers.
# TABLE OF CONTENTS

## INTRODUCTION

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATIONALE</td>
<td>6</td>
</tr>
<tr>
<td>PROFESSIONAL GOALS</td>
<td>7</td>
</tr>
<tr>
<td>PROFESSIONAL QUESTIONS</td>
<td>8</td>
</tr>
<tr>
<td>PROFESSIONAL STANDARDS</td>
<td>9</td>
</tr>
<tr>
<td>CONTENT STANDARDS</td>
<td>10</td>
</tr>
<tr>
<td>TERMINOLOGY</td>
<td>11</td>
</tr>
<tr>
<td>PURPOSE BEHIND PROJECT</td>
<td>12</td>
</tr>
<tr>
<td>RECIPROCAL TEACHING</td>
<td>13</td>
</tr>
<tr>
<td>METHODOLOGY</td>
<td>16</td>
</tr>
<tr>
<td>CLASSROOM ADAPTATIONS</td>
<td>17</td>
</tr>
</tbody>
</table>

## INDIVIDUAL STRATEGY INSTRUCTION

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREDICTING</td>
<td>20</td>
</tr>
<tr>
<td>SUMMARIZING</td>
<td>30</td>
</tr>
<tr>
<td>QUESTION GENERATING</td>
<td>35</td>
</tr>
<tr>
<td>CLARIFYING METACOGNITIVE STRATEGIES</td>
<td>41</td>
</tr>
<tr>
<td>METACOGNITIVE STRATEGIES</td>
<td>41</td>
</tr>
</tbody>
</table>

## COMBINATION OF STRATEGIES

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMBINING STRATEGIES</td>
<td>42</td>
</tr>
<tr>
<td>COOPERATIVE LEARNING GROUPS</td>
<td>43</td>
</tr>
<tr>
<td>RECIPROCAL TEACHING LESSON PLAN</td>
<td>46</td>
</tr>
<tr>
<td>ASSESSMENT TIPS</td>
<td>51</td>
</tr>
<tr>
<td>RUBRICS</td>
<td>52</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>53</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>54</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>62</td>
</tr>
<tr>
<td>ANNOTATED BIBLIOGRAPHY</td>
<td>63</td>
</tr>
</tbody>
</table>
Rationale

- In 2009, The National Assessment of Education Progress Guidelines recommended literature read in classrooms should be 50% nonfiction (Kraemer et al., 2012).

- Bruner’s constructivist theory illustrates that learning is an active process that allows students to use the reading strategies they have been taught to help them comprehend what they are reading (McTavish 2008).

- Students receive a reoccurring narrative structure instruction during primary years. In essence, students internalize that all literature follow the same patterns (McTavish, 2008).

- Students struggle with comprehending informational text since they are unable to easily apply the familiar strategies to different text structures (McTavish, 2008).

- Many instructional strategies may be combined to enhance student comprehension of nonfiction text (Houtveen, et. al., 2007).
**Project Goals**

The primary goal of this professional project is to create a teachers’ guide on implementing informational text reading strategies. The application of these reading strategies will enable intermediate grade students to independently comprehend information text.
Professional Questions

- What are effective informational text comprehension strategies for intermediate elementary students?

- How can elementary grade teachers implement comprehension strategies successfully?
Professional Standards Addressed in the Project

The following professional standards from the International Reading Association were addressed in the project:

- **Standard 1: Foundation of knowledge**

  Educators understand the theoretical aspect behind the foundation of the reading and writing process, as well as strategic instruction. Elements included within this standard are: understanding how to appropriately critique students’ writing and reading developments, ability to adapt to perceptions of reading and writing development, and respectable evaluation of certain empirical and theoretical studies regarding the development of students’ reading and writing.

- **Standard 2: Curriculum and Instruction**

  Using expected knowledge of subject to create, implement, and assess effective curriculum. Elements include triggering prior knowledge to connect abstract ideas and priority to ensure all curriculum objectives are met using a variety of literature.

In addition to IRA standards, the following Core Propositions from the National Board for Professional Teaching Standards apply to this project:

- **Proposition 3: Teachers are responsible for managing and monitoring student learning.**

- **Proposition 2: Teachers know the subjects they teach and how to teach those subjects to students.**
Content Standards Addressed in the Project

- **CCSS.ELA-Literacy.RI.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

- **CCSS.ELA-Literacy.RI.4.2** Determine the main idea of a text and explain how it is supported by key details; summarize the text.

- **CCSS.ELA-Literacy.RI.4.3** Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

- **CCSS.ELA-Literacy.RI.4.7** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.
Terminology

**Reciprocal Teaching:** An instructional method that activates dialogue among students to improve comprehension of nonfiction literature. Strategies that are used consecutively include predicting, summarizing, questioning, and clarifying.

**Explicit Instruction:** A teaching instruction in which the teacher models the thinking process while reading.

**Think, Pair, Share:** An activity in which the student thinks about a problem or issue and then shares it with their classmates grouping configurations.

**Metacognitive Reader:** A self-regulated learner able to adjust reading strategies to comprehend concepts presented in text.

**Fix-up Strategies:** Self-correcting behaviors readers use to understand text. Strategies include rereading, slowing down, or defining words.

**Predicting:** Actively connecting background knowledge with key components found in text in order to create logical hypotheses prior to reading the full text.

**Clarify:** Verify understanding of text by decoding misunderstandings found in text.

**Questioning:** Using questions like “who?, what?, when?, where? and why” during reading in order to concentrate on main ideas, rather than random details.

**Summarizing:** Ability to distinguish important from less-important information in text and organize information in his/her own words.

**Context Clues:** Using text features such as bold words, captions, and pictures to help students comprehend paragraphs.
Purpose behind Project

Students apply instructional strategies they have mastered in order to comprehend text. This concept supports Bruner’s constructivist theory. It explains learning as an active process that allows humans to constantly activate their own prior knowledge, experiences, and mental patterns in order to make connections with new ideas or concepts. Students’ interpretations are based on their own personal background knowledge. They use the reading strategies they have been taught to help them understand a variety of reading structures, both narrative and expository. An issue that students encounter starting in fourth grade is the great amount of unfamiliar content-specific vocabulary found in science and social studies text since, traditionally, primary students are taught reading comprehension strategies that are used for narrative texts. These texts often lack information about the social world, factual data, content-specific terms, classification, and graphic features (Hannah & Shore, 2008). Over the last several years, researchers have identified the difficulties students have while comprehending informational text in intermediate elementary and beyond. Because of the reoccurring narrative structure, students internalize that all literature follows the same patterns. As Bruner’s constructivist theory explains, students take those known reading patterns and apply them to all the literature they read. They struggle with comprehending informational text since they are unable to easily apply the familiar narrative strategies to different text structures. This struggle is referred to as the “fourth-grade slump” (McTavish, 2008). The problem increases as students enter the fourth grade since nonfiction text starts to predominately appear in the curriculum. By sixth grade, more than 75% of students’ reading material consists of nonfiction, informational text (Kraemer, 2012). It is also important to note that 95% of most visited internet sources are informational resources (Ness, 2011).
Reciprocal Teaching
Definition

A conceptual map of reciprocal teaching is contained in figure 1.1. Reciprocal teaching consists of the combination of four reading strategies: prediction, summarizing, question generating, and clarifying. Using these four strategies will improve students’ understanding of informational text (Carr et al., 2010, McTavish, 2008, Takala, 2006). In this instruction method, students alternate acting as a dialogue leader. Their roles are one of the following: leader, predictor, summarizer, questioner, and clarifier. Each student assumes one of these roles during each group session (Williams, 2010). The diagram below illustrates the phases that reciprocal teaching occurs. The first step is to introduce all the strategies, one at a time. All of the strategies are organized by typical thought process: before, during, or after reading a segment.
Pre-reading Strategies

Students should be exposed to pre-reading strategies to become familiar with features and concepts of informational text. The purpose of pre-reading strategies is to activate prior knowledge, set a purpose for reading, and make predictions. There are many activities that teachers can do during this stage to establish initial thoughts about the nonfiction material such as:

**K-W-L:** Method in which students brainstorm what they know (K), what they want to know (W), and what they have learned (L). The process begins with the teacher inviting students to list their knowledge pertaining to a topic and decide what they need to find out. After reading the text, students will be able to list what they learned or summarize their findings.

**Class Discussion:** An interactive method used to create discourse related to the topic.

**Observing Text Features:** Students make predictions about what they will read based on text features such the title, subtitles, graphs, and bold vocabulary words (Harvey & Goudvis, 2007).

**Concept Maps:** Visual aids that break down larger concepts, such as the one shown in figure 1.1. They help students understand what they are about to read.

During Reading Strategies

After initial thoughts and predictions are assumed, students enter the during reading stage. The during reading strategies are: finding main ideas, or summarizing the text, and questioning and answering (Q&A). During question and answer, students will be able to generate higher level thinking questions, or heavyweight question, similar to questions that could show up on a test. Such strategy lessons will teach these essential reading comprehension strategies:

**Guided Discussion:** Teacher models thinking for a few minutes, then asks for students input and encourages active discussion to create Logical understandings of text.

**Lifting Text:** Teacher hands out same material that is presented on an overhead projector. The teacher reads the material aloud, models thinking and students Mimic...
similar strategies such as highlighting important information. While the students jot down notes for further discussion.

**Interactive Read Aloud:** Activity in which the students orally listen as the teacher reads aloud from a resource and has the students jot down notes as they read (Harvey & Goudvis, 2007).

**Think, pair, share:** Activity that gives the students time to think on their own about particular ideas, then share with other peers, one peer at a time, then share their ideas with the entire class. This is a time controlled activity that allows everyone to share and serves as a great assessment tool (Graves, Juel & Graves, 2007).

**Post reading strategies**

The post reading strategies include clarify and metacognition. During the clarification stage, students will use metacognitive, or fix-up strategies, in order to clarify any misunderstandings in the text. Fix-up strategies include:

- Rereading
- Defining words
- Slowing down
- Reading ahead

**Implementation of Reciprocal Teaching**

These strategies should be introduced in the order listed. Eventually, during independent grouping arrangements, students will be able to use strategies as needed in any given order. After modeling and practicing strategies with students, teachers will then teach the combination of all the strategies encouraging active dialog between students in small groups. The instruction will start with a teacher-student dialog, then the instruction will reverse, making the students become the teachers while working within smaller groups. Handouts are available in the appendix to help students stay on track, and to ensure they re-visit and practice strategies during all phases of reading. Eventually, independent groups will be established as well as roles for each member. Roles include: leader, summarizer, questioner, and clarifier. Cue cards will enable students to keep them on track, while the teacher support is reduced and eventually eliminated. Ultimately, students will end at the metacognition stage in which they will internalize the strategies to
the point of automaticity.

**Methodology**

It is recommended that students are taught how to use a comprehension method that has multiple strategies since proficient readers use many strategies to comprehend a text. Students must process many different strategies while reading including recognizing words, defining words, and relating that information with their prior knowledge (Williams, 2010; Takala, 2006; Houtveen & van de Grift, 2007). Reciprocal teaching is a research-based practice that has yielded positive results for students when comprehending nonfiction text. Figure 1.7 illustrates what researchers determine as what good readers do. Good readers make connections with the title and other text features. They set a purpose for reading and make predictions with the background knowledge they possess. They also ask questions throughout the text to monitor comprehension, summarize in their own words what they’ve read, and clarify any misunderstandings with the use of fix-up strategies (Houtveen, 2007; McTavish, 2008).

In 2006, Marjatta Takala conducted research to recognize the importance of introducing comprehension strategies through reciprocal teaching. Takala selected 140 intermediate elementary students to participate in a five-week study to determine the effectiveness of reciprocal teaching on comprehension. The teachers who administered the method focused on practicing the key reciprocal teaching strategies. Test scores from experimental groups indicated positive results in comprehension areas compared to the control group who did not receive the instructional method. Reciprocal teaching can be particularly beneficial for students with learning disabilities. Studies have indicated increased engagement
levels and statistically higher comprehension scores from students with learning
disabilities who participated in a reciprocal teaching instructional method (Lederer,
2000). Reciprocal teaching allows for students to expand their knowledge past the simple
understandings of a text. Students are required to think on a deeper level and it also
serves as a self-assessment as they apply the strategies (Harvey & Goudvis, 2007).

Classroom Adaptations
What is Looks Like

Adapting reciprocal teaching with nonfiction text comprehension begins with the
selection of nonfiction text. The following steps demonstrate a typical reciprocal
instruction:

1. During whole-group, the class accesses background information by having a
discussion regarding the topic at hand. Teacher scaffolds the remarks of students
to facilitate and expand their understandings.
2. Organize students into small groups and assign a student leader to lead the
discussion. Have the leader assign a part for each student: predictor, summarizer,
questioner, and clarifier.
3. The leader will start by introducing the text and member roles. Their job is to also
encourage all roles to participate and keep the conversation on task.
4. The predictor will revisit the background knowledge from peers and develop
predictions.
5. Students take turns reading aloud the text and writing notes to help them prepare
for the discussion role.
6. The assigned summarizer will then highlight important facts and summarize the
main points in passage.
7. The questioner will ask higher level thinking questions to check comprehension.
8. The clarifier will help aid in clarifying any misunderstandings.

