

USING READING LOGS TO IMPROVE COMPREHENSION OF SCIENCE TEXT

by

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STATEMENT OF PERMISSION TO USE

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ABSTRACT

The Common Core Standards demand that we teach our students to interact with science text in deeper ways. Students struggle with reading comprehension in the science classroom. In this study, reading logs were explored as an effective way to promote literacy skills including the comprehension of scientific text in sixth grade science. The population studied was made up of sixth grade students, the majority of whom were reading at or near grade level. Students showed an increase in comprehension and achievement after using reading logs. Students' attitudes about reading and their own comprehension also improved.

INTRODUCTION AND BACKGROUND

Project Background

Teaching Environment and Demographics

For the past 10 years I have taught in a middle school in Helena, Montana, which is part of a large school district relative to others in the state. My school is one of two middle schools in the city and has just over 1,000 students in grades six through eight. The school consists of primarily English speaking students, with 91% identifying as White, 2% Hispanic/Latino, 1% Asian and less than 1% each African American, and Native Hawaiian/Pacific Islander. 19% of students receive free or reduced lunches while at school and approximately 9% of students receive special education services.

I teach with an interdisciplinary team and share 133 sixth grade students with the same Math, Social Studies and English teachers. My five science classes have, on average, 27 students, and their reading ability varies. 5% are enrolled in remedial English classes.

Focus Questions

I have observed that many of my students appear to struggle with comprehension of science materials. For example, they may give up and not read the assignment or they may answer comprehension questions incompletely or with obvious lack of understanding. I would like my students to be able to make meaningful connections with what they read and have strategies for developing a solid understanding of their science text. To accomplish this, I became interested in using reading logs. Would providing a structured format for students to use to think about and write about what they were

reading help them to connect more meaningfully with the text? The focus for this action research project was the impact of using reading logs on student comprehension of science text. The impact of using reading logs on student achievement in summative assessments and student attitudes towards reading logs in science class was examined.

CONCEPTUAL FRAMEWORK

Introduction

A review of the literature on the topic of reading strategies and reading comprehension in the science classroom will be divided into two discussions. First, the need for using reading strategies to promote literacy when teaching and learning science will be discussed. Second, approaches to using reading strategies in the science classroom and their impact on students' reading comprehension will be explained and analyzed. Finally, the use of reading logs as a specific reading strategy will be presented.

The Need for Literacy

With the development of the Common Core State Standards, examining how students read and interact with science text is increasingly important. The 6-8 Standards for Literacy in Science and Technical Subjects emphasize interactions with the text that go beyond the simple decoding or recognizing of words and contextual meaning. Students need to be able to determine main ideas or themes, support ideas with details, summarize, synthesize, and draw conclusions about the purpose and reliability of science text (Common Core Standards Initiative, 2011). Students need to be engaged in the type of reading that scientists do and have the language literacy skills to understand the

scientific information that is read. The National Academies of Science supports this idea in their Framework for Science Education (2012) which states,

...students should have sufficient knowledge of science and engineering to engage in public discussions on science-related issues, to be critical consumers of scientific information related to their everyday lives, and to be able to continue to learn about science throughout their lives (p.1).

The Common Core standards discuss how literacy skills used in science must include the ability to access and interact with an evolving body of scientific information.

This is illustrated by Norris (2003) when he states,

Texts contain expressions of the wide range of degrees of doubt and certainty applied to statements in science; texts are used to differentiate the status of scientific statements, from observations, to causal generalizations, to hypotheses, to descriptions of method; and texts indicate the role in reasoning played by various statements in science, whether they be statements of evidence, predictions, or speculations. Scientific literacy in its fundamental sense refers to the capacity to interpret all of these distinctions (p. 243).

The ability to read and make meaning from scientific text is key to 21st century scientific literacy (Lemke, 2002). There exists a relationship between basic literacy and scientific literacy. To participate fully in scientific inquiry it is necessary to have the skills to access scientific knowledge. Without the ability to access, understand, interpret and analyze scientific text one cannot become scientifically literate (Norris, 2003). In other words, without good language literacy skills students cannot become and remain scientifically literate adults.

