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## Student Success While Incorporating Cooperative Learning In The 6th Grade Classroom

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Student Success While Incorporating Cooperative Learning in the 6th Grade Classroom

Project Presented to  
The Graduate Faculty of  
Minnesota State University Moorhead

By  
Jacob Johnson

In Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science in  
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### **Abstract**

The purpose of this study is to examine the positive impacts of cooperative learning in the classroom. I will be intentionally teaching skills to enhance cooperative learning throughout the duration of the study. The methods of cooperative learning that will be used will be as follows: positive interdependence, individual accountability, interpersonal skills, face to face promotive interaction, and processing out. This study took place within a 6th grade classroom with three different sections of students. The data that was collected showed that students who learned in the cooperative learning setting had a higher percentage of students fully understanding the material, compared to those students who learned the same material in a traditional lecture style learning environment. The observations that were also made showed that students were more responsible in completing all of their work when working together within a group.

## CHAPTER 1 INTRODUCTION

### **Introduction**

The purpose of the education system and schools is to better the students and prepare them for what they want to do as they grow older. From kindergarten all the way through high school, students learn about different subject areas. In math they learn how to add and subtract, learn about geometry, and even algebra. In reading and writing students learn the different letters of the alphabet, learn about different components of reading, and how to put together a well written paper. Science teaches students all about problem solving and experimental situations. Finally, social studies teaches students all about history, locations around the world, and current events. Still, there are many aspects of teaching that are not found directly within the curriculum. One of those aspects is social skills.

According to Heinemann (1996), employers are looking for people with good people skills. It can be difficult for teachers to focus on the social skills of their students due to the many demands required with formal curricula. The first priority is that the teacher gets all of the curriculum information to the students. In the end, they barely have enough time to cover that, let alone add in any new information to them. Teachers do help students work on their social skills through different situations from small group learning, partner work, and large group projects. However, the social skills needed to work together may not be directly taught to the students. That is the problem that the researcher has established. Students need to be taught and shown examples of great social skills and then given the opportunity to work on those skills. During the 2020-2021 school year with COVID-19 Pandemic and students learning from home, the researcher really noticed a difference in the way students interacted with each other. There were two patterns that showed among students: 1) Students were very shy and had a hard time opening

up to a large group of other students, and 2) Students had a hard time knowing the boundaries or respect towards other students. The researcher hopes to incorporate cooperative learning into his classroom which will allow students the opportunity to learn together, rather than individually. Students were taught the social skills they need such as communication, respect, accountability, and organization to help them work together. Then, throughout the semester, students will be working together with other students on a daily basis to help each other learn.

### **Brief Literature Review**

There has been a wide variety of literature reviews done on cooperative learning. Current evidence in the fields of education and social science seem to suggest that cooperative learning techniques are generally effective and students who work in groups perform better than individuals who work alone (Breneiser et al., 2012). The idea behind cooperative learning is that there are five key elements that students learn and understand. They are: 1) positive interdependence, 2) individual accountability, 3) interpersonal skills, 4) face to face promotive interaction, and 5) processing out (Jones & Jones, 2008). These five key elements help students build strong social skills that they will use in their everyday lives as they grow old. The importance of cooperative learning is not only the idea that students learn better, but it also gives students the chance to build those strong social skills that they need. Communication, teamwork, responsibility, and accountability within the group are only a few of the strong components that students get to work on with cooperative learning. Research has shown that one of the main things that employers are looking for during the hiring process is communication skills, interpersonal skills, and initiative (Jones & Jones, 2008). Cooperative learning helps students learn and focus on these skills that will help prepare them for when they begin working.

### **Statement of the Problem**



There are many ways that students learn in the classroom. They range from individual work, to partnership, and small and large group projects. The measure of success comes from the students' ability to work positively and effectively within that group. However, some students may not possess the skills they need to work with others. Some students may be missing the communication skills they need. Others may not be as responsible and have a hard time holding others accountable for contributing to the group. While some just may not know exactly what to do in group work. Here lies the problem within the research. Students don't possess the skills needed to work positively and effectively with a cooperative group. The researcher's goal is to teach these skills to his students so that they possess the social skills needed to work positively and effectively within their groups. Not only will the students hopefully learn better, but these skills will be useful for the students as they grow up.

### **Purpose of the Study**

The purpose of this study was to see if the implementation of cooperative learning in the classroom helps students academically, behaviorally, and socially. The researcher wants to understand how teaching cooperative learning skills to his students will help them both academically, as well as behaviorally and socially. Ultimately, the researcher wanted to know the benefits, if any, from implementing cooperative learning into the classroom compared to the traditional lecture style learning. Depending on the findings, the researcher will be able to determine if implementing cooperative learning into his classroom was effective and beneficial or not.

### **Research Questions**

Do students learn better in a cooperative learning setting or a traditional classroom?

How does student academic, behavior, and social achievement differ from individual instruction, to cooperative learning?

### ***Definition of Variables***

Dependent Variable: The first variable of this study is the measure of academic achievement. Both informal and formal assessments will be used to judge student achievement and determine if cooperative learning plays a significant role in higher academic achievement.

Dependent Variable: The second variable of this study will measure students behavior and social interaction among each other. Informal assessment will be used to measure this data. Observation will take place to see how well students' social skills were before the installment of cooperative learning, and after.

Independent variable: The independent variable will be the implementation of cooperative learning into the classroom. Students will be grouped together and work alongside one another to complete the task at hand.

### **Significance of the Study**

The importance of this study was to find ways that will help benefit students for the years after school. As stated before, one of the main things that employers are looking for during the hiring process is communication skills, interpersonal skills, and initiative (Jones & Jones, 2008). By teaching students cooperative skills that they will use in their cooperative learning, they will be practicing these skills for life after school. The importance of the study for the researcher is to determine if cooperative learning truly affects the academic, behavioral, and social performance of the students. This information will help the field of education because in the end, all educators truly want is what is best for the students. If cooperative learning helps students in all aspects of academics, behavioral, and socially, then it should be implemented into every classroom.

## **Research Ethics**

### ***Permission and IRB Approval***

In order to conduct this study, the researcher will seek MSUM's Institutional Review Board (IRB) approval to ensure the ethical conduct of research involving human subjects (Mills & Gay, 2019). Likewise, authorization to conduct this study will be sought from the school district where the research project will take place (see Appendix A).