The same steps will apply for each directed part of text. Throughout the process,
interactive dialogue is encouraged to help other peers comprehend the same text.
Sometimes the way other students explain concepts to their peers makes more sense
to them than the traditional teacher lecture. It’s another point of view.
Reciprocal Teaching Example
At a Glance

Below is a typical scenario where reciprocal teaching has been applied:

**Sam (Leader/Predictor):** Okay so let’s look at these pages before we start reading to get a feel for what we’re about to read and what we already know. From the title, “Power from Nature,” and the pictures shown, it looks like we will be learning about natural power. I wonder what those spinning fans are? I’ve seen them in land farms before. What do we know about natural energy already?

**Grace:** I’ve seen those before too. I think it produces electricity somehow. It says in the caption they are “wind turbines.” Look at that house, we have those since we have a pool. Mom says it helps keep the pool warmer. Says under the picture they are called “solar panels” that are used to provide heat and electricity. Cool!

**Lance (Summarizer):** okay so some main points to this article. The sub captions helped me identify what each passage will be about. This paragraph talked about how energy is produced from two different sources: renewable energy sources, which can be renewed like the sunlight and wind. That explains those wind turbines, and nonrenewable energy resources like coal or oil, which can eventually run out. This paragraph talks about the issues of nonrenewable resources like how they can run out, and need man power to turn into energy as well as polluting the environment. Lastly, the author summarizes by saying renewable resources are more beneficial since it protects our natural resources and reduces pollution.

**Stacy (Questioner):** I’ll ask a few questions to make sure you guys understand. In what ways are renewable resources beneficial?

**Stephanie:** It’s definitely cheaper. The author stated from the start, people used wind to move ships and wood to
cook food.

**Stacy:** I never thought of that fact. Now we use fuel to make boats go faster. I think sail boats are beautiful and better yet, nature friendly.

**Stephanie (clarifier):** At the end, it says “conserve energy.”

That’s confusing. How do you conserve renewable resources if the resource never runs out? Put wind in a jar?

**Sam:** By reading a little ahead it says things you can do like turn off lights, TV’s, computers etc. When you turn them off, what are you doing?

**Stephanie:** I would be saving energy and money on the power bill. Oh, so that’s what “conserve” means.

**Where to Start**

*Direct Instruction of Cognitive Strategies*

The best way to introduce the strategies that apply to reciprocal teaching is through **direct instruction.** Direct instruction is applied to teach reading comprehension. The teacher uses an explicit think-aloud instruction to model what students should do during reading. It should be taught into manageable chunks, starting with introducing each strategy individually. The instruction should start with teacher-led instruction within a whole group setting. Throughout the teaching of each strategy, teachers should include collaborative working opportunities, at least every seven minutes, since reciprocal teaching is based on the foundation of collaborative group work (Oczkus, 2010). It is also important to organize groups appropriately and have firm behavior expectations for group work environment. By the end of a particular strategy, students should understand what the strategies are and how and when they should be applied while reading a text. For example, they should know whether the strategy is a pre-reading, during reading, or postreading strategy. The time frame for each individual strategy should be 1-2 days for intermediate elementary students (Carr, Patberg & Aldinger, 2004).
Individual Strategy Instruction
Modeled by Think-Alouds

**Predicting**
When teaching to an informational text, it is essential to teach text features. This can be done by pointing out and asking what makes the text special and different from a fictional text. Students will notice the bold and italicized titles and vocabulary words. They will also notice pictures and graphs. Text features allow students to access their prior knowledge on the concept by looking at the pictures with captions. Have students practice using the glossary by looking up the bold vocabulary words shown in the text before they read it. Having students create their own booklets on a nonfiction topic of their choice consisting of labeled text features is a good way to introduce text features. After establishing what text features are, have students fill out an organizer, such as one shown in figure 1.3. This organizer provides a simple format for students to write down which text features are present as well as predictions based on the text features. Students may write their questions in the bubble provided.

**Prediction & Teacher Modeling**
A Think Aloud Method
When teachers expose students to non-fiction text, they should model predictive reading strategies. Initially, the identification of text features, specialized vocabulary, and graphics or pictorials are located. After locating text features, vocabulary, and key concepts, students will be better equipped to predict major concepts and better understand
an author’s intent. For example, a typical scenario of learning about cells appears in the dialogue below:

Alright, so let’s establish what kinds of text features will help us figure out what we are going to read about. What kind of pictures do you see? It looks like these pictures are cells. Make a prediction based on the pictures you see about what we are going to read. I can tell they are cells by looking at the captions. Down here we see a picture of our nerves in our bodies. What do we know about cells and our bodies? Some of our headings state that cells work together. Study the bold vocabulary words in this section and make a guess on what they might mean based on the text features. Let’s look up this bold word in the glossary to get some ideas. On the next page, there is a picture of a plant cell. I wonder if our cells are similar to plant cells? What other questions may we want answered just by looking at the text features? Let’s jot our thoughts down on our bubble chart to keep our predictions and thoughts organized. I predict plant cells are similar to human cells because the title of this section has to do with cells being the start of life.

Students can work in groups to discuss what they know about the nonfiction text and help each other fill out the graphic organizer to help build background knowledge. Some scaffolding prompts to use during guided reading to help students predict are included in bold type in the above scenario (Oczkus, 2010). The questions cue the student to look at available text features and make numerous predictions. After a few sections, have students collaborate in small groups. When handing the reins over to the students, give them a list of think aloud prompts such as:

- What is the connection between the title and the visuals that are presented?
- What do you think this bold type word means?
- What does the title lead you to believe this lesson will be about?

Typical student responses should start with phases like:

- I predict…
- I wonder if…
- I think…
Answers should include why they predicted something. After students have collaborated, bring the instruction back to whole-class discussion and discuss why and how the prediction strategy was useful.
Introducing Text Features Lesson Plan

Objectives:
- Students will be able to identify text features in nonfiction text.
- Students will be able to use think aloud strategies to prepare for reading

CCSS Standards:
- RI4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- RI4.7: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

Anticipatory Setting: Discuss the difference between fiction and nonfiction literature. Have a nonfiction text book and fiction picture book available for students to use as a visual aid. Show them an overhead copy of “Beelzebulfo: A Giant of a Find” with no text features and then the same text with text features and brainstorm what makes the one with text features more visually appealing. Define these characteristics as Text Features.

Procedures:
1. Walk students through each of the following text features found in “Beelzebufo: A Giant of a Find”: Photographs, charts, title, captions, subheadings, glossary, and captions.
2. Identify the importance of how each text feature helps readers prepare for reading a nonfiction text.
   a. Subheadings: Helps reader predict what they are about to read
   b. Caption: Helps reader understand pictures or graphs
   c. Glossary: Section that helps reader understand meaning of concept related words (bold type words)
   d. Graphs: Helps reader comprehend facts found in text with use of visuals
   e. Photographs: Helps reader make a visual connection with what is read in text.
3. Model think-aloud pre-reading strategies by asking questions and making observations about the text.
   a. Example: How does the title of this passage help us predict what we are going to read? I would think this section will be about someone discovering a small or large frog by looking at the picture of the frogs.
4. Model how readers can ask questions that they hope will be answered before reading based on the text features.
   a. Example: Who discovers the frog? Where did he discover the frog? Is it a small or large frog that is found?
5. Show the class the copy of the same article with no text features and illustrate how it would be hard to make predictions about the frog without any text features.

Guided Practice:
1. Distribute the bubble concept map “Using text features to predict” to each student as well as a copy of “Beelzebufo: A Giant of a Find” to each student.
2. In pairs, have students fill out what text features they see in the article under “what text features do I see” bubble.
3. Discuss answers with the class.
4. Have them brainstorm and write down the clues the text features give to the reader before reading the article, followed by two questions that they may have regarding the text features with partners.
5. Discuss answers with the class.
6. Read the article aloud with the class.
7. Confirm predictions made and answer questions students thought of.

Independent Work: Have the students identify text features in their social studies or science textbook using the worksheet “Text Feature Scavenger Hunt”

Conclusion to Lesson: Review the importance of text features and how they help readers set up for a successful reading experience.

Lesson Extension: Have students create their own nonfiction booklet on a topic of their choice containing important text features.
A team of researchers in Madagascar has discovered the fossil of what may be the largest frog to have ever lived. The beach-ball-size amphibian, which grew to be 16 inches (40.6 centimeters) long and weighed about 10 pounds (4.5 kilograms), is scientifically named Beelzebufo, or 'devil frog.'

Paleontologist David Krause of Stony Brook University in New York made the discovery and is working together with other scientists to determine how Beelzebufo is related to other frogs and to understand how and why they are on the island of Madagascar. Fossil frog experts Susan Evans and Marc Jones of the University College London agree that the new frog represents the first known occurrence of a fossil group in Madagascar with living relatives in South America.

"Beelzebufo appears to be a very close relative of a group of South American frogs known as 'ceratophyrines,' or 'pac-man' frogs, because of their immense mouths," said Krause. But why wasn't Beelzebufo found in South America? "We're asking ourselves, 'What's a 'South American' frog doing half-way around the world, in Madagascar?'" said Krause. "One possibility is that there was a land connection between South America and Madagascar during [the Late Cretaceous] period." Some researchers believe that Antarctica, Madagascar, and South America may all have been connected at one time.

Beelzebufo is, without a doubt, one of the largest frogs on record and was perhaps the largest frog ever to exist. The size, appearance, and predatory nature of the frog prompted its discoverers to call it the "armored frog from the darkest night." The name "Beelzebufo" comes from the Greek word for devil (Beelzebub) and the Latin word for toad (bufo).

Not only was the frog huge, it was powerful, had a protective shield, an extremely wide mouth and powerful jaws. These features made Beelzebufo capable of killing lizards and other small animals, perhaps even hatchling dinosaurs.

By comparison, the largest living frog today is the goliath frog of West Africa, which can be 12.5 inches (31.7 centimeters) long and weigh about 7.2 pounds (3.2 kilograms). The largest frog alive on Madagascar today is just over four inches (10.1 centimeters) long.
Beelzebufo: A Giant of a Find

A Surprising Discovery

A team of researchers in Madagascar has discovered the fossil of what may be the largest frog to have ever lived. The beach-ball-size **amphibian**, which grew to be 16 inches (40.6 centimeters) long and weighed about 10 pounds (4.5 kilograms), is scientifically named Beelzebufo, or ‘devil frog.’

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Far From Home?

But why wasn’t Beelzebufo found in South America? “We’re asking ourselves, ‘What’s a ‘South American’ frog doing half-way around the world, in Madagascar?’” said Krause. “One possibility is that there was a land connection between South America and Madagascar during [the Late Cretaceous] period.” Some researchers believe that Antarctica, Madagascar, and South America may all have been connected at one time.

WHERE??

Madagascar is an island off the east coast of the African continent.

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Just a Pretty Face?

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Glossary

Amphibian: a creature that spends part of its life on land and part in water.

Hatchling: a newly born creature fresh from its hatching from an egg.

Immense: extremely large.

Paleontologist: someone who studies fossils.
What Text Features Do I See?

Clues Text Features are giving me about the text are:

Some Questions I may have about the text are:
Text Features SCAVENGER HUNT

Using your textbook, see how many of these text features you can find. Write the page number beside the example that you find. Explain how the text feature helps readers make predictions about what is going to be read.

<table>
<thead>
<tr>
<th>TEXT FEATURE</th>
<th>PAGE NUMBER</th>
<th>How does it Help us Predict?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub Title</td>
<td></td>
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<tr>
<td>Labeled pictures or diagram</td>
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<tr>
<td>Photograph</td>
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<tr>
<td>Table or Chart</td>
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<tr>
<td>Graph</td>
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<tr>
<td>Bold Print</td>
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</tr>
<tr>
<td>Italics</td>
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<tr>
<td>Caption</td>
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<tr>
<td>Map</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table of Contents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glossary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index</td>
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</tbody>
</table>
**Summarizing**
**During Reading Strategy**

The second step in reciprocal teaching is summarizing. This is taught as a during reading strategy. Introducing how to summarize information in a nonfiction book should be taught using smaller sections of a larger passage. When students read an entire lesson of three or more pages, it becomes difficult to sift through it all to establish main points that the author is trying to make (Harvey & Goudvis, 2007). This strategy should also be taught right after prediction, since students read the text after they predict and walk through the book. Pre-teaching should be done prior to reading and summarizing the material. Make sure new vocabulary is introduced. A good way of doing this is during the pre-reading stage. Students can look up the bold type words (text feature strategy) and have a discussion about what they know and questions they want to have answered.

**Introducing Summarizing using Interactive Reading Aloud**
**Stop, Think, and React**

One way to get students to summarize material is during interactive reading aloud. This is when the teacher reads aloud from the text. While the teacher reads the text aloud, the students listen carefully. They do not have a copy of the text in front of them (Harvey & Goudvis, 2007). This is helpful because they have to listen to the text and do not have the distraction of the actual text in front of them. Prior to reading, access prior knowledge by having the students collaborate in groups about what they already know about a particular topic. Ask the students to write down any information that helps them summarize what the text was about. Remind them that their information may be written as quick notes that may not have entire sentences at this stage. After they have attempted to summarize what they have read, explain that summarizing is a strategy done during reading. Explain that summarizing should be done in the least amount of words as possible. Have students share their summaries of the first paragraph in the lesson of the textbook or chosen nonfiction material.
Teacher Modeling

After the read aloud introduction, hand out copies of the text for highlighting and a 3x5 index card to each student. The next paragraph will be done as a think-aloud model using the text excerpt found in figure 1.4.