Students often struggle with reading and making meaning from science text. Reading comprehension is largely determined by what students already know about the topics read (Daniels and Zemeleman, 2004). Being able to read and being able to make meaning from what is read are two different skills. Some students who are “good” readers lack the ability to comprehend and make meaningful connections with the science text they are asked to interact with (Kalman, 2011). In this case, the ability of students to reflect upon and identify what they understand and do not yet understand becomes very important. In a study by Bruin et al. (2011) students’ ability to identify what they know and what they do not know was improved through reading strategies. Armed with this knowledge, students can use a variety of reading strategies to make meaningful connections with the ideas and text- a necessary step towards becoming and remaining scientifically literate.

Approaches to Using Reading Strategies in the Science Classroom

Fang et al. (2008) asked “Does teaching reading strategies along with introducing alternative science text improve science learning?” In this study, sixth grade students were explicitly taught reading strategies in weekly lessons. Examples of lessons included think- pair-share, predicting, paraphrasing, and concept mapping. Students read both textbooks and science trade books. Pretests and post-tests on content and reading skills were given. The investigation showed that sixth grade students made significant improvement in content knowledge as evidenced by summative assessment.

In a 1998 study by Guthrie et al. (1998) involving third and fifth grade students in self-contained classrooms, an attempt to improve reading comprehension by integrating reading with science instruction was documented. Students received either Concept

Oriented Reading Instruction (integrated or thematic units) or traditional instruction (compartmentalized). The effects of this instruction were measured as conceptual knowledge in pre and post-performance assessment. Students who learned to employ reading strategies demonstrated more conceptual knowledge gain than students who did not employ reading strategies (Guthrie et al., 1998).

Another study that looked at integrating reading instruction with science was undertaken by Romance and Vitale (2011). This study investigated how using the Science IDEAS instructional model (a model that integrates reading and science including hands-on activities, reading, concept-mapping and journaling) affected both reading and science learning in grades third through eighth. Students receiving the integrated instruction had higher achievement gains than a control group in both reading and science as measured by the Iowa Basic Skills test.

In the studies summarized above, there exists clear and positive correlation between integrating the teaching of reading strategies together with science instruction and student comprehension and content knowledge. Students who received instruction in reading strategies were able to use them to make meaning from science readings. In some cases, this led to a measurable increase in content knowledge.

Reading Logs

In several studies, researchers used reading logs -- notebooks or journals in which students reflect upon readings in response to guiding questions or writing prompts -- as a specific reading strategy. In a study with sixth grade students, Caverly, Franke, Hand, and Radcliffe (2008) noted that students who were taught and used a reading strategy called PLAN(Predict, Locate, Add and Note) scored higher on comprehension

assessments than a control group. The PLAN strategy asks students to predict, using a reading log, what the reading will be about. Students were prompted to record prior knowledge and experiences, locate familiar and unfamiliar words and concepts, add new information to prior knowledge, and finally to note how new information can be applied to everyday tasks in their reading logs.

Kalman (2011) proposed a study to evaluate the impact of reflective writing- or reading logs- on how university students understand science concepts from their textbook. Students read a section of the textbook to uncover what points they did not understand and underlined, highlighted, and/or summarized the selection. They were then instructed to free-write or write without direction in their reading log. Students were interviewed and the content of their reading logs was evaluated. The authors found that students connected their prior knowledge to what they were reading. Their writing helped them to find meaning in the new ideas presented in the text, clarified new concepts and helped students to see the big picture instead of a series of disconnected ideas. The study also concluded that in comparing summative writing to reflective or “free-writing” students were able to see that the purpose and process were different and led to different outcomes. Writing in the reading log was felt to be more beneficial to learning the material than highlighting, underlining or summarizing because it allowed a self-dialog about the content and encouraged students to think more deeply about what they were reading. While comprehension assessments were not given, it is clear that reading logs were promoting deeper understanding of the scientific information that was read.

(Kalman, 2011, p.170)

In surveying the literature several themes emerge. Students who are taught to use reading strategies can comprehend and possibly create more meaning from science readings. Students can be taught to use strategies but still often think of reading as consuming ideas not constructing them. Reading logs can be used with reading science text as a tool to promote comprehension and encourage the creation of new meaning as students identify and clarify new concepts.