### ***Informed Consent***

Protection of human subjects participating in research will be assured. Participant minors will be informed of the purpose of the study via the Method of Assent (see Appendix B) that the researcher will read to participants before the beginning of the study. Participants will be aware that this study is conducted as part of the researcher's master degree program and that it will benefit his teaching practice. Informed consent means that the parents of participants have been fully informed of the purpose and procedures of the study for which consent was sought and that parents understood and agreed, in writing, to their child participating in the study (Rothstein & Johnson, 2014). Confidentiality will be protected through the use of pseudonyms (e.g., Student 1) without the utilization of any identifying information. The choice to participate or withdraw at any time will be outlined both verbally and in writing.

### **Limitations**

The first limitation of this study is going to be student involvement. If students aren't willing to participate in this study, then the study won't be a success. Depending on the COVID-19 Pandemic, a normal classroom setting may not be available to the students.

The second limitation is how well students are willing to open up and participate. The whole idea of cooperative learning is working with others and being able to not only enhance the

students' academics, but their social skills as well. If students just flat out are not willing to participate in groups, the study will not work out. It also comes down to how well students know and understand cooperative learning. Students who have learned in a cooperative learning setting before will be much more open and accepting of it compared to those who have never learned like that before.

### **Conclusions**

In conclusion, cooperative learning gives students the chance to improve on their academics, their behavior, and their social skills. The researcher is hoping to find out if incorporating cooperative learning into the classroom helps students out with those things. The study is aimed at helping students out not only in the present, but for their future success. In the next chapter, the researcher will go through a literature review of what he has found, and what information he found useful.

## **CHAPTER 2 LITERATURE REVIEW**

### **Introduction**

The thought of education and learning has evolved over the course of time. Learning models, teaching strategies, and types of assessments have all grown and adapted to the world of education. One particular method of learning that sparks interest is called cooperative learning. Cooperative learning involves students working with their peers to learn and to enjoy learning (Farrell & Jacobs, 2016). The idea behind cooperative learning is that instead of standing in front of students and lecturing them about the curriculum that is being taught, group them together and have them work aside one another to explore ideas and problem solve the curriculum the teachers are teaching. The most important features of the method are the group goals, sharing ideas and materials, division of responsibilities, and group awards (Zorlu & Sezek, 2020). Cooperative learning not only helps students learn better, but it also enhances their social skills as well. Cooperative learning is made up of five key elements: 1) positive interdependence, 2) individual accountability, 3) interpersonal skills, 4) face to face promotive interaction, and 5) processing out (Jones & Jones, 2008). Many articles and studies have been reviewed to see the effectiveness of incorporating cooperative learning into the classroom.

### **Body of the Review**

#### **Context**

As educators, the main goal is to better the students. Teachers and parents alike want them to have a bright and successful future. From kindergarten through high school, and then possibly into college or the workforce, what is learned differs greatly. However, one common denominator among all those is the ability to work with a team and be a great group member. With cooperative learning, students are practicing and using ideas that they will use for a

lifetime. Teaching is guiding the learning activities of students so that their potential is maximally developed (Usmadi et al., 2020). In order to maximize student development, cooperative learning checks the box.

Besides the fact that cooperative learning allows students to learn from one another, it also helps students boost their social skills. According to a survey conducted by the U.S. Department of Labor back in 1991, employers were asked what skills they sought most in their employees. Communication skills, interpersonal skills, and initiative were the most often cited (Jones & Jones, 2008). By installing cooperative learning into the classroom, the teacher is setting students up for future success outside of the educational scheme of things, and preparing them for the real world.

### ***Essential Elements of Cooperative Learning***

In order to implement cooperative learning into the classroom, one first has to understand the elements of it. Cooperative learning is made up of five key elements: 1) positive interdependence, 2) individual accountability, 3) interpersonal skills, 4) face to face promotive interaction, and 5) processing out (Jones & Jones, 2008).

The first element of cooperative learning is positive interdependence. “Positive interdependence is the belief of anyone in the group that there is value in working together and that the results of both individual learning and working products would be better when they are done in collaboration.” (Laal, M., 2013) “To achieve positive interdependence within a group, the collaborative task must be structured in a way that only allows students to succeed if all group members succeed” (Hartmann et al., 2017). In cooperative learning, positive interdependence is well achieved when individuals in a group perceive that they are linked to each other. It is shown that when members in cooperative learning groups are informed that one

member of the group will randomly be called on and their grade will be the grade of the entire group, it strengthens individual and group accountability and consequently facilitates learning (Sarfo & Elen, 2017).

The second element of cooperative learning is individual accountability. Individual accountability comes directly from the individual, holding oneself accountable for their achievement and outcome. Individual accountability is extremely important in cooperative learning because the work of an individual student not only affects themselves, but it also affects the entire group as well. Research on cooperative learning reveals that cooperative learning can facilitate learning and motivation if done well, but it can also lead to an opportunity for free loading if individual accountability is not included (Sarfo & Elen, 2017). Both positive interdependence and individual accountability are extremely important elements of cooperative learning.

The third element of cooperative learning is interpersonal skills. Interpersonal skills can mean a wide range of things. “Appropriate use of interpersonal skills is to develop various useful skills in interpersonal relationships in groups such as criticizing the ideas of others” (Sutarman et al. 2019). In short, the skills range from communication, listening, and attitude; all in all, the ability to work well with others in the group. Without good interpersonal skills, one will struggle to work well with their group members.

The fourth element of cooperative learning is face to face promotive interaction. With face-to-face promotive interaction, students become personally committed to each other as well as to their mutual goals. It occurs when the partners help, assist, encourage, and support each other's efforts to learn (Avent, 2004). In the end, the teacher wants the group to become codependent on each other and hold each other accountable.

The fifth and final element of cooperative learning is processing out. Group processing is the evaluation of how the group is functioning and working. It is also a time to decide how to make improvements as a group. This assessment is done through discussion of what member actions are and are not helpful to the group. Then the group decides what behaviors to change or continue. It is extremely important for this process to be a group decision and not solely based on one group member's opinion. The final characteristic of collaborative learning research that might be responsible for the inconclusive results is its focus on group performance instead of on the contribution of each group member. There are a substantial number of studies suggesting that collaborative learning improves students' achievements compared to working alone (Kirschner, Paas, & Kirschner, 2008).