A typical dialogue from a teacher is stated below:

**The title of this lesson in this text book is “What are the Skeletal and Muscular Systems?”** The purpose of this section is to figure out what the skeletal and muscular systems are. From our previous sections, I have learned that our bodies are made up of cells and a group of cells is tissue, and a group of tissues are organs and they all work together. (Read Text Aloud). So let’s take a look at this section, the skeletal system. What are some important facts we can highlight in this section. (Skeletons are made of tissuse called bone.) Anything else? (Skeletons protect
organs inside your body and help you move), (muscles are attached to your skeleton).

Have the students highlight the important facts. After they highlighted the sentences, create brackets on the teacher copy and brainstorm with the class what that particular sentence means (shown in figure 1.4). Do a think, pair, share exercise asking them to try and summarize the passage in about 15 words using the 3X5 index cards given. The think, pair, share exercise is an activity in which students do the activity independently, then share their ideas with 2-3 other students, then share with the entire class.

**Guided Practice with Summarizing**
Continue practicing writing summaries using many different nonfiction materials. Have students work in groups and challenge them to be able to summarize a passage using a set number of words (Harvey & Goudvis, 2007). To spark creativity, have students in the groups summarize and draw a picture describing the topic (Oczkus, 2010). Use this opportunity to observe and assess to make sure students understand how to summarize using their own words, highlight important facts, and collaborate with others.

**Conclusion to Lesson**
After practicing summarizing with different types of nonfiction text, bring back the session to whole-group and discuss the importance and usefulness of summarizing and comprehension. Be sure to mention summarizing is what good readers do and it is performed at critical junctures throughout the reading session.
Teaching Summarizing Lesson Plan

Objectives:
- Students will be able to identify summarizing as a comprehensive reading strategy
- Students will be able to establish important from less important details
- Students will be able to summarize sections of a passage in own words
- Students will be able to overall summarize the entire passage in own words

Standard:
- RI4.2: Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Materials: “A Walk in Space” copy for each student, highlighter for each student

Anticipatory Setting: Review with students how text features help readers. Explain that good readers stop at the end of each section to explain what they have just learned in their own words. This is a good way to monitor comprehension.

Procedures:
1. Distribute copies of “A Walk in Space” to each student. Read aloud the first section of the passage. Ask students was the main event was in the first paragraph.
   a. Example of student response: flakes of frozen ammonia were seen drifting from ISS)
2. Have students highlight the evidence that backs up the main event. Explain the highlighted information is important information in the first paragraph. All other details are less important. If the details were missing, the story would still make sense.
3. Ask the students what they just learned from that paragraph and write the summary on the board. Tell the students the summaries serves as notes.
4. Ask students to make predictions on what the next section will be bout and why. Remind them that the text feature, subheading, will give them clues.
5. Read aloud the next section, “Keeping it Cool” and model highlighting important information and noting its importance.
a. Example: The first sentence, ‘Ammonia is used on the ISS to cool the spacecraft’s electron equipment’ is important because I was wondering if the ammonia was dangerous to the astronauts. It is not dangerous to them but is dangerous to the equipment and experiments. It’s important to know that they’re not sure why the pump leaked, so I’m highlighting that, but the rest of the information is less important. If it wasn’t written, the story would still make sense.

6. Ask the students what they’ve learned in their own words. Tell them to focus on the highlighted information only to help with summaries. Write down the summary on the board.

Guided Practice

1. Allow students to make predictions on the next section, highlight important information and summarize it as a note.

2. Ask Students to provide important details and why they think the details are important. Discuss the summary and write it on the board.

3. At the end, discuss the importance of summary notes. Explain how the notes serve as an overall summary for the entire article.

Independent Practice

- Provide a student copy of a lesson that is in their class textbook and have them summarize and identify important details verses less important details.
A Walk in Space

There was some trouble in space over the weekend. On Thursday, May 9, flakes of frozen ammonia were seen drifting from the International Space Station (ISS). The team onboard immediately prepared for a spacewalk to look into the issue. Two days later, on Saturday, two astronauts stepped outside the ISS to investigate the leak. The chief suspect was an old ammonia pump.

Thomas Marshburn and Christopher Cassidy conducted the search, but did not discover any visible damage. “All the pipes look shiny clean, no crud,” Cassidy reported as he used a mirror to peer into tight, deep openings. Even so, the astronauts removed the old pump and replaced it with a new one.

Keeping it Cool

Ammonia is used on the ISS to cool the spacecraft’s electronic equipment. NASA said this leak did not pose a safety threat to the six space station residents. But problems with the cooling system could threaten experiments and equipment.

It is still not clear why exactly the leak erupted. NASA speculates that a microscopic piece of space matter struck the space station, leaving a tiny crack in the ammonia pump. Another possibility is that there was simply a leaky seal in the pipe. Either way, “there’s nothing to lose by putting in a fresh pump and pressing ahead with additional detective work,” said Mission Control.

Studies in Space

The ISS was launched into orbit in 1998. Since 2000, a rotating crew of astronauts and scientists has continuously occupied it. While in orbit, the international team of astronauts performs scientific research and collects data about conditions in the Milky Way and beyond. Many of their experiments focus on humans’ ability to live and work in space over long periods of time.

While these astronauts have performed some amazing tasks, NASA has never before staged a spacewalk so quickly. Marshburn has been on the space station since December, and Cassidy is a new arrival to the ISS. While the leaky pump mystery continues to puzzle the ISS team, they are hopeful further investigations will provide answers. “This type of event is what the years of training were for,” space station commander Chris Hadfield said in a tweet Friday. “A happy, busy crew, working hard, loving life in space.”

NASA astronauts Tom Marshburn and Chris Cassidy completed the May 11 spacewalk in 5 hours and 30 minutes.
Question Generating
A Q&A Approach

Question generating is the third step in reciprocal teaching. After students have read, gathered important facts, and summarized the text, the questioner role asks higher level thinking questions to help monitor and engage with clarification of text.

Getting Students to Ask the Right Type of Questions

There are two types of questions: heavyweight and lightweight questions (Williams, 2010). Heavyweight questions are inferential questions that essentially makes the reader connect evidence found in text to their background knowledge. Bloom’s Taxonomy is a resource that was developed to help create heavyweight and lightweight questions. It is organized by levels of higher level thinking questions (Graves, Juel, & Graves, 2007). The lowest level, shown in figure 3.0 is remember. These are text-evidence fact based types of questions, or lightweight questions. The questions can start with “who…”, “what is…”, or “when did….

Lightweight questions are literal questions that can be answered by looking directly at the text. Looking at figure 1.4, a lightweight question from this passage could be, “What forms tissues in your body?” The second level of Bloom’s Taxonomy is understanding. These questions are used to evaluate if the reader understands what they read. It generates questions that monitors the reader’s comprehension of the text. There are different verbs that Bloom’s table provides, but generally the questions involve how or why something happened. Other levels ask the readers to apply read information in other scenarios, making them think outside the box using inferences instead of facts found in the text. A heavyweight question would fall under the understandings level or above.

Figure 3.0
In the passage found in figure 1.4, a heavyweight question could be, “Which is the largest: Organs, tissues, or organ systems?” The best questions focus on the main ideas of the passage, rather than trivial questions like, “what year did WWII occur?” Practicing asking heavyweight questions could help as a test taking skill as well, since most test questions focus on the main idea. It is a very beneficial skill to have while studying (Lederer, 2000). When teaching students how to ask heavyweight questions, have them initially focus on using questions that start with how, what, and why something happened. Once students become more proficient at asking questions, expose them to more advanced higher level thinking prompts.
Questioning using Think Aloud Lesson Plan

Objectives:
- Students will be able to use predicting strategies to connect to literature
- Students will be able to summarize passage in their own words
- Students will be able to produce higher level thinking questions to monitor comprehension

Standards:
- RI4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- RI4.2: Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- RI4.3: Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- RI4.7: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

Materials:
- Text Features Concept Map
- “Where is Earth’s Water?” lesson copy for each student
- Highlighters

Anticipatory Setting:
- Introduce the lesson “Where is Earth’s Water?” and have students fill out text features concept map individually as a pre-reading activity. Explain that just as good readers create questions before reading, they also create questions after summarizing in order to monitor their comprehension.

Procedures:
1. Organize class into small groups to share their responses on the text feature concept map.
2. Assign each group member a role: reader, highlighter, summarizer, and note taker. The reader is responsible for reading the section. The highlighter establishes the important vs. less important facts, the summarizer summarizes main ideas in own words, and the note taker writes down the summary for the section.

3. Have each group work through each section of the lesson. Each member changes roles after each section.

4. Go over the summaries in each section and answer predicting questions as a class.

5. Ask the students what kind of test questions might be asked after reading this lesson. Students will most likely ask questions that begin with the 5 w’s (who, what, when, where, why).

6. Explain that most test questions begin with “what”, “why”, and “how” something happened and these types of questions are called “heavyweight” or higher-level thinking questions.

7. Display the poster stating the differences between heavy and lightweight questions and tell them their goal is to produce heavyweight questions at the end of each section to monitor their comprehension. Give a few examples of heavyweight questions:
   a. Heavyweight: Explain why the water in the Baltic Sea is less salty than most ocean water?
   b. Heavyweight: Why is the ocean water more salty in warm and dry Locales?
   c. Lightweight: In what location is the seas less salty?

8. Explain that a good test strategy is to highlight where the answer is found.

**Guided Practice**

- Have the students create two heavyweight and two lightweight questions for the section they read in their groups. For every question they produce, have a different student answer and highlight where the answer is found.

**Independent Practice**

- Provide a copy of another lesson from a text book and have students create higher-level thinking questions for the text.
Lesson 1

Where is Earth’s water?

Any ocean that you might step into is linked to all the oceans in the world. The world’s oceans connect to form one huge mass of salty water, with large and small areas of land.

Earth—the Water Planet

Throughout history, people have used bodies of water to travel from place to place. Because almost \( \frac{3}{4} \) of Earth’s surface is covered with water, they had very little choice. Water provides a home and food for millions of Earth’s organisms. In turn, these organisms are food for people.

Earth’s water is always in one of three states. At a temperature of 0°C, water freezes into a solid called ice, and ice melts into water. At a temperature of 100°C, water becomes an invisible gas called water vapor.

Some of the water near Earth’s surface is water vapor in the atmosphere. But more than \( \frac{97}{100} \) of Earth’s water is in the oceans and the seas. The seas are smaller areas of the ocean. Most of the rest of Earth’s water is frozen in glaciers and polar ice caps. Less than \( \frac{1}{100} \) is in rivers and lakes.

People have named sections of Earth’s great ocean. The table shows the names and areas of some of the sections.

<table>
<thead>
<tr>
<th>Ocean</th>
<th>Pacific</th>
<th>Atlantic</th>
<th>Indian</th>
<th>Southern</th>
<th>Arctic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>165 million</td>
<td>82 million</td>
<td>73 million</td>
<td>20 million</td>
<td>14 million</td>
</tr>
</tbody>
</table>
Salty Water

“Water, water, everywhere, Nor any drop to drink.” These lines in a famous poem describe a crew on an ocean ship that has run out of drinking water. Water is all around them. How could they run out of drinking water?

If you have ever tasted ocean water, you know the answer. It tastes very salty. But taste is not the main problem. Ocean water is not healthy for drinking. Your body cannot use water that is as salty as ocean water.

But why is the ocean salty? Water is a liquid made up of hydrogen and oxygen. Ocean water is a mixture of water and many dissolved solids. Most of the salt in ocean water comes from rocks and soils on the land. Rivers carry dissolved salts and minerals to the ocean. The most common salt in the ocean is sodium chloride, the same salt that’s in your saltshaker. The ocean supplies much of our table salt and some of our minerals.
Summary: saltiness in water depends on how warm it is. Warm seas have more salt bc water evaporates faster than the salt does. Colder seas, salt and water evaporate slower.

Earth’s Water

Differences in Saltiness

Saltiness of the water near the ocean’s surface varies from place to place. In warm, dry places, ocean water turns rapidly into water vapor in the air. The salt that’s left behind makes the water even saltier. Some of the saltiest water on Earth is located in the Red Sea, which has deserts on three sides.

Ocean water is less salty near the North and South Poles. Less salt can dissolve in the cold water there. And water turns to vapor more slowly in lower temperatures. The ocean is also less salty in areas where rivers, melting ice, or heavy rains add plenty of fresh water. For example, many rivers flow into the Baltic Sea. Its water is less salty than most ocean water.

Most of Earth’s water is salty ocean water. Most of Earth’s fresh water is frozen in glaciers and ice caps. People cannot use it for drinking. They cannot use it to keep land plants and animals alive. Earth’s liquid fresh water is underground or in lakes, rivers, and streams. The water vapor in the air and the liquid and frozen water that fall through the atmosphere are all fresh water.
Clarifying using Metacognitive Strategies

Fix-up Strategies

The last step of reciprocal teaching is clarifying. After reading a text, readers sometimes pause and try to recap what they have just read. When reading is not enough to achieve comprehension, readers use metacognitive strategies to help relieve confusion.