The Common Core Standards demand that we teach our students to interact with science text as real scientists do. Scientists must be able to survey new scientific information, determine the context and content, examine evidence, synthesize and draw conclusions about its larger meaning and scientific reliability. Students struggle with reading comprehension in the science classroom. Reading logs are an effective way to promote literacy skills including the comprehension of scientific text and construction of meaning from new scientific ideas.

METHODOLOGY

Two of my sixth grade classes participated in this study, a total of 53 students. Of these students 11% are enrolled in special education, and/or non-special education remedial English classes. Participation in the study was not mandatory. Students could stop at any time without penalty to their grade. These classes were selected as they represent a snapshot of the general diversity of my students' ethnicity, socio-economic status and reading skills. The same students participated in both non-treatment and treatment phases.

My capstone project took place over a two week unit on Astronomy, specifically the solar system. The treatment I chose involved using reading logs to increase

comprehension. I used three science readings over the course of one week, at least one of which did not come from their science text. During the non-treatment phase, students read Chapter 3.1 and 3.2 from *Interactive Science: Astronomy and Space Science* (Buckley, Miller, Padilla, Thornton & Wyssession, 2011) and answered the Assess Your Understanding questions as a comprehension check. For the final reading, students read *Kids Discover: Sun* magazine (Price, 2009), pages 1-10, and answered the comprehension questions provided in the teacher materials. While the students read, I completed an observational checklist (Appendix A). At the end of the non-treatment phase students completed a summative assessment in the form of quiz. During the treatment phase, students first took a pre-treatment survey (Appendix C). They then read Chapter 3.4 and 3.5 but completed a reading log concurrently. I provided a format for students to guide them as they wrote (Appendix A). While students were required to write using the format I provided, I encouraged them to elaborate as well. Reading logs were evaluated only for completion. They also read and used a reading log with *Kids Discover: Planets* (Villard, 2010) magazine, pages 1-10. Each day students read using the reading log, I completed an observational checklist (Appendix B). Their homework was the same as the non-treatment phase- to complete questions as a comprehension check. The treatment activity, like baseline data collection, did not occur each day but three reading logs were completed during the treatment time frame of one week. At the end of the treatment phase students completed a summative assessment in the form of quiz and a post-treatment survey (Appendix C) a survey about using reading logs (Appendix D). Follow-up interviews were conducted after the treatment was complete. A timeline of the activities of this study can be found in Table 1.

Table 1
Timeline of Intervention Implementation

Date	Treatment	Data collection tool
Day 1	No	Chapter 3.1 Assess Your Understanding Questions Observational Checklist (Appendix A)
Day 2	No	Chapter 3.2 Assess Your Understanding Questions Observational Checklist (Appendix A)
Day 3 and 4	No	<i>Kids' Discover: Sun</i> comprehension questions Observational Checklist (Appendix A)
Day 5	No	Summative assessment-Chapter 3.1 and 3.2 Quiz
Day 6	Yes	Pre Treatment Survey (Appendix B) Reading Log (Appendix C) Chapter 3.3 Assess Your Understanding Questions Observational Checklist (Appendix A)
Day 7	Yes	Reading Log (Appendix C) Chapter 3.4 Assess Your Understanding Questions Observational Checklist (Appendix A)
Day 8 and 9	Yes	Reading Log (Appendix C) <i>Kids Discover: Planets</i> comprehension questions Observational Checklist (Appendix A) Using a Reading Log Survey (Appendix D)
Day 10	Yes	Summative assessment-Chapter 3.3 and 3.4 Quiz Post Treatment Survey (Appendix B)
Post treatment		Follow-up Interviews

The data I collected included teacher observations, students' scores on selected comprehension questions, students' quiz scores, student surveys and interviews. I made observations about students' behaviors and work completion during both the treatment and non-treatment periods (Appendix A). Both at the beginning and end of the treatment

phase, I used a survey based on a Likert scale asking students their attitudes about reading science selections (Appendix B). At the end of the treatment phase only, students were surveyed about their attitudes about using reading logs (Appendix D).

I followed up the post treatment survey with selected student interviews. Students were identified for interviews from their survey responses indicating they would be willing to participate. I selected a group of 3-5 students who were most representative of my demographics. Table 2 summarizes my data collection strategies.