### ***Strategies to Implement Cooperative Learning***

Cooperative learning can be used in a handful of different ways. The end goal is all the same: get students to work together in a way that they produce a product with the same outcome in mind. There are many different ways to incorporate cooperative learning into the curriculum. Cooperative learning can be used as both informal and formal assessment to see what students have learned, and still need to learn. A few informal strategies would be turn and talks, brainstorming, think pair share, and quick problem solving. Turn and talks are simply used as the teacher asks a question, and wants students to share with each other before they discuss as a class. It gives students a chance to see what someone else is thinking first and hopefully allows them to gain confidence in their answer. Brainstorming and think-pair-share are both similar in manner. They are used to allow students to use each other to elaborate on specific questions and ideas around a certain topic. Again, allowing students to share what they are thinking with each other lets them expand on what they are thinking and hear what others think. These would



generally be quick and no real teacher led instruction. These small group, informal strategies allow students to approach more complex questions or tasks that are not amenable to unison response methods (Conderman, Bresnahan, & Hedin, 2011).

Aside from informal assessment strategies, there are also formal assessment ideas that can be linked to cooperative learning. These types of assessments would last longer than the informal assessments, and would be much more teacher led with specific goals in mind. Types of formal assessment strategies would be large projects, presentations, reports, and even review for assessments. These assessment strategies with cooperative learning would last much longer than the informal strategies. These strategies would last anywhere from a couple of days to a couple of weeks. It is important to allow students to get comfortable with each other to where they are willing to open up and share ideas with their group members. With formal assessment strategies, the teacher could even assign roles to each group to help get them started and keep on task. Those roles could include researcher, recorder, facilitator, and time keeper.

### **Theoretical Framework**

The theory that is most prevalent within my research regarding cooperative learning would be the Social Interdependence Theory. (Johnson, 2003) Social Interdependence Theory is a classic example of the interaction among theory, research, and practice. The premise of the theory is that the way in which goals are structured determines how individuals interact, which in turn creates outcomes (Johnson, 2003). Morton Deutsch was the founder of the Social Interdependence theory after he continued the work of Lewin. (Johnson, 2003) Social interdependence theory provides a foundation on which cooperative learning is built (Johnson & Johnson, 2009).

### **Research Questions**

Do students learn better in a cooperative learning setting or a traditional classroom?

How does student academic, behavior, and social achievement differ from individual instruction, to cooperative learning?

### **Conclusions**

Cooperative learning not only helps student engagement and success in the classroom, but it also builds each individual with the skills they will need in the real world. Cooperative learning is broken down into five main elements of success. They are: 1) positive interdependence, 2) individual accountability, 3) interpersonal skills, 4) face to face promotive interaction, and 5) processing out (Jones & Jones, 2008). With the five main elements of success in mind, cooperative learning has two ways to be implemented into the classroom, namely, formal and informal assessments. Overall, the literature review that was conducted helped the researcher get a base understanding of cooperative learning. The next chapter will dive into the study of how cooperative learning can be implemented into the classroom and how it helps student achievement in and out of the classroom.

## **CHAPTER 3 METHODS**

### **Introduction**

Student success isn't measured only by academic achievement. It does play a big role in the students' overall success, but another factor that helps determine success is the students' social skills. Good social skills are needed at all ages throughout life, and especially when one gets older and in the workforce. This was one of the main targets that the researcher wanted to discover. What are ways to help improve students' social skills, as well as their academic performance? The area in which the researcher is focusing is cooperative learning. Cooperative learning is where students work alongside one another to help each other solve issues and problems at hand. This is different from the standard teacher lecture and independent work by students. Cooperative learning allows students to improve their ability to work as a team, helps their communication skills, and makes them have some responsibility within the group. The researcher wants to know if cooperative learning helps students academically, behaviorally, and socially. This study is important because, if proven that cooperative learning in fact helps students all around, especially with their social skills, this teaching technique should be implemented throughout all grade levels.

### **Research Questions**

Do students learn better in a cooperative learning setting or a traditional classroom?

How does student academic, behavior, and social achievement differ from individual instruction, to cooperative learning?

### **Research Design**

This study was conducted over the course of two units. The researcher used a mixed methods approach for data collection. Quantitative data was collected using posttest assessment.

Qualitative data was also collected with the use of observation during cooperative learning. For unit one, the researcher had his section 1 and 2 class learn in a cooperative learning environment where students worked together to formulate ideas and better their understanding on the topic. The researcher's section 3 learned in a traditional setting where it was more of a lecture based learning with independent work. Then, for unit two the researcher had his section 1 and 2 classes learn in the traditional setting and section 3 in the cooperative learning environment. The researcher chose to do the two different learning environments so that he had data that he can compare in each unit separately, as well as the class as a whole. Each student learns differently, so with that, the researcher wanted to be able to compare as much data as possible. Data will be measured based on pre and post assessment data between each section of his 6th grade class within each unit. Observations also took place between the three sections. Each group was observed during their cooperative learning setting.

### **Setting**

The setting of this study took place in North Central Minnesota. It is a rural town with a population of roughly 10,000 residents. It is in the heart of lakes country where water rules the summer. There is also an abundance of farmland in every direction. It also has a number of music festivals that take place over the course of the summer.

The school is made up of grades 6-8 with roughly 600 students enrolled. The actual study took place within a 6th grade classroom. From a district wide perspective, there were 2,807 students enrolled. One point seven percent of the students were Hispanic or Latino, 20.3% of the students were Native American, 0.7% of the students were Asian, 1.2% of the students were African American, 74.6% of the students were White, and 1.4% of the students had two or more races (Minnesota Report Card, 2021). English Language Learners also make up 0.2% of the

students, 20.6% of the students received special education services, and 33.7% of the students receive free or reduced lunch (Minnesota Report Card, 2021).

### **Participants**

The participants that will be participating in the researcher's study will be 6th grade students. In the researcher's class, 56% of the students are female and 44% students are male, with a total number of 70 students. Eighty nine percent of the participants are of White ethnic background, 8% of the participants are of Native American background, and 3% of the participants are of African American background. Sixty six percent of the participants are the age of 11 and 34% of the participants are the age of 12.