Metacognitive strategies can be used when trying to understand a passage. For example readers may re-read at a slower pace, skim previously read information or summarize important facts (McTavish, 2008). If a reader comes upon an unknown word, he or she may use context clues by rereading a sentence before and/or after the word, refer to text features, or can look up the word in the dictionary for clarification. The key with metacognitive strategies is when and how to use them.

Teaching Metacognitive Strategies

Reminding Students What Good Readers Do

To apply strategies while reading nonfiction texts, students become adept in metacognition. Metacognition may be introduced in the classroom during the clarification stage. Teachers may explain to students that they possess the ability to employ fix-up strategies while reading. This is shown in a real life scenario below:

A beginner basketball player missed 95% of his free-throws during his first game. During practice, what is he going to do? Is he going to take the time to figure out why he isn’t making any his shots? (He is going to practice shooting
free throws) What kind of strategies can he use to get better at making his shots? (Aim at the backboard, arch hand better). If during the next game, he throws up the ball without thinking about his strategies, will he most likely make the shot? (No). Why? (Because he didn’t think about it first). By using metacognition, or fix-up strategies, we can figure out solutions to our problems or relieve our confusions. We can apply certain metacognitive strategies when we have troubles comprehending text as well.

Ask the students what they need to do when they come across a word that they don’t understand. Students should be able to describe many different things they can do to figure out what the word means. While describing what it means to be metacognitive, review what happens during each stage of reciprocal teaching. It is important that students understand why they are using a particular strategy so they can use it in the proper manner while reading independently. Students may jot down the strategies they used after reading a selected text. These notes provide insights into student comprehension and good class discussions.

**Combining Strategies**
**Using All Strategies as an Effective Comprehension Method**

The time frame for introducing all strategies should be a week’s length of time, or one day per strategy, depending on the school schedule. Once students have been taught the individual strategies in the consecutive order listed, putting all the strategies together in order to form an effective comprehension method will be easier for students to adapt. Practice makes perfect, so the more time students work in groups using reciprocal teaching, the faster the strategies will become mastered and independent. Use the poster illustrated in figure 2.3 (also provided in appendix B) as a visual to demonstrate what good readers do. Introduce the poster after having a class discussion about what good readers do. Figure 1.8 shows a layout that students can refer to as they go through the steps of reciprocal teaching. During prediction, students will fill out the sentence, “I think I will learn about… because…” They are given suggested student cues to trigger their memory as to what to look for. They will also state three questions that may want to be
answered during reading. This helps them distinguish what they know and may want to know. In a group setting, this step is similar to a K-W-L. During step two, summarizing, there is a reminder that the reader needs to underline the most important facts and put them in their own words. After, they are to state the overall summary for that section. The third step is questions. Listed are heavyweight questions and lightweight question prompts to get them started. Students should develop more heavyweight questions than lightweight questions. The fourth and final step is to clarify. There is a fill-in-the-blank area under clarifying with fix-it strategy suggestions to serve as a memory trigger on what to do in order to clarify misunderstandings. A student copy of this table is available in appendix C.

<table>
<thead>
<tr>
<th>1. Prediction</th>
<th>2. Summarize</th>
</tr>
</thead>
<tbody>
<tr>
<td>- I think I will learn about... Because (I see these text features, already know about this)</td>
<td></td>
</tr>
<tr>
<td>- Some questions that may be answered as I read are</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>- I underlined the most important facts and put them in my own words.</td>
<td></td>
</tr>
<tr>
<td>- Overall, this section is about...</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>My heavyweight questions are:</td>
<td></td>
</tr>
<tr>
<td>- Give the reasons why...</td>
<td></td>
</tr>
<tr>
<td>- Why does...</td>
<td></td>
</tr>
<tr>
<td>- How did...</td>
<td></td>
</tr>
<tr>
<td>- What if...</td>
<td></td>
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<tr>
<td>- Provide support for...</td>
<td></td>
</tr>
<tr>
<td>- Explain...</td>
<td></td>
</tr>
<tr>
<td>My lightweight questions are:</td>
<td></td>
</tr>
<tr>
<td>- Who is...</td>
<td></td>
</tr>
<tr>
<td>- What is...</td>
<td></td>
</tr>
<tr>
<td>- Where is...</td>
<td></td>
</tr>
<tr>
<td>- Define...</td>
<td></td>
</tr>
<tr>
<td>- Name...</td>
<td></td>
</tr>
<tr>
<td>- When did...</td>
<td></td>
</tr>
<tr>
<td>- I wasn’t sure about ______ so I will (reread, look up, skim text, search text features).</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1.8

Figure 2.3
Cooperative Learning Groups

An important part of reciprocal teaching is cooperative learning within small groups. This is vital because a student may not understand how the teacher is teaching a certain concept, but may understand it when someone else explains it in their own words. Essentially, everyone in the groups are teachers and students.

Establishing Group Rules

Classroom group rules should be established before groups are assigned. Figure 2.0 is a colorful way of representing what “groups” stands for. Classroom behavior can be assessed by giving group points on a board. The points can serve as a positive and negative reinforcement. Partner evaluation sheets, as shown in figure 2.1, can be given after the group work is finished. The front side allows space for all participants and their scores, along with an area to write notes to the teacher. The back side has a rubric to determine the behavior of each partner.

Figure 2.1 Partner Evaluation Sheet (Front Side)

```
<table>
<thead>
<tr>
<th>My Name</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner's Name</td>
<td>Score</td>
<td>Partner's Name</td>
</tr>
<tr>
<td>Partner's Name</td>
<td>Score</td>
<td>Partner's Name</td>
</tr>
<tr>
<td>Partner's Name</td>
<td>Score</td>
<td>Partner's Name</td>
</tr>
<tr>
<td>Notes to Teacher:</td>
<td></td>
<td>Notes to Teacher:</td>
</tr>
</tbody>
</table>
```

Figure 2.0 is adapted from http://pinterest.com/pin/1265230754190094/
Group Set-up

During guided practice, allow students to work with a variety of nonfiction material that sparks their interest. Initial groups can be set up according to their preference of material. Introduce the passage titles and have students put their heads down and vote for which one they want to learn more about. Develop the groups this way. This method is quick and avoids students choosing groups that only have their friends in it. As for assigning roles, have students choose from a hat or assign them to a specific role. Assign lead roles to students who did well on learning the strategy roles so that they can provide beneficial feedback to the group. Eventually, every student should play each role. Reciprocal teaching can be adapted in essentially every subject, so it can be practiced all throughout the day. Create a pull-out group consisting of students who need extra scaffolding for particular roles (Oczkus, 2010).

Student Cue Cards

Student cue cards are useful for students to stay on task. The cue cards in figure 2.8 tell students what they should be thinking and conversation starters for each role. After students play a role, the cards can be transferred counter-clockwise so every student participates as a role. A student copy of the cue cards is found in appendix F.
Reciprocal Teaching Lesson Plan

Objectives:
- Students will be able to go through the steps of reciprocal teaching
- Students will be able to comprehend a nonfiction text while collaborating in groups

Standards:
- RI4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- RI4.2: Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- RI4.3: Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- RI4.7: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

Materials:
- Student Cue Cards
- Highlighter
- Reading for Comprehension Sheet
- Text Features Concept Map
- “What are Tornadoes?” lesson copy for each student

Anticipatory Setting:
- Ask students what natural disasters are. Ask for examples of famous tornados they are aware of. Tell them today we are going to look more into what tornados are in groups and focus on the strategies we have been learning about. Perform a K-W-L about tornados.
Define reciprocal teaching as an activity where the students are teachers and students. Explain that they will work in groups and help monitor each other’s comprehension.

Procedures:

1. Review what a good reader does, particularly: look at text features, form predictions and questions before reading, summarize text, ask questions to monitor, and clarify with use of metacognitive strategies.

2. Explain that you will be setting up groups and each member will be responsible for a particular stage of reading. You will also assign a leader to keep track of time and encourage cooperative learning.

3. Organize students into small groups and assign each member to a task. Hand out student cue cards to each student. Tell them the cards serve as a guide of responsibilities.

4. Hand out “Reading for comprehension” worksheet.

5. Model how the leader should start the lesson
   a. **Okay so this lesson is called ‘What are Tornadoes.’ Let’s make predictions based on text features first.**

6. Model how the predictor starts his role by following each bullet on the cue cards
   a. **I predict this will be about what’s in a tornado and how they form because I see the sequential steps in the picture.**

Allow the predictors in the groups complete the concept map “text features” then share their thoughts and write them down on the reading comprehension sheet. Encourage all peers to give their thoughts as well.

7. Have the leaders in the group read aloud the first section. Encourage the summarizer to highlight important information and collect notes as the leader reads.

8. Model how the summarizer should discuss the text
   a. **I think we should underline ‘A funnel cloud is a rapid spinning…’ because it describes exactly what a tornado is. It’s saying that thunderstorms cause wind to spin downwards, making a funnel shape. The faster the wind is, the more things and dangerous it is.**
9. Have the summarizer highlight important facts backing up the summary. Encourage other peers to give their feedback.

10. Model how the questioner should ask a question using the cue cards.
   a. *What characteristics make up a tornado?*
   b. *How fast can a tornado's winds reach?*

11. Have the questioner fill out their block with question and allow peers to answer the questions.

12. Model how a clarifier can help with confusion of text.
   a. *After reading what a tornado was, I still didn't understand it so I looked at the available pictures on the left and saw that wind directions increase with speed and air makes the wind tilt upwards. Then I reread where the bold vocabulary word was and it cleared the concept up for me.*

13. Have the clarifier help other's confusion and encourage group collaboration.

**Guided Practice:**

- Have the students read “Vortex” in their groups following the reciprocal teaching procedures. Take a moment after each role to clear up any confusions.
Lesson 2

What are tornadoes?

A tornado is part of a thunderstorm. A group of thunderstorms can produce many tornadoes. Most of the world's tornadoes form over the midwestern United States.

How Tornadoes Form

The day began with bright sunshine. In the afternoon, though, the sky turned stormy. Rain poured down. People saw flashes of lightning and heard booms of thunder. Winds sent things flying through the air. Then people heard a new noise—a roar like that of an approaching train. They could barely see a whirling column of air through the rain. A tornado was coming!

A funnel cloud is a rapidly spinning column of air that comes down out of a thunderstorm. It becomes a tornado when it touches the ground. The center of a tornado has low air pressure. Tornadoes form in strong thunderstorms. Most tornadoes occur in the spring and summer. The winds of most tornadoes have speeds that are less than 200 km per hour. However, a tornado's winds can reach speeds of 500 km per hour—the fastest winds on Earth.

Before a tornado can form, an area inside a thunderstorm must be spinning. Then a narrower column of air must start spinning faster. This column may become a tornado. Sometimes tornadoes develop when the bands of thunderstorms in a hurricane move onto land.

Inside the spinning storm, a smaller column of spinning air becomes shaped like a funnel. The funnel grows longer and narrower. It spins even faster as it moves along, picking up things in its path.

As the thunderstorm forms, air within it rises. The spinning air begins to tilt upward.

Before thunderstorms form, winds change direction and increase in speed. Winds begin to spin.

The area of spinning grows wider.
The Vortex

What do a sink and a thunderstorm have in common? A vortex can form in each of them. A vortex is an area where air or liquid spins, or spirals, in circles. Watch as water drains from a sink. You might see a small vortex of swirling water. A tornado is a vortex that forms in a thunderstorm. Air spirals upward along the outside of a tornado.

Air rushes into the low pressure area at the center of a tornado. Water vapor condenses in the rising air along the outside. A funnel cloud may appear below the storm base. As the funnel cloud picks up dust and other objects, the vortex may get darker and may be easier to see. But, sometimes you cannot see a tornado. Heavy rain, dust clouds, or nighttime can hide it.

1. **Checkpoint** What are three ways in which a tornado is different from a hurricane?
2. **Writing in Science** Expository Find out where and when strong tornadoes have hit your state. Write a newspaper article about the tornadoes.

The funnel cloud stretches downward. After it touches the ground, it is called a tornado.

Dust Devil

A dust devil is a column of whirling air. It is not a tornado. It is not part of a thunderstorm. It can form when the sky is clear. A dust devil’s winds are much slower than a tornado’s. They reach only about 95 kilometers per hour. Dust devils are common in places like deserts, where columns of hot air rise.

Waterspout

A waterspout is a rapidly spinning column of air over a lake or ocean. It does not pull large amounts of water high into its vortex. But it does lift a spray of water droplets. All waterspouts are linked with clouds. A waterspout may form over water. Or it may be a tornado that formed over land and then moved over water. Waterspouts are usually weaker than tornadoes.
Uses text features to make predictions
- I predict this will be about ________ because I see ________.

Make connections to what you already know
- I predict this will be about ________ because I already know that ________.

Make connections to previous sections of text
- I predict this will be about ________ because this section said ________.