Table 2
Data Triangulation Matrix

Focus Questions	Data Source 1	Data Source 2	Data Source 3
1. What is the impact of using reading logs on student comprehension of scientific text and student achievement on summative assessments?	selected homework questions	summative assessment-quizzes	student reading logs
2. What are students' attitudes towards the use of reading logs in science?	student surveys	student interviews	teacher observations

DATA AND ANALYSIS

To determine the impact of reading logs on student comprehension and their attitudes about reading logs in science, data were collected from a variety of sources. These sources included selected homework questions, summative assessments in the form of quizzes, student reading logs, student surveys, student interviews and teacher observations. Data were collected from six readings. The same students completed each

reading. The first three readings were completed without using reading logs; the second three using reading logs. There were a total of 53 students participating in the study.

Comprehension and Achievement

In analyzing the data associated with comprehension and achievement, one can conclude that using a reading log increased students' comprehension of science text. The results of a comprehension check in the form of Assess Your Understanding questions from Chapters 3.1 and 3.2 (non-treatment) versus Chapter 3.4 and 3.5 (treatment) from *Interactive Science: Astronomy and Space Science* (Buckley, Miller, Padilla, Thornton & Wyssession, 2011) showed scores in both classes combined ($n=53$) increased when using a reading log. The average score for the non-treatment comprehension check was 65.31 ($SD=6.07$). The average score for the treatment comprehension check was 74.67 ($SD=2.69$). This difference was found to be statistically significant, $t(198) = 14.1, p < 0.0001$. For the final readings, students read *Kids Discover: Sun* magazine (Price, 2009) (non-treatment) and *Kids Discover: Planets* (Villard, 2010) (treatment) and answered the comprehension questions provided in the teacher materials. Students' scores showed an increase from a class average of 72.13 ($SD= 1.65$) non-treatment to 77.34 ($SD= 2.59$) after the treatment. The difference between these groups was statistically significant with $t(98)= 11.9965, p < 0.0001$. Although care was taken to use comprehension questions generated by the same sources for comparison, it is possible that the questions may have been easier or harder in either the non-treatment or treatment comprehension checks. Differences in the topics assessed may also have affected the outcome.

A comparison of the results of summative assessments (quizzes) used to measure achievement in the non-treatment phase and treatment phase show similar increases. A

class average of 62.98 with a ($SD= 2.88$) (non-treatment) was followed by a class average of 76.64 (treatment) with a ($SD= 2.94$). A t -test showed $t(106)= 24.3903$, $p< 0.0001$.

Again care was taken to normalize the difficulty of the quiz questions, however it is possible that the questions may have been easier or harder in either the non-treatment or treatment summative assessments.

A closer look at student reading logs finds that both the complexity of ideas and use of vocabulary increased with practice. This may indicate that students are making more sense of the information using reading logs and that practice improves their usefulness. For example, in the first use of reading logs, students characteristically answered with one sentence or sentence fragments: “The sun has 3 layers.” and “its (sic) big.” In subsequent reading logs the complexity of ideas increased: and “Mars is the most like Earth. We might be able to find life there or eventually live there.” and “The most important thing is to relize (sic) that most of the inner planets has either really thick (Venus, Earth) or really virtually no atmosphere at all (Mercury).” Students’ use of vocabulary words in their reading logs increased as well, “The inner planets are also known as the terrestrial planets. Terrestrial means Earth-like.” and “the greenhouse effect means to trap heat”. Students completed their reading logs with 100% participation with all students writing at least one sentence or sentence fragment for each required question.

Attitudes about Using Reading Logs in Science

In looking at students’ attitudes about reading in science and using reading logs through Likert scale surveys and interviews several themes emerge. First, students feel more positively about reading in science and confident in their understanding after using a reading log. Pretreatment, 61% of students responded positively to “I understand what

I read in my science book.” and 67% responded positively to “After I read I find my science homework is easy.” Post-treatment, 73% and 77% of students responded positively, respectively. In the Using a Reading Log survey, 60% of students responded positively to the statement: Using a reading log helped me understand more of what I read. In interviews, students commented that “I could understand more about my science book. You could look back after class and see what you said” and “I love the reading logs I thought they were fun and a good way to pay attention to what your (sic) doing.”

Second, students have difficulty making connections between what they read and their own lives. In both the pre and post treatment, surveys indicated that making connections remains difficult for students. Pretreatment 48% responded positively to the statement: *It is easy to connect what I read to my life.* Post treatment 43% responded positively.