### **Sampling**

The students that will be sampled are all of the students who were assigned to the researcher's class. They include section 1, which holds 20 students; section 2, which holds 21 students; and section 3, which holds 29 students. These students were assigned randomly to the researcher's class rosters. All students are a part of the sample because the researcher wants as much data as possible to see if cooperative learning is a teacher tool that helps students' overall achievement. This is convenience sampling.

### **Instrumentation**

Pre- and posttest assessments were used for data collection during this study. The pretest assessment data was used to see how much each student knew of the subject of each unit before it was actually taught to them. The posttest assessment data was used to see how much each student improved. The pre-assessment that was given was more of an open ended assessment to see exactly what the knew and didn't know about the two subjects. The post-assessment that was given had more direct questions asked about what was specifically taught to them during the

lessons. Sections 1 and 2 were taught unit 1 using the cooperative learning method and section 3 was taught unit 1 using the traditional lecture learning method. The researcher used the posttest assessment data to compare which learning style students learned best with. For unit 2, section 1 and 2 were taught using the traditional lecture style learning method, while section 3 was taught using the cooperative learning approach.

The researcher also used observations to see how well students worked within their groups during cooperative learning. The researcher used a tally chart for each group that had positive/negative interactions, communication, and responsibility on it. He made a tally next to each column if he saw the group working well in a certain area. This allowed the researcher to look back and see which groups worked well and had good social skills with each other, and which groups did not.

### **Data Collection**

For this research study, the researcher used mostly quantitative data. He evaluated the pre and post assessment data of his students in regard to the cooperative learning environment vs. traditional/lecture style learning environment. The pre and post assessments came from both the unit 1 study as well as the unit 2 study. This way, the researcher had two separate units to compare data with in each class. The researcher also used some qualitative data where he observed the students in the cooperative learning environment.

### **Data Analysis**

A pre test assessment was conducted before the unit 1 and unit 2 study. The pre test was used to see what the students' prior knowledge of the subject matter was. At the end of each unit, a post test assessment was conducted to see if, and how much the students learned. The post test

assessment was compared to each student's pre test to see the gain in academic performance for each unit.

A tally chart was used to determine how well students were working within each of their groups. The tally chart was used each time students were put into their groups for any sort of work or assignment. Either positive or negative tallies were given within the four categories of proper social skills; teamwork, communication, personal roles, and responsibility.

### Research Questions and System Alignment

The table below (Table 3.1) provides a description of the alignment between the study's research questions and the methods used in this study to ensure that all variables of study have been accounted for adequately.

**Table 3.1.**

*Research Questions Alignment*

Research Question	Variables	Design	Instrument	Validity & Reliability	Technique (e.g., interview)	Source
What are the best types of ways to implement cooperative learning into the classroom?	Independent Variable: Cooperative learning groups	Qualitative and quantitative action research	Pre and post tests  Observations	All students were given the same pre and post assessment for unit 1 and 2.  Students were observed daily during cooperative learning time. They were	Both pre and post assessments were used to determine the outcome of cooperative learning on academics.	6th grade students that were assigned into the researchers class.
How does student success differ from individual instruction,	Dependent Variable: Academic behavior, and					

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to cooperative learning?	social achievem ent	observed on their teamwork, communicat ion, personal roles, and responsibilit y.	A tally chart was used during observatio n to observe students working with one another to assess their social skills.
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### **Procedures**

This study was conducted over the course of 4 weeks. Unit 1 took place for 2 weeks, while Unit 2 took place for 2 weeks. At the start of Unit 1, the researcher had the participants take a pre test assessment to find out the students prior knowledge of the subject. All three sections took the same pre test assessment. Over the course of Unit 1, both section 1 and 2 learned in a cooperative learning environment. Students were either partnered up or put into groups to work on various tasks and assignments. Section 3 was taught the material in a traditional manner with lectures and independent work. At the end of Unit 1, all three sections took the same post test assessment that was then used to analyze the growth of the students academically.

A similar pattern happened during Unit 2. All three sections took the same pre test assessment. Over the course of Unit 2, section 1 and 2 both learned the material in a traditional



manner with lectures and independent work. Section 3 was taught the material in a cooperative learning environment. At the end of Unit 2, all three sections took the same post test assessment that was then used to analyze the growth of the students academically.

### **Ethical Considerations**

Before this study was conducted, permission was granted to the researcher by the school district, the participants, and the parents/guardians of the participants. Both participants and parents/guardians were notified that they could withdraw from the study at any time without any consequences. Before the study was conducted, both participants and parents/guardians were informed that there were no risks that come within the study. All names and personal information was left out of the study results.

### **Conclusions**

Social skills are something that students need in school, as well as afterwards when they move onto adulthood. It is an essential part of life. That is why the researcher felt that it was important to find a way that helps students benefit both academically, but also behaviorally and socially. In the next chapter, the researcher will go over the results of this study and show whether or not he believes that cooperative learning helps boost students' social skills and helps academically.

## **Chapter 4**

### **DATA ANALYSIS AND INTERPRETATION**

After a tough year of distance learning along with some hybrid mixed in, the focus of this study wasn't focused solely on the academic performance of the students, but also the social side of things as well. The problem that the researcher wanted to address was the ability of students to be able to work together as a team and rely on each other for the greater good of the group. Cooperative learning allows students to work together to tackle the task at hand. With cooperative learning, students will work on team work, communication skills, and responsibility within a group. Aside from these social skills that the students will work on, they will also be learning from each other to problem solve the academic problems that are put in front of them.

The purpose of this study was to see whether or not students learn better in a traditional, lecture type learning environment, or if they learn better in a cooperative learning environment where they are working together with their peers to solve problems. Aside from the academic part of things, the other purpose of this study was to see how well students interact with each other socially. In general, social skills are very important for students, and adults alike, to work on and improve. With having almost two years off of a regular school year and the student interactions with each other being almost diminished, the researcher felt it was important to tackle the idea of social skills in the classroom and see how that affects their academic education.