Prediction

Helps identify unclear words or confusion with text passage by using metacognitive strategies.
- Use good strategies to help clarify
  - Reread before or after unknown word (context clues)
  - Reread at a slower pace
  - Sound out unknown words
  - Look up words in glossary or dictionary

Summarize

- Highlighting the important details in text
- Put important details in own words
- Overall, this section is about _____________.

Q&A

Asks questions to check comprehension. Ask two heavyweight and one lightweight questions.

Heavyweight Questions start with
- Give the reasons why...
- Why does...
- How did...
- What if...

Lightweight Questions start with
- Who is...
- What is...
- Where is...
- Define...

Clarifying

I just need the main ideas.
Assessment Tips
There are several ways to assess whether students are understanding how reciprocal teaching works. Observation is a powerful tool. Create a checklist, such as the one shown in figure 2.3 to keep record of each student’s progress. Another way is to have students write down their reactions towards the method. They can write a couple sentences about what they have learned after reading the text and some strategies that helped them. Invite them to share their entries with the class afterwards. This serves as a good assessment tool to see if the students are comprehending the material and if they know how and when to use the strategies.

- Introduces the text
- Encourages all other roles to participate
- Make sure everyone is joining in conversation
- Be fair, and keep kind voice
Rubrics

Rubrics are used as a way to keep record of students’ progress. A simple chart can be made, as shown in figure 2.3 to organize students’ names and the strategy. Figure 2.7 is a rubric for the reciprocal teaching strategies adapted from a very useful textbook, Reciprocal Teaching at Work by Lori Oczkus. The rubric presents certain indicators to determine how proficient a student is with each strategy. A copy of the rubric is provided in appendix E.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Example (4)</th>
<th>Developing (2)</th>
<th>Beginning (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predict</td>
<td>Uses text purpose and cues to make logical predictions.</td>
<td>Makes predictions that are logical and based on text.</td>
<td>Makes predictions that are not logical.</td>
</tr>
<tr>
<td>Summarize</td>
<td>Identifies and clarifies main ideas.</td>
<td>Identifies main ideas and summarizes in their own words.</td>
<td>Needs prompting to summarize.</td>
</tr>
<tr>
<td>Clarify</td>
<td>Identifies important words and ideas.</td>
<td>Identifies words and ideas that are important and summarizes them.</td>
<td>Needs prompting to clarify.</td>
</tr>
<tr>
<td>Q&amp;A</td>
<td>Identifies and clarifies questions.</td>
<td>Identifies questions and summarizes important ideas.</td>
<td>Needs prompting to answer.</td>
</tr>
</tbody>
</table>

Figure 2.7 (Oczkus, 2010)

Figure 2.3
Conclusion

Reciprocal teaching is a very useful method to teach metacognitive strategies. It serves as an effective way to introduce intermediate elementary students to nonfiction text. It is important to expose students to a variety of nonfiction text. Most students prefer nonfiction over fictional material (Kraemer, 2012). It is useful for students to take a “picture walk” when reading narratives; and identify text features while scanning non-fiction texts. While authors of narratives generally focus on reading for enjoyment; authors of nonfiction text focus on reading for meaning and acquiring new information. It is used for both nonfiction and fiction material (McTavish, 2008; Cervetti, 2009).

Reciprocal teaching can be used in any subject but is especially beneficial while teaching social studies and science. Students are more interactive rather than just listening to the teacher for a long period of time. There are many grade level appropriate resources available to serve as nonfiction material in class such as Time For Kids Magazine (www.timeforkids.com), Kids Discover Magazine (www.kidsdiscover.com), and Scholastic Magazine (www.scholastic.com/magazines).
Appendix A

What Text Features Do I See?

Some Questions I May Have About

Clues Text Features are Giving Me

The text are:
What Good Readers Do

**Before**

- Read title
- Look over text features (why they might be there)
- Set a purpose for reading
- Activate background knowledge
- Make predictions

**During**

- Visualize
- Monitor comprehension
- Make connections
- Predict future events
- Analyze characters
- Reread confusing parts
- Infer meaning of unknown words & replace with synonyms
- Ask questions! Answer those questions later, if possible!
- Mentally paraphrase

**After**

- Reflect on what you read
- Paraphrase
- Ask questions
- Reread parts that need clarification
Appendix C

- **Uses text features to make predictions**
  - I predict this will be about ________ because I see ________.
- **Make connections to what you already know**
  - I predict this will be about ________ because I already know that ________.
- **Make connections to previous sections of text**
  - I predict this will be about ________ because this section said ________.

**Prediction**

Helps identify unclear words or confusion with text passage by using metacognitive strategies.

- **Use good strategies to help clarify**
- Reread before or after unknown word (context clues)
- Reread at a slower pace
- Sound out unknown words
- Look up words in glossary or dictionary

**Summarize**

- **Highlighting the important details in text**
- **Put important details in own words**
- **Overall, this section is about _____________.**

**Q&A**

Asks questions to check comprehension. Ask two heavy-weight and one lightweight questions.

**Heavyweight Questions start with**
- Give the reasons why....
- Why does...
- How did...
- What if...

**Lightweight Questions start with**
- Provide support for...
- Explain...
- Who is...
- What is...
- Where is...
- Define...
Appendix C

- Introduces the text
- Encourages all other roles to participate
- Make sure everyone is joining in conversation
- Be fair, and keep kind voice
<table>
<thead>
<tr>
<th>1. Prediction</th>
<th>2. Summarize</th>
<th>3. Overall, this section is about...</th>
</tr>
</thead>
<tbody>
<tr>
<td>- I think I will learn about... Because I see these text features...</td>
<td>- I understand the most important facts and put them in my own words...</td>
<td>- Overall, this section is about...</td>
</tr>
<tr>
<td>- Predict answers that may be answered as I read...</td>
<td>- Some questions that may be answered as I read...</td>
<td>- Overall, this section is about...</td>
</tr>
<tr>
<td>- Who is...</td>
<td>- Where is...</td>
<td>- Overall, this section is about...</td>
</tr>
<tr>
<td>- Why does...</td>
<td>- How did...</td>
<td>- Overall, this section is about...</td>
</tr>
<tr>
<td>- What is...</td>
<td>- What is...</td>
<td>- Overall, this section is about...</td>
</tr>
<tr>
<td>- Explain...</td>
<td>- Provide support for...</td>
<td>- Overall, this section is about...</td>
</tr>
<tr>
<td>- Name...</td>
<td>- Define...</td>
<td>- Overall, this section is about...</td>
</tr>
<tr>
<td>- When did...</td>
<td>- Overall, this section is about...</td>
<td>- Overall, this section is about...</td>
</tr>
</tbody>
</table>

4. Questions

My heaviest questions

I wasn't sure about... So I will (read, look, clarify...)

Appendix D
## Rubric for the Reciprocal Teaching Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Exemplary (4)</th>
<th>Proficient (3)</th>
<th>Developing (2)</th>
<th>Beginning (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predict</strong></td>
<td>Uses text features and clues to make logical predictions.</td>
<td>Makes predictions based on text class, background information.</td>
<td>Makes some simple, sensible predictions.</td>
<td>Predictions don’t always make sense.</td>
</tr>
<tr>
<td></td>
<td>Uses background knowledge to make predictions.</td>
<td>Confirms and changes predictions throughout reading.</td>
<td>Sometimes uses text class and background to make predictions.</td>
<td>Doesn’t use text class clues such as illustrations, headings, to make logical predictions.</td>
</tr>
<tr>
<td></td>
<td>Consistently uses the language of predicting.</td>
<td>Often gives reasons for predictions.</td>
<td>Sometimes makes some predictions that are not sensible.</td>
<td>Predictions are wild and not text based.</td>
</tr>
<tr>
<td></td>
<td>Discusses predictions with detail after reading to change or confirm.</td>
<td>Checks predictions after reading.</td>
<td>Sometimes gives reasons for predictions.</td>
<td>Experiences difficulty even when prompted to give reasons for predictions.</td>
</tr>
<tr>
<td><strong>Question</strong></td>
<td>Consistently asks a mix of well-crafted questions including recall questions that go with the events and ideas of the text; inferential questions; and critical thinking questions that take the discussion beyond the text. Such as “Why do you think...?” or “How does...compare to...?”</td>
<td>Asks several levels of questions including a mix of literal recall questions about the main ideas of the text, literal recall about important details of the text, and inferential questions.</td>
<td>Asks simple recall questions that go with the text and begin with who, what, when, where, why, how, and what if?</td>
<td>Experiences difficulty formulating even simple literal recall questions that begin with question words.</td>
</tr>
<tr>
<td></td>
<td>Asks questions about the theme and deeper meanings of the text.</td>
<td>Asks critical thinking questions, such as “Why do you think...?”</td>
<td>Asks simple “I wonder...” questions that relate to the text.</td>
<td>Asks questions that do not correspond with the text.</td>
</tr>
<tr>
<td><strong>Clarify</strong></td>
<td>Identifies words and ideas that are unclear.</td>
<td>Identifies words and ideas that are unclear.</td>
<td>Identifies words to clarify.</td>
<td>Does not stop to try to figure out words.</td>
</tr>
<tr>
<td></td>
<td>Consistently identifies and uses a rich variety of strategies for figuring out difficult words and ideas and portions of text (e.g., reread, read on, sound out).</td>
<td>Consistently identifies and clarifies high-level ideas such as themes, metaphors, and symbolism.</td>
<td>Identifies ideas and portions of text to clarify when prompted.</td>
<td>Identifies words to clarify when prompted.</td>
</tr>
<tr>
<td></td>
<td>Identifies and clarifies high-level ideas such as themes, metaphors, and symbolism.</td>
<td>Identifies words and ideas in text to clarify.</td>
<td>Uses one or two strategies to figure out words and ideas.</td>
<td>Identifies ideas to clarify when prompted.</td>
</tr>
<tr>
<td><strong>Summarize</strong></td>
<td>Retells in own words using some of the new vocabulary.</td>
<td>Identifies words and ideas in text to clarify.</td>
<td>Sometimes does not realize that meaning has been lost.</td>
<td>Uses only one strategy to figure out words or ideas and needs to be reminded of others.</td>
</tr>
<tr>
<td></td>
<td>Gives only most important events, points, and key details.</td>
<td>Begins to use language of clarifying such as “I didn’t get... so I...”.</td>
<td>Does not realize when he or she is stuck.</td>
<td>Does not remember much of the reading.</td>
</tr>
<tr>
<td></td>
<td>Summarizes, giving points in order.</td>
<td>Uses text structure to summarize.</td>
<td>Leaves out unimportant details.</td>
<td>Recalls random ideas or events from the text.</td>
</tr>
<tr>
<td></td>
<td>Uses text structure to organize summary.</td>
<td>Rereads and uses clues from the text.</td>
<td>Usually retells in own words using a vocabulary word or two from the text.</td>
<td>Includes unimportant details.</td>
</tr>
<tr>
<td></td>
<td>Uses rereading and text supports such as illustrations and headings to summarize.</td>
<td>Leaves most of the points in correct order.</td>
<td>Usually draws from text structure to summarize.</td>
<td>Needs heavy prompting to respond.</td>
</tr>
<tr>
<td></td>
<td>Includes some of the events in order but may give some out of order.</td>
<td>Needs prompting to reread or use text clues.</td>
<td>Leaves out some of the important events and ideas.</td>
<td>Does not reread or use text clues as tools for summarizing.</td>
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Appendix F

<table>
<thead>
<tr>
<th>Partner's Name</th>
<th>Score</th>
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Notes to Teacher:________________________________________________________________
### Appendix F

**Partner Evaluation Rubric**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Had great ideas to share, used kind voice, didn’t talk to other groups, lead their assigned role with ease, collaborated the entire time.</td>
</tr>
<tr>
<td>3</td>
<td>Had great ideas to share, collaborated most of the time, was kind to others, lead their assigned role with ease.</td>
</tr>
<tr>
<td>2</td>
<td>Needed a lot of feedback from other students to keep to their assigned role, usually off task, didn’t participate as much as others.</td>
</tr>
<tr>
<td>1</td>
<td>Continually spoke to other groups, hardly collaborated with others, most of the other partners had to complete the work, not on task.</td>
</tr>
</tbody>
</table>

**Partner Evaluation Rubric**

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<tr>
<th>Score</th>
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<tr>
<td>2</td>
<td>Needed a lot of feedback from other students to keep to their assigned role, usually off task, didn’t participate as much as others.</td>
</tr>
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<td>1</td>
<td>Continually spoke to other groups, hardly collaborated with others, most of the other partners had to complete the work, not on task.</td>
</tr>
</tbody>
</table>
References


Block, Parris, and Whiteley (2008) identified that most comprehension strategies are solely linguistic and do not benefit all learning styles. The research question examined in this study was: Would adding kinesthetic motions to a transactional strategy instruction increase comprehension scores in elementary students? The research design was experimental.