Interestingly when a neutral choice is added into the percentages, students do seem to feel less negatively about the statement with 71% responding neutrally or positively pretreatment and 81% responding neutrally or positively post treatment. One student commented “It kept us connected to the ideas. We didn’t just drop off.” Another asserted, “It helped you keep in mind what you wanted to find out.” Others commented, “There’s not really a point. Everyone knows it’s for an assignment.” Thirdly, students generally like to read about science. In the pretreatment survey 60% of students responded positively when shown the statement: I like to read about science. Post treatment the percentage was similar with 63% responding positively. These survey results support the teacher observations that were made each day. On task behavior and work completion was virtually the same pretreatment and post treatment. Students were generally on task for the duration of the activity, whether a reading log was used or not. Finally, students

were neutral about the value of using a reading log again. Sixty-one percent responded neutrally or positively to the statement: *I would like my teacher to have us use reading logs again.* Students commented, “I think that using a reading log helped but for me it takes a while to really understand and to kinda (sic) get it programmed in my brain. It took lots of time to do” and “They are easy except that when I get started I just want to finish reading.” Overall, attitudes became more neutral or positive about reading in science as a result of using a reading log.

INTERPRETATION AND CONCLUSION

Using reading logs with reading in science can be an effective way to engage students in interactions with the text that go beyond the simple decoding or word recognition and contextual meaning. Students need to be able to determine main ideas or themes, support ideas with details, summarize, synthesize, and draw conclusions about the purpose and reliability of science text (Common Core Standards Initiative, 2011). This AR project found that using reading logs concurrently with a reading selection increased student comprehension and achievement. This supports previous research about the use of reading strategies and comprehension. For example, a study by Guthrie et al. (1998) found that students who learned to employ reading strategies demonstrated more conceptual knowledge than students who did not employ reading strategies. In addition, my students’ attitudes about reading in science and their confidence in making understanding from what they read also improved. My students’ ability to make connections between science selections and their own lives remained the same.

Using reading logs in the sixth grade science classroom is time consuming and requires specific and concerted instruction. In interviews, students commented, “I wish that we could understand it better.” and “Reading logs are time consuming and a little boring.” Students must be taught how to use them and then reminded to follow the directions throughout the process. The neutrality about using a reading log reported above could in part be due to students’ perceptions of the time and difficulty using them. The teacher was required to answer many procedural questions during the treatment, although students became more proficient with practice.

Since the pre and post treatment reading selections discussed different topics, it was difficult to build summative assessments with equal levels of difficulty. It is probable that some comprehension questions and quizzes were easier or harder than others. Some of the positive results may be attributed to this. Focusing on improving the standardizing the comprehension questions and quiz questions with a test generation program may produce a more accurate result.

Students like to read about science but they also like feeling confident that they are understanding what they read. The use of reading logs supported and enhanced this positive attitude. What remains a concern is the fact that as Kalman (2011) noted, some students who are “good” readers lack the ability to comprehend and make meaningful connections with the science text they are asked to interact with. This is independent of their attitudes about their ability to read. Students in this AR project indicated that their ability to make connections between science selections and their own lives remains low. With consistent and explicit use of reading logs improvement in this may be observed.

VALUE

This AR project has helped me focus on the Common Core Standards and their application in the middle school science classroom. The Common Core standards discuss how literacy skills used in science must include the ability to access and interact with an evolving body of scientific information. My idea of what is important for students to be reading has changed as has to the way I approach and support reading comprehension. The need for improving students' motivation and attitudes about accessing science information has impacted my pedagogy as well. Including diversity in instruction that readings both from the textbook and outside sources is an important part of my engagement strategies.

Reading in science must include selections that do not come from a science book. Scientific information is an evolving body of information. It is dynamic by nature. Students must have the skills and strategies to read and interpret this information. Reading logs are one way to promote scientific literacy. I feel that they give my students explicit practice in the "habits of mind" that good readers have. They ask students to think, predict, and engage with scientific ideas.

Students must also have the interest in reading about scientific ideas. This is harder to teach. Perhaps it is inspired, rather than taught. Providing my students with a rich, diverse and challenging set of scientific experiences including reading about science is one way to help students make meaningful connections to their own lives and become scientifically literate adults.