#### **Data Collection**

The researcher used a mixed methods approach to his data collection for the study. The quantitative collection method that was used for this research study was the collection of assessments. The assessment that was used during this study was a focus on the moon phases and

seasons on planet Earth. Before the graded assessment and any lessons were presented, the students were given a pre-assessment to gather their understanding of the material. After the lessons were completed and the post-assessment was given, the data was compared between the two to see if there were any improvements made.

The second part of this research study was to see how cooperative learning improved students' social skills. The researcher used a qualitative collection method of data using observation. The instructor used his observation of student groups to decide if there was positive interaction or negative interaction between the groups. Before observations began of groups working together, students were taught the importance of positive group work and the ability to work together. Groups worked together in a variety of ways including turn and talks, think-pair-share, projects, and review study. Each of these different settings were observed and data was collected.

## **Results**

***RQ 1:** Do students learn better in a cooperative learning setting or a traditional classroom?*

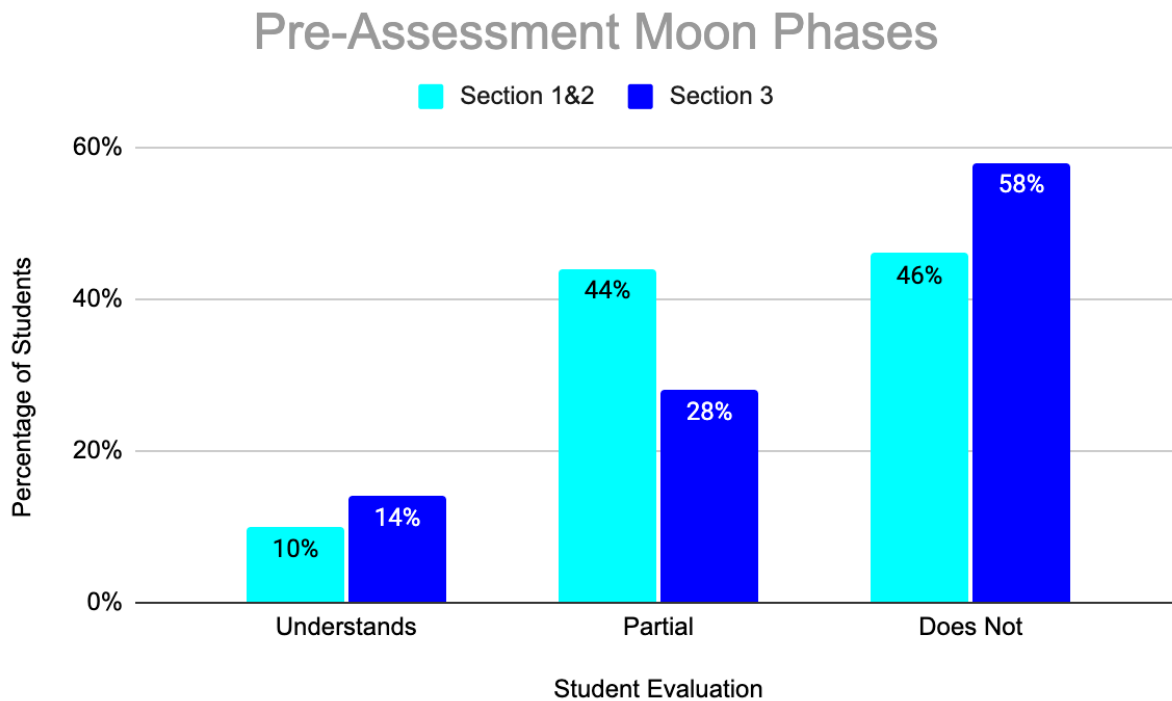
For this research question, the researcher used quantitative data in the means of pre- and post-assessment. The students were evaluated and placed into three different categories. Either they understood the material, partially understood the material, or did not understand the material. The researcher chose to evaluate students this way because his school uses a standards based grading evaluation for students. They receive a score of 4, 3, 2, or 1. One represents does not meet the standard. A two represents the student partially meets the standard. A three

represents the student met the standard. And a four represents the student exceeded the standard. If students scored a 4 or a 3 on their assessment, they were classified as fully understanding the material. In order to get a 3 or 4 on their moon phase assessment, students had to get less than three wrong on the lunar cycle. If students got anywhere from three to six answers wrong they were categorized as partially understanding the material. If a student got seven or more wrong on the lunar cycle they were evaluated as does not understand the material. This evaluation was used for both the pre- and post-assessment data. All students in all three sections of the researcher's class took the same pre-assessment on the same day. The pre-assessment was focused on moon phases and seasons (Appendix C). Section 1 and 2 were the experimental group during the moon phases unit and were learning in a cooperative learning setting. The number of students who took the pre- and post-assessment in the experimental group was 41 students. Section 3 acted as the control group during the moon phases unit. The number of students who took the pre- and post-assessment in the control group was 29 students.

When it came to moon phases for section 1 and 2, the data showed that 10% (4 students) of the students understood the material. While 44% (18 students) of the students partially understood the material and 46% (19 students) did not understand the material. As for section 3 in regard to moon phases, the data shows that 14% (9 students) of students understood the material. While 28% (8 students) of the students partially understood the material and 58% (17 students) did not understand the material (see figure 4.1).