Block and colleagues examined the possibility of adding a kinesthetic instruction to a traditional transactional strategy instruction and if it could be used as a metacognitive comprehension strategy. Participants were enrolled in grades K-5 from two urban schools. Nineteen experimental (n=257) and 19 control (n=256) groups were chosen to participate in a 12-week study that consisted of 45-minute daily lessons. The majority of the participants demonstrated very low levels of comprehension achievement. Teachers in both groups implemented transactional strategy instruction that consisted of explicit strategy use. Students in the experimental group learned comprehension process motions (CPMs) that consisted of kinesthetic learning aids. Certain hand gestures were encouraged to be reenacted when analyzing text. For example, when students determined they found the main idea in the text, they were required to demonstrate a hand signal similar to a time-out signal. The trained teachers taught signals to report predictions, inferring an author’s viewpoint, drawing conclusions and finding main ideas. Students were also encouraged to explain why and how they figured out the answer in groups.
Eventually, for most students, this strategy became a self-regulated strategy. Students in the control group were not exposed to CPMs. They focused mainly on traditional basal instruction with the use of the teachers’ manual and were exposed to comprehension strategic processes. The Texas Primary Reading Inventory test was administered to measure comprehension as both pre- and posttest. Multiple-choice questions from basal reading textbooks were administered in small groups as a posttest. Teachers in experimental group kept a log of how long they spent on CPMs instruction, how many students mastered CPMs, and the number of CPMs taught. ANOVA statistical measures showed kinesthetic teaching aids proved to be a significant tool for students who struggled with text comprehension. Students in experimental groups scored significantly higher in comprehension; in particular, students K-2 excelled more than other grades. They demonstrated more metacognitive awareness than the control groups.

Block and fellow researchers explored how kinesthetic motions are used to create mental representations for abstract concepts and can increase comprehension when used with a transactional strategy instruction. These results provide teachers with evidence that all learning styles must be addressed if teachers want to increase comprehension levels within their classrooms.

Boulware-Gooden, Carreker, Thornhill, and Joshi (2007) investigated the need for comprehension strategies in the classroom setting. They noted that many teachers do not utilize comprehension strategies because many teachers believe students acquire those skills naturally and that direct teaching of such strategies is unnecessary. The purpose of this experimental study was to determine if teaching multiple metacognitive strategies will result in higher comprehension and vocabulary scores. The research question for this study was: Can metacognitive strategies increase text comprehension and vocabulary recollection?

Boulware-Gooden and research colleagues used an experimental design by selecting six third grade classrooms (n=119) within two different urban elementary schools. One school served as the control group, while the other was the intervention group. A spelling pretest was administered using spelling tests from the 2001 Woodcock Johnson III (WJIII) tests to ensure that all students were all at the same decoding level. Other tests that were administered were The Grey Silent Reading Test and other researcher-designed tests were multiple-choice format tests to measure students’ vocabulary and comprehension skills. The same tests, but in different order, were given as a posttest five weeks later. The metacognitive strategies that were taught to the students in the intervention group included accessing prior knowledge, self-questioning, using graphic organizers for vocabulary instruction, clarifying, and summarizing. The teacher in the intervention group accessed students’ prior knowledge regarding the passages they read. The teacher asked questions about the passage and the students were told to silently write down the answers. As they read the passage, they were encouraged to use think out loud strategies such as silently saying “wow,” when they found
something in the text interesting or using words like “yes,” if they answered teacher administered questions correctly. Prior to reading the passage, the teacher also introduced new vocabulary terms using a semantic web graphic organizer. After reading the passage, the teacher used scaffolding to summarize the passage. The lesson concluded with question-answer strategies about the passage. Eventually students were all independently creating summaries and utilizing graphic organizers. The control groups read the same text, experienced the same anticipatory setting, and answered the same comprehension questions. They were not exposed to the graphic organizers used to enhance vocabulary skills or to help describe the elements of the story, and were not involved with other interventions such as the think out loud strategy or summarizing. Data analysis of mean and standard deviations demonstrated that the intervention group had significant increases on the posttests. In the intervention school, comprehension test scores increased by 20% and vocabulary test scores increased by 40% when the metacognitive multi-strategies lesson plan was followed.

Preparing lesson plans using these strategies can be time consuming, but these results provide educators evidence that demonstrates how important it is to increase the use of metacognitive comprehension strategies within the classroom. In only five weeks, students had considerably increased their comprehension scores. Teachers need to encourage students to consistently use these strategies.

Cervetti, Bravo, Heiberty, Pearson, and Jaynes (2009) examined the differences between primary grade informational text and fictional narrative text. The purpose of this single session experimental study was to investigate the fluency, preference, and comprehension differences between these two text structures. The research questions examined in this study were: (a) Which text structure do students prefer to read, and (b) Which text structure will result in higher comprehension and fluency scores?

Cervetti and colleagues interviewed 74 third and fourth grade students after they read a paragraph from either a fictional narrative or informational text. The reading topics were either about snails or sand and were between second and third grade reading level. Of the 74 participants, 25 were considered ELL. Students were assessed on several factors including number of sight words identified, oral reading words correct per minute (WCPM), reading comprehension, misconceptions, preference of text, and recollection of key ideas. Students were divided into two groups: fictional narrative and informational text structure. The groups were further separated into the two topics of snails and sand. Procedures for execution of assessments were the same for all groups. Students were first assessed for reading ability using the Sight Word Efficiency subtest of the Test of Word Reading Efficiency. Oral reading was assessed by WCPM fluency rate of the first or last 100 words of the passage. The oral reading was audio recorded and the reading time was recorded for all students. After reading, students were asked to recall as many facts in the text as they could, followed by a series of researcher-designed comprehension questions. After reading both text structures, students were asked to choose the structure they preferred. ANOVA was used to determine significant differences. Results indicated
students who read the more difficult informational text about sand topic recalled more key details than any other literature. Overall, students received higher comprehension scores on informational than fictional narrative text recollection. Even though comprehension scores were higher on informational text, students had more misconceptions while recalling the facts after reading it. There were no significant differences in preference between the two genres.

Teachers should include informational text instruction in their reading programs since it is beneficial for primary grade students’ comprehension and vocabulary development. These students were able to recall more facts from informational text than narrative text without any scaffolding from instructors. Informational text can be beneficial for vocabulary usage and ELL students because key terms are repeated several times in informational text, but not in fictional narrative texts. Primary teachers should expose students to informational texts as much as possible.


Crowe (2005) investigated the need for a different approach to reading interventions for students with low reading ability. The purpose of this five-week experiment was to determine the effectiveness of two different types of oral reading feedback strategies. The research question examined in this study was: Would a meaning-
based or a decoding-based approach to oral feedback provide higher comprehension scores among elementary students? This was an experimental design.

Crow selected eight students between the ages of eight and ten years of age. The intervention consisted of 10 one-hour sessions that occurred twice a week for five weeks. Both groups focused on a third grade reading level novel. Group one (n=4) used traditional feedback strategies that focused on decoding new words. The strategies consisted of reviewing previous reading material, preview new vocabulary by decoding unfamiliar words, and periodic discussion regarding story events. The teacher focused more on decoding words rather than comprehending and examining text structure. Students in group two (n=4) engaged in communicative reading strategies (CRS) that focused on a meaning-based approach. Strategies such as extracting background knowledge and cooperative group work allowed for students to make meaningful connections to the literature. Procedures included: (a) answering comprehension questions regarding previous material, (b) activating prior knowledge as anticipatory setting, (c) making predictions by browsing chapters and pictures, (d) summarizing passages, (e) examining text structure, and (f) connecting new words with past experiences. The *Gray Oral Reading Test* and a subtest from *Assessment of Sound Awareness* were used as pretests to determine comprehension and decoding skills. The same tests as well as a researcher-designed comprehension tests were administered as posttests. T-tests measured pretests outcomes which showed the students in the decoding based intervention had higher comprehension and decoding scores. Mann-Whitney U Statistical procedures measured outcomes of posttest scores. Results showed that even though the decoding-based intervention group initially scored higher on
pretests, posttests showed students in the meaning-based, CSR intervention, scored significantly higher on all tests. CRS students were more actively engaged than the first group. Students in first group showed more disinterest in the text, did not connect literature to personal experiences, and displayed more behavioral issues than in second group.

The results provide teachers with evidence that students need to be able to make personal connections in order to adequately understand what they are reading, even in non-fiction text. Teachers in the second group asked critical thinking questions throughout the reading sessions which proved to be more beneficial than just decoding unfamiliar words. Teachers should demonstrate and teach strategies that enable students to actively engage in the reading sessions.


Griffin, Malone, and Kameenui investigated the benefits of using graphic organizers (GO) to teach the comprehension of expository text to elementary students. The purpose of this experimental study was to examine the effects of GO instruction on comprehension, recall and transfer of information of informational text. The research questions examined in this study was: (a) Can direct instruction of implementation of GO increase comprehension and recall of expository text, and (b) Can GO be used as a self-regulated strategy to organize and comprehend expository text?
Griffin and colleagues selected 99 fifth grade students to participate in a ten-day study. All sessions lasted 45 minutes. Literature from a never-exposed-to grade level, social studies book was used. The students were randomly assigned to five treatment conditions: direct instruction of GO (n=20), direct instruction without use of GO (n=21), implicit GO instruction (n=21), implicit instruction with no GO (n=20) and basal, textbook manual instruction (n=17). Direct instruction involved trained researchers teaching students in-depth how to actively point out main ideas and details within a passage using active engagement from students. Students who received direct GO instruction were taught how to implement GO and were taught student-regulated practices involving GO. Implicit instruction was delivered through a lecture hall environment where the trained instructor pointed out main ideas and details but students were not actively engaged during instruction. GO instruction within implicit instruction construed of researcher demonstrating what an already filled out GO looked like, with no instruction or training on how to fill a GO out. Basal instruction included active engagement prediction instruction, critical thinking questions and map reading instruction. Data were collected from researcher-designed pre- and posttests that consisted of comprehension questions from the chapter. Posttests were administered day after conclusion of instruction and again 12 days after. Recall was measured in same fashion where students had to recall as many details in a free write. Transfer measure test was administered to see if students were able to independently establish main idea and details within an expository text. MANOVA was used to measure statistical differences between the groups. Results showed groups that utilized GO in their instruction were able to independently organize main ideas and details when reading an expository text.
Students who received basal instruction were able to recall details and scored higher on comprehension tests verses the students who received the GO instruction.

These results provide teachers with evidence that teaching GO as a self-regulated comprehension strategy is beneficial for students when they need to independently establish main ideas and details of expository text. Students were only exposed to ten days of explicit instruction with the use of GO, and were able to successfully use it as a self-regulating comprehension strategy.


Guthrie, McRae, Coddington, Klauda, Wigfield, and Barbosa (2009) investigated the need for a successful reading instruction to help low-achieving readers. The purpose of this 12-week study was to compare the effects of *Concept-Oriented Reading Instruction* (CORI) with traditional basal instruction (TI). The research question examined in this study was: Would explicit instruction with motivational support show higher reading comprehension after intervention for both low and high achieving students? This research design was quasi-experimental.

Guthrie and colleagues selected 156 fifth graders to participate in two different treatment groups: CORI (n=94) and TI (n=62). Each group was further separated into high and low achieving students. CORI instructors implemented an explicit
instruction that demonstrated the following strategies: activating background knowledge, questioning, searching for information, summarizing, organizing details, and text structure. They also received motivation strategy instruction that was practiced by asking students to create content goals, allowing students to make choices regarding literature and providing hands-on activities in groups. TI consisted of instruction with basal materials, trade books and vocabulary books. These students participated in word recognition and fluency activities, but no motivation instruction. Low achieving students from both groups also received additional lessons two days a week in addition to the three days given by the reading specialist. Pre- and posttests from the Gates-MacGinitie Reading Comprehension Test, the Woodcock-Johnson Fluency Test and researched-designed tests measured comprehension, fluency, vocabulary, and motivation. ANCOVA statistical analysis showed no significant difference in pre-test on comprehension or fluency scores between the groups. Both low and high achieving CORI students showed higher comprehension, word recognition, and motivation scores than TI students. There were no significant differences between the groups in reading fluency.

Low achieving students need explicit reading instruction. These results provide teachers with evidence that a multiple strategy with motivation instruction can increase comprehension as well as word recognition scores in elementary students.

Hall, Sabey and McClellan (2005) investigated the problems associated with comprehension achievement within intermediate elementary students. The purpose of this six-week experimental study was to investigate an expository text strategy taught to second grade students. The research question in this study was: Can teaching a strategy that focuses on the structure of an expository text prove to be a successful instructional program?

Hall, et. al. proposed teaching a text structure strategy to small groups of students would increase comprehension scores. The researchers selected 72 second graders in five classrooms within one Title I elementary school to participate in the study. Students were divided into 20 guided-reading groups. The experiment consisted of three groups: text structure (n=31), content group (n=17) and the no instruction group (n=24). All students were administered a Gates-MacGinité Reading Test (GMRT) to measure any differences in comprehension abilities between the groups. The reading material used in this experiment was a compare/contrast expository text about animal classification. Students from the text structure and content groups were exposed to lessons that consisted of the following components: vocabulary, background knowledge, reading of the text, review of literature, graphic organizer and summarizing; however, the instruction approach was different between the groups. The content group focused on the facts found in the text. A bubble map graphic organizer was used to organize the facts. As the students read the text, the trained instructor only helped students with difficult word identification. The text structure program focused on clue words within a paragraph. During independent reading, the instructor pointed out clue words such as the comparison
words alike, both, and however. The students reviewed the comparisons in the text by creating a matrix graphic organizer that focused on the compare/contrast structure. The no instruction groups were exposed to a traditional program that focused on background knowledge and vocabulary. Researchers observed teachers to ensure the fidelity of treatment.