REFERENCES CITED

- Borkowski, J. G. (1992). Metacognitive Theory: A Framework for Teaching Literacy, Writing, and Math Skills. *Journal of Learning Disabilities*, 25(4), 253-257.
- Buckley, D., Miller Z., Padilla M., Thornton K., and Wysession M.. *Interactive Science: Astronomy and Space Science*. Upper Saddle River: Pearson Education Inc., 2011. Print.
- Carrier, K. A. (2005). Supporting Science Literacy Objectives for Learning through Science English Language Learners. *Science Activities*, 42(2), 5-11.
- Caverly, D., Franke, D., Hand, J., & Radcliffe, R. (2008). Improving Reading In a Middle School Science Classroom. *Journal of Adolescent & Adult Literacy*, 51(5), 398-408. doi:10.1598/JAL.51.5.3
- Common Core State Standards Initiative. (n.d.). Common Core State Standards Initiative. Retrieved March 3, 2012, from <http://www.corestandards.org>
- Craig, M. T., & Yore, L. D. (1992). Middle School Students' Metacognitive Knowledge about Science Reading and Science Text: An Interview Study. *16(2)*, 169-213 Retrieved from ERIC database. (ED356135)
- Daniels, H. & Zemelman S. (2004). *Subjects Matter*. Portsmouth, NH: Heinemann.
- De Bruin, A. B., Theide, K. W., Camp, G., & Redford, J. (2011). Generating keywords improves metacomprehension and self-regulation in elementary and middle school children. *Journal of Experimental Child Psychology*, 109(3), 294-310. doi: 10.1016/j.jecp.2011.02.005)
- Fang, Z., Lamme, L., Pringle, R., Patrick, J., Sanders, J., Zmach, C., . . . Charbonnet, S. (2008). Integrating Reading into Middle School Science: What we did, found and learned. *International Journal of Science Education*, 30(15), 2067-2089.
- Guthrie, J. T., Van Meter, P., Hancock, G. R., Aalo, S., Anderson, E., & McCann, A. (1998). Does Concept-Oriented Reading Instruction Increase Strategy Use and Conceptual Learning From Text? *Journal of Educational Psychology*, 90(2), 261-278.
- Just Read Now!. (n.d.). Just Read Now!. Retrieved March 31, 2012, from <http://www.justreadnow.com/strategies/plan.htm>
- Kalman, C. S. (2011). Enhancing Students' Conceptual Understanding by Engaging Science Text with Reflective Writing as a Hermeneutical Circle. *Science and Education*, 20(2), 159-172.
- National Research Council. *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*. Washington, DC: The National Academies Press, 2012.

Norris, S. P., & Phillips, L. M. (2003). How Literacy in Its Fundamental Sense Is Central to Scientific Literacy. *Science Education*, 87(2), 224-240. doi: 10.1002/sce.10066

Price, S. (2009) Sun. *Kids Discover* (n.d.), 1-19.

Romance, N.R., Vitale, M.R. (2011). An Integrated Interdisciplinary Model for Accelerating Student Achievement in Science and Reading Comprehension Across Grades 3-8: Implications for Research and Practice [abstract]. SREE Conference, 1-14.

Villard, R. (2010) Planets. *Kids Discover* (April), 1-19.

APPENDICES

APPENDIX A

OBSERVATIONAL CHECKLIST

Non Treatment: Observational Checklist				
DAY 1	<u># of students</u> Off Task	<u># of students</u> Reading	<u># of students</u> Writing	<u># of students</u> On task but talking
5 min				
10 min				
15 min				
20 min				
DAY 2	<u># of students</u> <u>Off Task</u>	<u># of students</u> <u>Reading</u>	<u># of students</u> <u>Writing</u>	<u># of students</u> <u>On task but</u> <u>talking</u>
5 min				
10 min				
15 min				
20 min				
DAY3	<u># of students</u> <u>Off Task</u>	<u># of students</u> <u>Reading</u>	<u># of students</u> <u>Writing</u>	<u># of students</u> <u>On task but</u> <u>talking</u>
5 min				
10 min				
15 min				
20 min				

Work Completion	Non-Treatment Trial 1	Non-Treatment Trial 2	Non-Treatment Trial 3
Students with completed HW			
Students with incomplete HW			