#### **Figure 4.1**

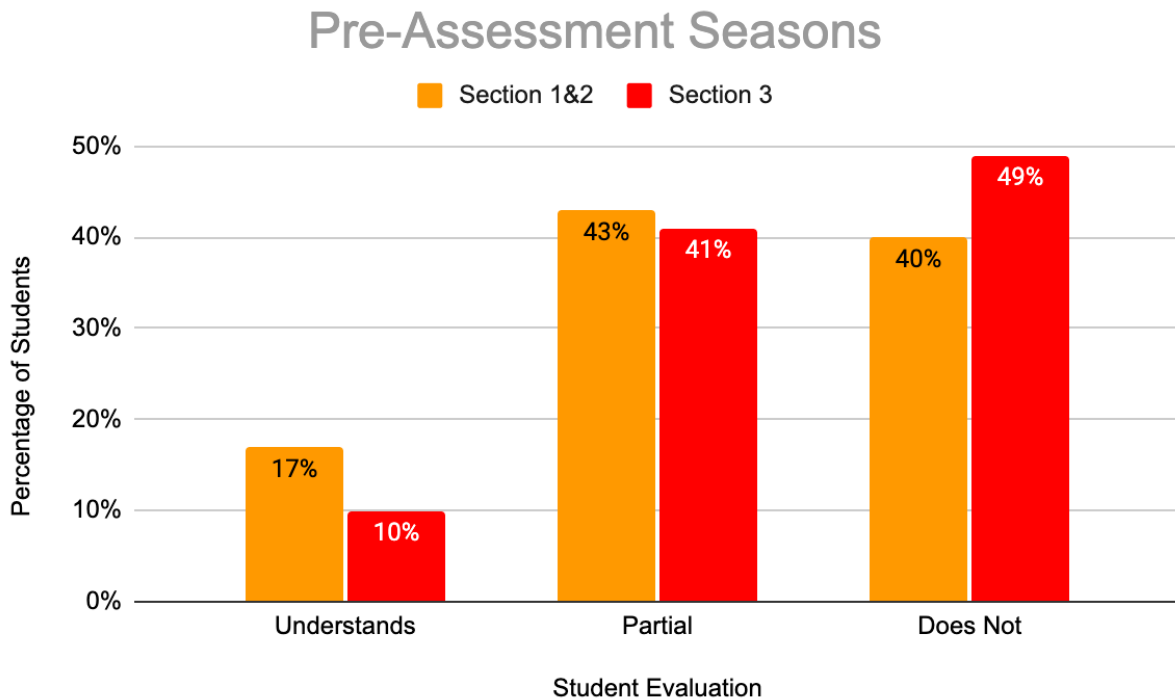
*Pre-Assessment Moon Phases*



The same process and scoring took place during unit two of seasons. The only change was that section 1 and 2 were now the control group and received the information in a traditional lecture style environment, whereas, section 3 was the experimental group and received class instruction in a cooperative learning setting. The pre-assessment data for section 1 and 2 for seasons showed that 17% (7 students) of the students understood the material. While 43% (18 students) of the students partially understood the material and another 40% (16 students) of the students did not understand the material. As for section 3 in regard to seasons, the data shows that 10% (3 students) of the students understood the material. While 41% (12 students) of the students partially understood the material and 49% (14 students) of the students did not understand the material (see figure 4.2).

**Figure 4.2**

*Pre-Assessment Seasons*

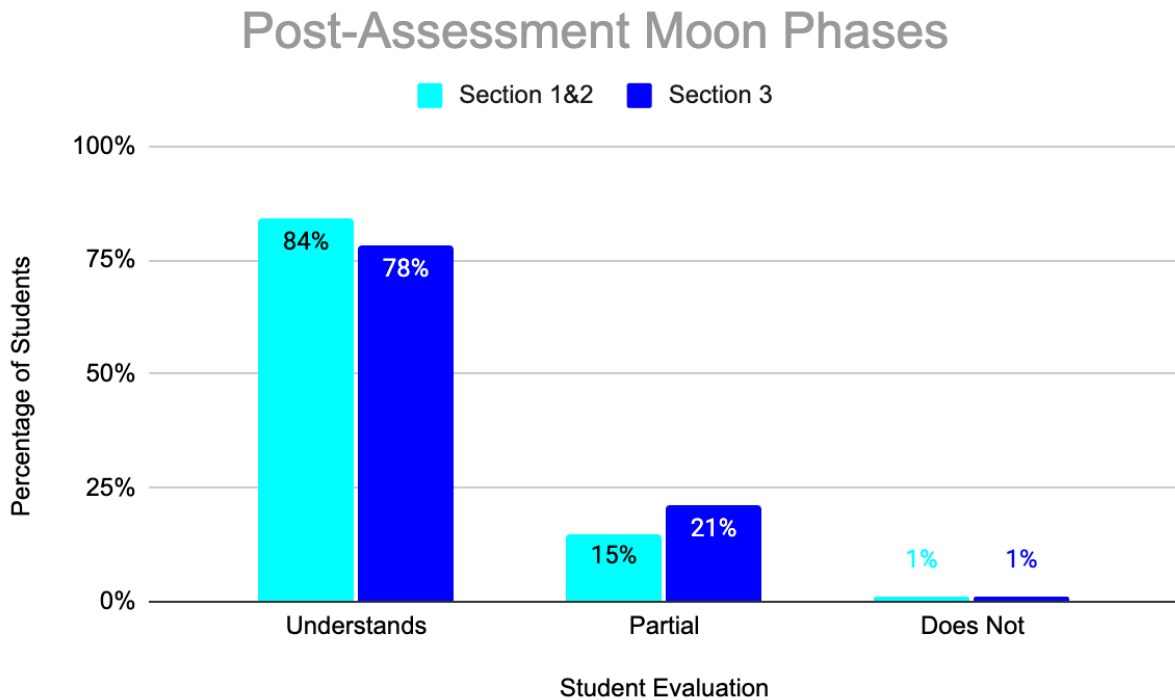


As for the post assessment data, all students in all three sections of the researcher’s class took the same post assessment on the same day. The post assessment covered both moon phases and seasons again (Appendix D). Section 1 and 2 of class received the material in a cooperative learning environment for the moon phases material. These two classes were the experimental group. The third section of class received the moon phases in a traditional lecture style environment. This class was the control group. For the seasons material, sections 1&2 received the information in a traditional lecture style environment. They were the control group during the seasons unit. While the third section of class received the material in a cooperative learning environment. Section 3 was the experimental group during the seasons unit.