F and t-tests showed no significant differences on the pretest between the three groups on the GMRT. Researcher-designed posttest were used to measure text structure identification, vocabulary, and reading strategy usage. In one posttest, students were assessed on their ability to summarize compare/contrast passages. Results showed no significant difference between the groups in a far transfer test, but the text structure group scored significantly higher than other groups in the near transfer posttest. Text structure students showed higher significant scores in the no transfer posttest. They were able to successfully compare/contrast the paragraph used in the instructional program. There were no significant differences in posttests in any measures between the no instruction and content group.

The results provide teachers with evidence that primary students are able to understand expository text with correct instruction. Teachers need to provide students with practice on graphic organizers and clue words within expository text. Although students were not able to successful transfer strategies to unrelated reading material, it is important to understand this study was only six weeks. More instructional time may result in successful transfer skills.
Hannah and Shore (2008) investigated metacognitive comprehensive skill use within students that have both learning disabilities and that are considered gifted. These students were defined as “twice-exceptional”. The purpose of this study was to observe and compare how these students use metacognitive processes to comprehend a reading passage that contained deliberate errors such as internal prior knowledge errors and unfamiliar vocab words to peers without learning difficulties. The research question examined in this experiment was: How did the twice-exceptional students use metacognitive techniques to solve academic problems? The research design was qualitative.

Hannah and Shore examined the performance of 12 students that were defined as twice-exceptional; six were elementary and six were high school students. These students were nominated by their teachers and principals and were identified as twice-exceptional by having a score of at least 128 on the Weschler Intelligence Scale for Children-Revised and read at a third or fourth grade reading level. The students may or may not have had a specific reading disability, but did have an identifiable learning disability. In order to detect metacognition, researchers produced reading passages with a topic that students had some prior knowledge about but included three types of comprehension errors: difficult and unfamiliar vocabulary words, background information violations, and internal inconsistencies.
Initially, researchers explicitly taught students a “think aloud” strategy. Students were encouraged to think aloud to the author about their thoughts regarding each sentence. Metacognitive skills such as controlling, evaluating, prediction, etc. were evaluated for all participants, paying particular attention to how they decoded the comprehension errors.

Qualitative results showed that many students successfully actively monitored their thoughts verbally to the author. They were able to gather new information as they read and constructed the meaning of the text. The high school students differed from the elementary students in that they questioned their prior knowledge while reading a passage that contained internal prior knowledge errors. Elementary students questioned the text for errors, insisting that the author of the text displayed false information. Elementary students also demonstrated more confidence while verbalizing inferences that they understood from the text; whereas the high school participants expressed uncertainty and frustration while reading.

The ability for students to be able to verbalize exactly what they are comprehending and which strategies they are using to do so is vital and a beneficial tool to possess. Elementary teachers should teach these metacognitive strategies using expository text to set students up for a successful transition into more difficult academic challenges. Most of these twice-exceptional students were able to successfully demonstrate metacognitive skills with additional assistance. Teachers can easily accommodate student with learning disabilities by allowing them to speak into a tape recorder to verbally express their thinking process.

Houtveen and van de Grift (2007) investigated the need for increased comprehension instruction and the amount of time spent on these essential skills during school time. They noted how most teachers spent significantly less time teaching strategies during reading comprehension lessons. They conducted a longitudinal study to determine what teachers would do in order to improve students’ comprehension skills. The purpose of this experimental study was to examine a successful explicit reading comprehension instruction program for primary elementary students. The research questions examined in this study was: (a) Would teaching metacognitive comprehension strategies benefit students, and (b) Would optimizing that instruction increase student comprehension scores? The research design was quasi-experimental.

Houtveen and van de Grift selected 569 ten-year-olds from 20 schools to participate in this study. The experimental group (n=344) and the control group (n=225) came from 20 different schools. Students in the experimental group were exposed to a five state approach including explicit instruction of strategies, teacher modeling strategies, collaborative and guided practice with scaffolding use, followed by independent use of strategies. All teachers in this group were trained on how to orchestrate the strategies. The teachers were also trained on how to devote at least one half-day per 14 school instruction days to comprehension strategy instruction. Students in the control group did not change their instruction; these students were exposed to little
or no comprehension strategies. Questionnaires were used to determine which, if any, reading strategies students used while reading. A reading attitude scale was used to measure how participants felt about reading and reading material. The Test for Measuring Reading Comprehension was used for pre- and posttest. Results from the pretests showed no significant differences between the control and treatment groups. ANOVA was used to measure statistical differences between the groups. The results of this longitudinal study showed the comprehension scores in the experimental group were significantly higher than those in the control group. Teachers who devoted more time to teaching reading strategies received higher scores than the comparing group. The students in the experimental group scored higher on comprehension tests than the students in the control group in a follow-up study a year later.

The results help teachers recognize the importance of spending time on teaching essential reading comprehension strategies. Teaching these strategies proved to be beneficial even after conducting the study. It is possible for students to use metacognitive strategies, even at the elementary level.


Klinger, Vaughn, Arguelles, Hughes, and Leftwich (2004) investigated the use of a combination of reading comprehension strategies within a classroom setting. They note how students need to learn comprehension strategies since literature-based learning
instruction is increasingly implemented in classrooms. The purpose of this longitudinal study was to determine the effectiveness of collaborative strategic reading (CSR) comprehension strategy for students of all comprehension reading achievement levels (K-12). The research questions examined in this study was: (a) Does collaborative strategy instruction increase comprehension scores in elementary students, and (b) Can collaborative strategy instruction be beneficial for students with learning disabilities (LD)? The research design was quasi-experimental.

Klinger and colleagues selected 211 students within five different metropolitan school districts. The study consisted of five control and five experimental classrooms. Teachers in the control group were aware of CSR, but were not part of the full-day professional development workshop regarding CSR implementation. The CSR consisted of multiple comprehension strategies including reciprocal teaching, collaborative group work, and classroom discussion. Students in control group received usual teacher-directed instruction. Some teachers in the control group implemented parts of CSR. Student comprehension achievement level was measured pre and post using level four of the comprehension section of the Gates-MacGinitie test. Students in the experimental group also participated in a researcher-designed interview where they identified which comprehension strategy they used while reading a particular part of a passage. Teachers in experimental group were urged to keep records of when they implemented CSR. Most teachers implemented CSR four days a week for approximately 40 min sessions. Researchers also conducted classroom observations in all participating classrooms. ANCOVA was used to measure statistical differences between the two groups. The results of this year-long study indicated students who were exposed to procedural CSR
received higher comprehension test scores than those who did not receive the procedural CSR implementation.

The results provide teachers with proof that implementing a multi-strategy instruction is beneficial for students of all comprehension achievement levels. Even students with LD scored higher than students with LD in control groups. Using only one or two strategies will not be as beneficial. With the increasing use of literature-based learning instruction, teachers need to implement comprehension strategies all year long.


Kraemer and colleagues (2012) investigated the benefits of exposing students to expository text during primary grades. The purpose of this research was to determine if an expository read-aloud instruction would increase expository skills. The research question examined in this study was: Would expository comprehension increase with an instruction involving expository read aloud using students’ book of choice? The research design was mixed methods.

Kraemer and fellow researchers randomly selected 77 first grade students to participate in this study. Two classes (n=37) were assigned to the experimental group and two classes (n=40) were assigned to the control group. The narrative books chosen were approximately 100 words more than the expository text chosen. Pre and posttest consisted of six open-ended questions, four evidence based questions, and two inference
based questions. Majority vote from students determined the selected books for the pre and posttests. In order to avoid book choice based on appearance, an experienced children’s literature professor helped ensure all books had similar pictures, font size, and word count. The students were able to choose from three sets of books and 12 first grade reading level texts were used in the study. All material in books was solely factual content.

Within a four week period, the teacher in the control group read a total of four informational book and 49 narrative books. On average, three books were read aloud each week. In the treatment groups, the teachers only read narrative books to the students. The researcher visited the classroom three times a week and conducted a guided reading instruction upon each visit. Instruction included a KWL concept prior to reading the informational book, followed by a review of literature after each read aloud. The researcher did not visit the control groups, nor did the control group receive the guided reading instruction. MANOVA was used to measure statistical differences between the groups. Results indicated significantly higher listening comprehension test scores within the treatment groups. In both groups, narrative comprehension scores were deemed insignificant due to the lack of significant findings in pre and posttest scores. A Mann-Whitney U statistical procedures were used to demonstrate participant book choice prior and after the four week intervention. Results indicated that some 75% of students preferred informational read aloud during pre and posttests.

These results illustrate how students are interested in nonfiction books and have the capability of comprehending such literature. It is important for teachers of the primary grades to introduce fiction and nonfiction novels to students so they can associate with
different text structures. Exposing young students to nonfiction text builds essential background knowledge regarding unknown terms and abstract concepts.


Lederer (2000) investigated an effective comprehension strategy to help students with learning disabilities (LD). The purpose of this research was to conduct a study of the effects of reciprocal teaching of social studies with students that have LD. The research question examined in this study was: Can reciprocal teaching improve reading comprehension ability in students with LD better than traditional methods during social studies?

Lederer’s study consisted of 128 fourth, fifth, and sixth grade students. There was one control group and one experimental group for each grade, each consisting of approximately 22 students. Every grade level included two inclusive classrooms and two noninclusive classrooms. The inclusive classrooms had at least five students with qualifying LD. All students with LD were receiving special education services. The study lasted approximately one month at each of the grade levels. The experimental groups promoted a cooperative learning environment, in that students with LD were paired up with other students without LD in groups no larger than five students. Three reading
comprehension measures were examined during this study: ability to create evidence-based questions from the text, ability to answer five open-ended short response questions regarding text, and compose a short summary of the text regarding social studies material. The instructional procedures done by the investigator for each grade level consisted of two days of teaching how to implement reciprocal teaching to the treatment groups. Students were asked to then read a section out of their social studies book and create three questions that a teacher would ask a student regarding the text, five short-answer questions, and a short summary of the text within a 45 minute span with their grouped peers. Five days following the first two days, the investigator explicitly taught students reading strategies such as questioning, summarizing, and predicting. Thereafter, at the beginning of classes, the investigator provided only five minutes of feedback by means of scaffolding to the treatment groups ensuring they were using reading strategies associated with comprehension. The researcher observed how social studies was being taught in the control groups once a week, for at least 45 minutes. The instruction was teacher-led, with little peer interaction. In essence, students were directed to silently read a section and answer the questions at the end of the chapter.

MANOVA was used to measure statistical differences among the groups on the three measures. Results indicated statistically higher comprehension scores from the treatment groups than the control groups. Students with LD improved their ability to create evidence-based summaries and questions, but there was no significant difference between the two groups on the ability to answer comprehension questions.
Reciprocal teaching is definitely a great tool to use in classrooms to build metacognitive reading strategies. Peer communication is important. It is always beneficial to get another perspective when it comes to learning any new concepts, including reading strategies.


Marianee McTavish (2008) investigated a third grade student and her use of metacognitive reading strategies while reading different types of literature. The purpose of this single subject qualitative research design was to determine if students' metacognitive skills and comprehension strategies are applied in the same fashion, no matter the literature type. The research question examined in this study was: To what ability can students apply metacognitive comprehension skills during oral readings of expository and narrative text?

McTavish selected Nicole, a third grade female, for this study. She came from parents who were both college graduates and embraced reading and education in general. The researcher collected field notes from Nicole's home environment as well as her school environment. Although Nicole enjoyed collecting books, she often did not finish books she started. McTavish also interviewed Nicole's teacher regarding Nicole's literacy development. McTavish used stimulated Recall (SR) in order to evaluate Nicole's metacognitive skill use with both informational and narrative text. In a vacant
room, McTavish directed Nicole to read aloud text while being videotaped. The books were 15-20 pages in length with illustrations on each page. The books were a third grade level, an appropriate level for Nicole. McTavish allowed Nicole to do a picture walk through both texts. After Nicole read each book, McTavish asked her to summarize and recall details by asking open-ended questions for clarification. During this time, McTavish implemented a think aloud instruction to determine what and when strategies were implemented.

Results found that Nicole was successfully able to monitor her comprehension, although had difficulties implementing strategies effectively while comprehending informational text. For example, Nicole was unable to successfully use the same metacognitive strategies that she used for narrative text in order to correct her pronunciation of words since she lacked the necessary background knowledge. She became very aggravated after numerous attempts of trying to comprehend parts of the informational text that she often sped through the information. Metacognitive skills were evident when she retold parts of the narrative book as she was able to identify main ideas and the problem; however, she was unable to make inferences with the informational text, thus having difficulties recalling key ideas and details. She was also unaware of the importance of text patterns in the informational text such as bold text headers and arrows connecting small passages to corresponding pictures. She ignored the patterns and did not mention them as an aid in helping her comprehend the passage during the SR interview. Nicole did not always employ the correct strategy when trying to comprehend parts of the informational text, such as interpreting unknown words. Possible reasons as to why Nicole was having difficulties comprehending nonfiction text could have been because
McTavish mentioned that during her observations, Nicole's teacher taught metacognitive strategies such as accessing background knowledge, predicting, figuring unknown words by using context clues, and making inferences, but also mentioned how she did not see students' independent use of them or extension of the strategy lessons. It is essential for primary teachers to teach these metacognitive strategies to the extent that students independently use them while reading all kinds of literature. Doing so will help alleviate the fourth-grade slump that describes Nicole's situation and how she was unable to comprehend expository text as easily as she did narrative text.