Treatment: Observational Checklist				
DAY 1	<u># of students</u> Off Task	<u># of students</u> Reading	<u># of students</u> Writing	<u># of students</u> On task but talking
5 min				
10 min				
15 min				
20 min				
DAY 2	<u># of students</u> <u>Off Task</u>	<u># of students</u> <u>Reading</u>	<u># of students</u> <u>Writing</u>	<u># of students</u> <u>On task but</u> <u>talking</u>
5 min				
10 min				
15 min				
20 min				
DAY 3	<u># of students</u> <u>Off Task</u>	<u># of students</u> <u>Reading</u>	<u># of students</u> <u>Writing</u>	<u># of students</u> <u>On task but</u> <u>talking</u>
5 min				
10 min				
15 min				
20 min				

Work Completion	Non-Treatment Trial 1	Non-Treatment Trial 2	Non-Treatment Trial 3
Students with completed HW			
Students with incomplete HW			

APPENDIX B

PRE-TREATMENT AND POST-TREATMENT SURVEY

Pre-treatment and Post-treatment Survey (GOOGLE DOCS SURVEY)

Participation in this is voluntary, and you can choose not to answer any questions that you do not want to answer, and you can stop at any time. Your participation or non-participation will not affect your grade or class standing.

Please choose the number that most closely represents your feelings or opinion.

1= strongly disagree 2=disagree 3=neutral (Maybe?... Maybe not?) 4=agree 5=strongly agree

I understand what I read in my science book

1 2 3 4 5

SUPER hard! ● ● ● ● ● SUPER easy!

After I read, I find my science homework is easy.

1 2 3 4 5

SUPER hard! ● ● ● ● ● SUPER easy!

Science quizzes are easy.

1 2 3 4 5

SUPER hard! ● ● ● ● ● SUPER easy!

It is easy to connect what I read to my life.

1 2 3 4 5

SUPER hard! ● ● ● ● ● SUPER easy!

I like to read about science.

1 2 3 4 5

NO WAY! ● ● ● ● ● YES! Definitely!

APPENDIX C
READING LOG

Reading Log for _____

Read the assigned selection and write a response. Begin each response with the reading title and the date of your journal entry. Before you read, quickly look over the pages to be read and answer:

1. What do you already know about the topic?
2. What do you want to learn?
3. Why are we reading this?
4. **Write as you read. . . You do not have to answer ALL of these questions every time you read. They are just a guide to keep you thinking and writing. You should always answer the first 3 +2 more of your choice.**
5. What are the most important things you are reading? Why?
6. What information is surprising you?
7. How can you use this information in your life?
8. What are some new vocabulary words you are reading? What do you think they mean based on how they are used?
9. What information do you question or think might not be correct? How might you check it out?
10. What is the most interesting thing you are reading?
11. Where do you think you could look for more information on this topic?

APPENDIX D

USING A READING LOG SURVEY

Using a Reading Log Survey (GOOGLE DOCS SURVEY)

Participation in this is voluntary, and you can choose not to answer any questions that you do not want to answer, and you can stop at any time. Your participation or non-participation will not affect your grade or class standing.

Please choose the number that most closely represents your feelings or opinion.

1= strongly disagree (No WAY!) 2=disagree 3=neutral (Maybe?... Maybe not?) 4=agree
5=strongly agree (YES! For sure.)

Using a reading log helped me understand more of what I read.

1 2 3 4 5

No WAY!	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	YES! For sure.
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I liked using a reading log while I read.

1 2 3 4 5

No WAY!	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	YES! For sure.
---------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	----------------

Using a reading log made my homework questions easier.

1 2 3 4 5

No WAY!	●	●	●	●	●	YES! For sure.
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Using a reading log made my quizzes easier.

1 2 3 4 5

No WAY!	●	●	●	●	●	YES! For sure.
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I thought using a reading log was easy to do.

1 2 3 4 5

No WAY!	●	●	●	●	●	YES! For sure.
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I would like my teacher to have us use reading logs again.

1 2 3 4 5

No WAY!	●	●	●	●	●	YES! For sure.
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What else would you like to share with me about using reading logs?

I have more to say! I would be interested in being interviewed by Mrs. Carrier about my survey. *

- Yes
- No