In order to get a 3 or 4 on their moon phase assessment, students had to get less than three wrong on the lunar cycle. If students got anywhere from three to six answers wrong they were categorized as partially understanding the material. If a student got seven or more wrong on the lunar cycle they were evaluated as does not understand the material. The data from section 1 and 2 for moon phases during the cooperative learning environment showed that 84% (34 students) of the students understood the material, 15% (6 students) of the students partially understood the material, and 1% (1 student) of the students did not understand the material. As for section 3, the data for moon phases during traditional lecture style showed that 78% (22 students) of students understood the material, 21% (6 students) of the students partially understood the material, and 1% (1 student) did not understand the material. The data showed a 6% increase in students who fully understood the material who were taught it in a cooperative learning environment compared to a traditional lecture style environment (see figure 4.3)

### **Figure 4.3**

*Post-Assessment Moon Phases*



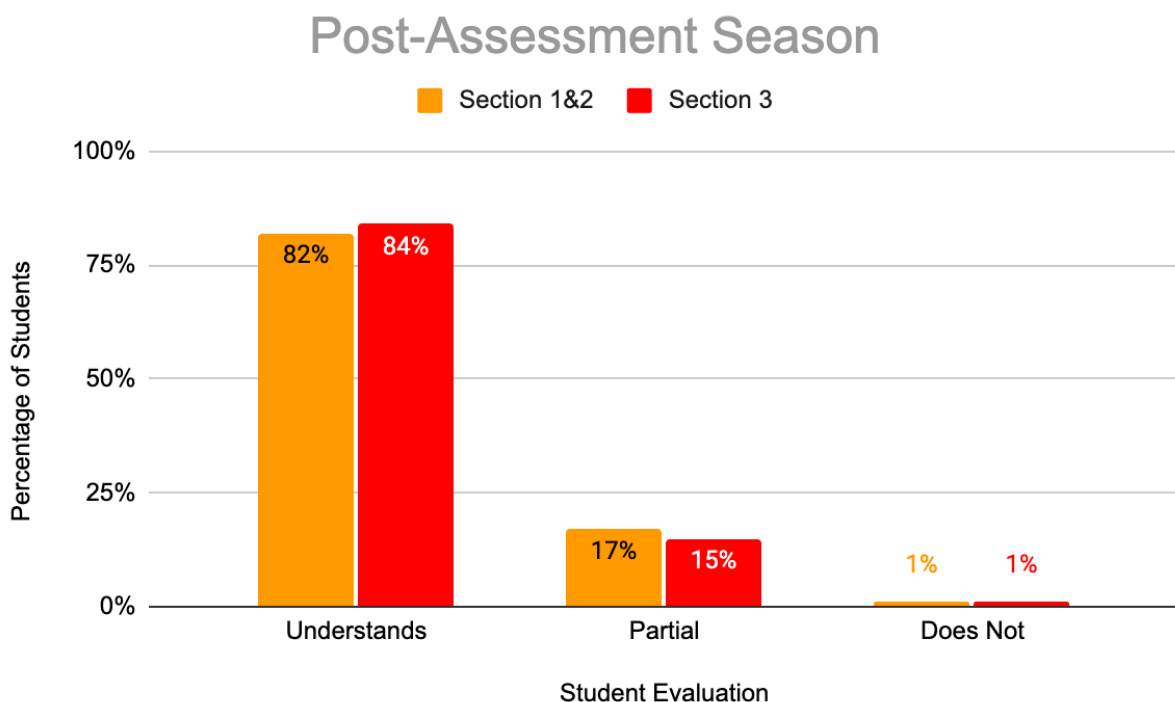
In order to get a 3 or a 4 on their seasons assessment, students had to get all of the seasons correct for each position of Earth around the sun, as well as the short answer question regarding why we have seasons on Earth. If students got one or two seasons wrong on the position of Earth around the sun, and missed any part of the short answer question regarding why we have seasons on Earth, they receive a 2 which would put them in the partially understands category. If students got more than two seasons wrong on the position of Earth around the sun and missed the short answer question on why we have seasons on Earth, they received a 1 which would put them in the does not understand category. The data from section 1 and 2 for seasons during the traditional lecture style environment showed that 82% (33 students) of the students understood the material, 17% (7 students) partially understood the material, and 1% (1 student) did not understand the material. As for section 3, the data for seasons during the cooperative



learning environment show that 84% (24 students) of the students understood the material, 15% (4 students) partially understood the material, and 1% (1 student) did not understand the material. The data showed a 2% increase in students who fully understood the material who were taught it in a cooperative learning environment compared to a traditional lecture style environment (see figure 4.4).

**Figure 4.4**

*Post-Assessment Seasons*



*RQ 2: How does student academic, behavior, and social achievement differ from individual instruction, to cooperative learning?*

For this research question, the researcher used qualitative data in the means of observation to collect data. Observations were taken three days a week on Monday, Wednesday,

and Friday. Key components that the researcher looked at during his observations were positive or negative interactions among students, ability to communicate with the group, and the ability to complete the work. Section 1 and 2 were observed for two weeks during their cooperative learning environment while learning the moon phases. The data showed that 100% (41 students) of the students were showing positive interactions during the two week time period they were observed. When looking for positive or negative interactions, the researcher was looking to see how students were reacting to one another. A few notes that the researcher made while taking the observation was that students were being very helpful with one another, the language that was being used was appropriate, and everyone was being included and working together as a team. The data also showed that 88% (36 students) of students communicated effectively within their groups during the time of observation. When looking and listening to see if students were communicating effectively, the researcher was looking to see if everyone in the group was sharing their ideas and thoughts. The researcher was also looking to see if students were willing to share their ideas and thoughts, as well as ask any questions. An example of not communicating effectively would be just sitting in the group and not participating and not discussing. Lastly, the data showed that 100% (41 students) of the students were able to complete all of their work that was assigned to them.

During that same two week time period, section 3 students were studying moon phases individually. Two of the categories were not observed because students were not interacting with each other during work time. Those observations were positive or negative interactions among students, and the ability to communicate with the group. However, the ability to complete the work was observed from students. The data showed that only 83% (24 students) of students completed all of the work that was assigned to them.

During the following week and a half, section three was observed in the cooperative learning environment, while section 1 and 2 were observed in the traditional lecture style learning environment. During this time students were learning about the different seasons on Earth. The researcher was looking and listening for the same things as he was for section 1 and 2 in regard to how students were interacting with each other and how they were communicating. The data showed that for section 3, 93% (27 students) of the students were showing positive interactions among each other. The data also showed that 90% (26 students) of the students communicated effectively within their groups during that time of observation. Lastly, the data showed that 100% (29 students) of the students were able to complete all of their work that was assigned to them.

During that same week and a half of learning about season, section 1 and 2 were observed on their completion of work. These students were not observed in the means of positive or negative interactions among students and the ability to communicate within the group. The reasoning for this is because students were not working in groups, they were working individually. The data showed that 93% (38 students) of the students completed all of the work that was assigned to them.