Michalsky, Mevarech, and Haibi (2009) investigated instructional strategies that help students comprehend scientific text. The purpose of this study was to identify the benefits of teaching metacognitive strategies to students rather than the traditional hands-on instruction in order to comprehend scientific text. The research questions in this quasi-experimental study were: (a) At what point of metacognitive instruction exposure is more beneficial for comprehension success?; and (b) Do intermediate elementary students have the ability to illustrate metacognitive skills independently?

In this study, metacognition is defined as the self-awareness of cognition and the ability to adjust using different strategies as necessary in order to successfully
comprehend a scientific text. There are three opportunities for metacognition during the comprehension of text: (a) anticipatory metacognition (beMeta), occurring before reading; (b) contemporaneous metacognition (duMeta), occurring during reading; and (c) retrospective metacognition (afMeta), occurring after reading of text. Michalsky and colleagues selected 108 fourth-grade Israeli students from four different schools to participate in a four month long study, three times a week, to determine the best opportunity for metacognition while reading scientific text. The study consisted of three experimental groups, each assigned to a specific metacognition stage, and one control group. Each teacher received one whole group training as well as a one-on-one training, totaling six hours of metacognition instruction training. The researcher observed each teacher an hour a week and noted that although no feedback was given after observations, all the teachers were implementing instruction as learned during training. In all groups, students were organized into small groups of four students: one academically high student, two middle achievers, and one lower achiever. They were encouraged to demonstrate cooperative learning throughout the study. Procedures for study required each student to read the text, identity the problem found in the text, analyze data, and formulate a hypothesis to a scientific phenomenon. Depending on the experimental group, each student answered a series of four self-addressed metacognitive questions. The first question asked to identify the phenomenon and the overall problem. The second question asked to distinguish new information from information the reader already knew and make connections between the two. The third question asked the reader to establish appropriate reading strategies to help solve the problem. The last question asked the reader to reflect on the strategies used and if the solution made sense.
The beMeta group received the metacognition instruction prior to beginning each text reading. The teacher told the students that the self-addressed metacognitive questions would allow them to comprehend and remember the text and to use the questions when reading the text. The duMeta group of students were exposed to the same self-addressed questions as they read the text. Students in this group were directed to read the text in small groups, and discuss the answers to the questions as a group. The afMeta group received the self-addressed questions after they had read the text. The control group did not receive the questions. They discussed the text in small groups and had no exposure to metacognitive instruction.

Three measurements were completed for both pre and posttests: scientific literacy (TSL), skills, science knowledge (TSK), and metacognitive awareness (MAQ). Pretests results showed no significant difference between the groups. T tests were used to measure statistical differences on posttests among the groups. Even though all treatment groups showed improvement on all measurements, results indicated that afMeta students performed statistically higher than any other groups.

This study demonstrates that elementary students are capable of learning and initiating metacognitive awareness when it comes to informational text. Results further show that students who were exposed to metacognitive instruction successfully scored higher on tests than other groups. The cooperative learning environments may have contributed to the results since students were able to discuss the text in-depth together. Although the teachers did not explicitly teach how and when to use the strategies, the cooperative learning groups enabled students to work together as they answered the self-
awareness questions. This learning environment is essential to develop the metacognitive skills each student needs.


Ness (2011) investigated teachers’ attitudes towards using informational text in K-5 classrooms. The purpose of this eight-month qualitative study was to examine if teachers use informational text and the difficulties with incorporating the text into their instruction. The research questions examined in this study were: (a) How frequently do K-5 teachers use information text instruction, (b) What attitudes do teachers have towards expository text, and (c) Are there any complications involved with informational text instruction? The research design was survey.

Ness selected 318 K-5 teachers to answer a series of short response questions regarding their feelings about expository text in classrooms and school libraries. More than half the teachers taught at a Title I school. These questionnaires were available online and by written response. ANOVA statistical analysis found, on average, teachers incorporated informational text 30 minutes daily into their instruction. Results also indicated as grade level increased, so did the amount of informational text availability in school libraries. The majority of teachers agreed that informational text was important and beneficial to the classroom. One particular teacher expressed how it helped with reciprocal teaching. Since primary teachers used less information text for instruction due to the lack of appropriate reading level materials, participants expressed that many
students lack personal experience in order to connect to topic. Teachers complained how expository text required extensive pre-teaching of background knowledge and vocabulary necessary for comprehension of material. Another complication of expository text was the text structure. Participants also cited that informational text was difficult for students because of the numerous changes in text structure throughout a paragraph. Other complaints regarding this type of instruction included disengaged readers, overwhelming amount of information, and length of passages.

These results show teachers’ opinions regarding expository text in classrooms. There are difficulties in providing informational instruction to K-5 students but the benefits outweigh the problems. Students need to be exposed to informational text in elementary school so they are not overwhelmed during later years in school.


Reed, Marchand-Martella, Martella, and Kolts (2007) investigated a particular reading comprehension program for elementary students and the need for such comprehension strategies demonstrated in this program. The purpose of this study was to assess the effects of the *Reading Success Level A Program* (RSL), an explicit reading comprehension program used in classrooms. This particular program was designed for fourth graders. The research question observed in this study was: Does the *Reading Success Level A* program increase comprehension scores in fourth grade students?
Reed and colleagues chose 93 fourth graders to participate in a six-week study that consisted of 80 lessons that lasted 20 minutes each. This program was implemented by two trained teachers with 20 plus years of teaching experience using a whole class instruction. Comparisons were made between several variables: (a) non-risk students (N=64), (b) at-risk students (n=29), defined as students who had an IEP or scored well below average on a certain pre-test and participated in a learning assistance program (c) gender, and (d) the teachers’ teaching method. These factors were compared using the Mann Whitney-U Test and t-tests. The intervention RSL focused on teaching comprehension strategies such as modeling, scaffolding during guided practice, and independent application of these strategies. The teachers focused on teaching main idea, inference in text, text structure, author’s purpose, vocabulary, and summarizing. In addition to the four days a week RSL instruction, students participated in a motivational program, Scholastic Reading Counts! Students read appropriate reading level novels and took computerized comprehension quizzes. Data collected consisted of numerous RSL multiple-choice questions used throughout the study, and a checklist of taught strategies to the class. The Washington Assessment of Student Learning reading and writing scores from the previous year were used as pre-test scores. Students took the same test after implementing the program. Quantitative results indicated both non-risk and at-risk students showed a significant increased difference on comprehension and fluency pre- and posttest. As for gender and teacher differences, there was no significant difference in testing scores.

Expository text is more prominent in fourth grade instruction. In primary grades, teachers focus on narrative literature. It is essential to expose primary grade students to
expository text so that metacognitive strategies taught in upper elementary isn’t as
difficult to inherit.

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Takala (2006) investigated the importance of introducing comprehension
strategies through reciprocal teaching during decoding instruction in primary grades. The
purpose of this study was to examine the effects of reciprocal teaching verses traditional
basal teaching for developing comprehension skills. The research question examined in
this study was: Can a reciprocal teaching method improve reading comprehension in
fourth grade general and special education students? The research design performed was
experimental.

Takala selected two fourth grade (n=69) and two sixth grade (n=72) classes to
participate in a five-week study to determine the effectiveness of reciprocal teaching
on comprehension. One class of each grade was selected to be the experimental group.
Several weeks later, Takala selected 63 more sixth grade students to participate in a
separate five week study involving the same factors. Student ages varied between 10 and
12 years of age. Each group possessed approximately eight students with specific
language impairments. These students typically had severe reading comprehension
difficulties. These students were taught in separate groups from the mainstream students
and, in addition to reciprocal teaching, received action movement methods as well. Each
group received 10-15 lessons, two to three times a week that focused on science or history expository text and lasted 45 minutes each. The teachers focused on practicing strategies such as prediction, clarifying, questioning, and summarizing. During the first four days, one strategy per day was introduced and discussed. Reciprocal teaching was displayed by exercising group activities. For example, summarizing was practiced by organizing students in groups. The students determined the most important facts and worked as a group to shorten long sentences and phrases. Teachers also promoted the use of four strategies with posters that demonstrated what good readers do. Control groups were not exposed to the strategy instruction. They used traditional basal instruction from the teachers’ manual. Data collected included expert-designed pre-, post, and delayed posttests to measure both decoding and comprehension skills and a hierarchy-rating test to measure comprehension. T-test and Mann-Whitney test were used to measure statistical differences between the groups. Test scores from experimental groups indicated positive results in all areas compared to the control groups. Some results were not statistically significant, but did show positive trends. Significant results were found in students who received at least 15 lessons, compared to the groups that received less than 15 lessons. Even students with language impairments showed progress.

While decoding skills are essential, these results provide teachers with evidence that using a reciprocal teaching method for teaching comprehension strategies, as well as decoding skills, are beneficial for all students. In a short period of time, this type of instruction has improved scores of students with severe comprehension difficulties.

Wigfield, Guthrie, Perencevich, Taboada, Klauda, Mcrae, and Barbosa (2008) investigated the need for research on whether motivation attributes to successful reading comprehension instruction. The purpose of this 12-week study was to determine the association between student engagement and reading comprehension. The research question examined in this study was: To what extent does adding a motivation instruction to a multiple strategy instruction have on comprehension scores on fourth grade students?

Wigfield, et al. noted how previous studies have proven the success of Concept-Oriented Reading Instruction (CORI), a multiple strategy explicit instruction, on measures of comprehension but not if motivation instruction attributed to the results. Participants in the study were 15 teachers and 315 fourth graders from five mid-Atlantic city schools. Two schools participated in CORI, two schools were assigned to strategy instruction (SI) and one school was assigned to teacher instruction (TI). Classes averaged 25 students; lessons lasted 90 minutes. CORI teachers participated in ten days of professional development, whereas the SI teachers participated in five days of professional development. Both SI and CORI implemented an explicit instruction which demonstrated the following strategies: activating background knowledge,
questioning, searching for information, summarizing, organizing details, and text structure. Each strategy was introduced one week at a time. After six weeks, all strategies were integrated into science lessons. CORI students also received motivation instruction that were practiced by asking students to create content goals, allowing students to make choices regarding literature and providing hands-on activities in groups. TI consisted of instruction with basal materials, trade books and vocabulary books. These students were not exposed to strategy instruction or motivation instruction.

Pre- and posttests from *Gates-MacGinitie Comprehension Test* and researcher-designed tests measured comprehension and use of metacognitive strategies. *Motivations for Reading Questionnaires* and the *Reading Engagement Index* assessed students’ intrinsic motivation. MANCOVA analysis was used to measured differences between and among groups. There were no significant differences in pre-test scores. Results from analysis showed no significant difference in student engagement between SI and TI students, however, students in CORI showed significant difference in engagement than other groups. Students with lower engagement displayed lower reading strategy usage. Results also showed students in CORI had higher reading comprehension scores than any other groups.

The study suggests that not only is strategy instruction important but student engagement is necessary to enhance the instruction. When students are motivated, they are more likely to turn comprehension strategies into self-regulated strategies easier

Williams (2005) investigated the need for reading comprehension strategies for primary grade students. The purpose of this experimental study was to determine a successful explicit reading comprehension instruction program for primary elementary students. The research questions examined in this study was: (a) Is explicit reading comprehension instruction appropriate for primary elementary students, and (b) Can text structure strategies be then used as a self-regulated comprehension strategy?

Williams conducted three evaluation studies to see if incorporating a text structure program would be beneficial for primary students. His third evaluation study involved 173 students from 11 different classes. The programs consisted of nine lessons that lasted 45 minutes each. All groups focused on a compare/contrast second grade reading level expository passage about animals. The students in the text structure program (n=4 classes) focused on locating clue words to indicate what type of expository text they were going to read, graphic organizing instruction to organize relevant information found in text, and a question-answer instruction to recall important details in text. Students in the content program (n=4 classes) received background knowledge regarding text, classroom discussion, graphic organizing instruction to organize information by topic, vocabulary development, summary, and lesson review. The no-instruction program (n=3 classes) did not receive text structure and only focused on using one comprehension strategy, the graphic organizer. Researcher-designed tests were used to demonstrate if students were
able to recall facts from compare/contrast passage using the text structure clues. Researchers asked for oral summaries from related and unrelated instructional material text structure passages to measure if students were able to transfer strategies independently. ANOVA was used to measure statistical differences between the groups. Results showed that students in text structure program were able to provide accurate and in-depth summaries of text. They were able to transfer information to both related and unrelated to instructional text significantly more than other groups.

The results provide teachers with evidence that students can gain information from expository text and automatically transfer strategies to other text with explicit instruction. Expository text should be used in primary grades to build vocabulary and comprehension strategies. Text structure instruction is beneficial because it helps students indicate text patterns within expository text.