### **Data Analysis.**

***RQ 1:** Do students learn better in a cooperative learning setting or a traditional classroom?*

The results from the study in regard to the student academics were not overly surprising to the researcher. Overall, the data showed that students who were taught the material in a

cooperative learning environment had an 8% higher rate in understanding the material fully between moon phases and seasons. The researcher was expecting a slightly higher percentage of students who fully understood the material compared to those who learned it in a traditional classroom. Although there was still an increase in learning, there was not a significant difference between the two learning styles. This was the researcher's first year teaching the Earth and Space curriculum. The students had previously learned this material in third grade as well. That could play a significant role in how students scored on their final assessment. Students maybe didn't remember the material at the beginning of the lesson, but after relearning the material it made it much easier to understand and remember. The data collection process went well for the researcher. The pre-assessment for all students regarding moon phases and seasons allowed the researcher to see which students understood, partially understood, or did not understand the material. The post assessment went just as smoothly as well. The assessment was easy to use to see how students either improved, declined, or stayed the same. For the majority of students they increased their score, which was nice to see. Overall, although there was a slight increase in the number of students who fully understood the material in a cooperative learning environment, the researcher would say that there is no significant difference between the two learning styles when it comes to academics.

*RQ 2: How does student academic, behavior, and social achievement differ from individual instruction, to cooperative learning?*

The results of this study in regard to the behavior and social achievement were also not overly surprising. The main goal of this research study was to help prepare students for the

different interactions they will have with other humans and the importance of being able to be a good teammate, have good communication skills, and to be responsible. One hundred percent of the students completed all of their work while they were learning in a cooperative learning environment. While only 83% of students in section 1 and 93% of students from section 2 and 3 completed all of their work while learning from the traditional lecture style environment. It is good to see that being able to work with each other on their work improved students ability to complete all their work. The data collection process went smoothly with the use of observation. The researcher did run into a problem with the instrument of observation. The problem that was encountered was that the researcher did not have any data to compare the positive interactions and communication skills with. What the researcher would do differently next time would be to use a survey to compare students' feelings of working individually to working together. That would allow the researcher to see which method students enjoyed more and would give the researcher another piece of data to look at to see whether or not students' behavior and social achievement were affected based on the learning style.

### **Recommendations for Future Research**

The research that took place and the data that was collected is specific to the students in the researcher's classroom. Data can change based on the students and the area where the research is taking place. The next step that the researcher would consider taking would be to incorporate a different learning strategy that focused on the importance of social skills. Data that would be collected would then be compared to the data that was collected in regard to the cooperative learning research study.

## **Conclusion**

The focus of this research study was to see the overall effects that the cooperative learning style had on students academic, behavior, and social performance. The researcher collected data in the means of pre- and post-assessments to be able to see the effects of the student's academic achievement. Data showed that students who learned in the cooperative learning environment improved their academic achievement. The researcher concluded that although students improved their academic achievement, the improvement wasn't significant enough to claim that cooperative learning is a better approach than the traditional lecture style. The second part of this study focused on students' behavior and social performance. The researcher collected data in the means of observation to see the effects of cooperative learning on student behavior and social performance. Although students showed positive results in regard to positive interactions, ability to communicate, and being able to complete work during the cooperative learning environment, there was no definite data to compare that information to. Overall, the researcher felt that his study was successful, but also knows what he would add and do differently for the next time, as described previously.

## **Chapter 5**

### **IMPLICATIONS FOR PRACTICE**

Cooperative learning and student's ability to effectively work together in groups was the main focus of this study. The researcher understands the importance of social skills and being able to positively interact with others. That is why he wanted to test out the idea of cooperative learning and how that would affect students' academic, behavior, and social performance. The data that the researcher collected showed that cooperative learning successfully improved student academic performance in all sections by 74%, as well as created positive student interactions among students.

#### **Action Plan**

The researcher has learned through this study, and teaching experiences, that social skills are a key component to success. The use of cooperative learning in the classroom contributes to the creation of positive experiences among students, but also helps improve academic performance as well. The use of cooperative learning in the classroom impacts a wide range of people, not only students. Being able to work with a team of people, communicate with each other effectively, and having responsibility for not only your own work, but your entire group, is what a well rounded person looks like. Because social skills are so important at all levels of life, the incorporation of cooperative learning into the researcher's classroom will not only affect his students now, but it will affect them for the rest of their lives. Hopefully that effect continues to be a positive one as students grow older and eventually move into the real world where they will use those skills in their job.

The researcher believes that social skills are just as important as academics. Because of this and the data that was collected during the research, the researcher has continued to incorporate cooperative learning into his classroom. He is still having his students work together in groups and work on those key social skills while also improving their academic performance.

### **Plan for Sharing**

This study that was conducted focused on the student's academic, behavioral, and social performance in regards to cooperative learning. The researcher feels that this data would be important to share with his colleagues in sixth grade within his school, because it affects the students that they teach as well. The information that he plans on sharing with them is how his students reacted differently to the cooperative learning environment compared to the traditional lecture style learning environment. Specifically, the impacts of how students worked together in groups. He also plans on sharing his results with two MSUM Moorhead professors that will evaluate him. Lastly, I plan on sharing my study with my district, and if they have any questions or would like to discuss my study with me further I will do so.



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**Appendix A**



Completion Date 31-May-2021  
Expiration Date 30-May-2024  
Record ID 42792119

This is to certify that:

**Jacob Johnson**

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

**Social & Behavioral Research - Basic/Refresher**  
(Curriculum Group)  
**Social & Behavioral Research**  
(Course Learner Group)  
**1 - Basic Course**  
(Stage)

Under requirements set by:

**Minnesota State University Moorhead**



Verify at [www.citiprogram.org/verify/?w1f4fa716-f24f-4aa9-91e2-b64512f1263c-42792119](http://www.citiprogram.org/verify/?w1f4fa716-f24f-4aa9-91e2-b64512f1263c-42792119)

## Appendix B

(Date)

500 11th Ave.  
Detroit Lakes, MN, 56501

Dear Parent or Guardian,

Your child has been invited to participate in a study to see if the use of **cooperative learning** will help boost student achievement and social skills.

Your child was selected because he/she is in my regular education classroom. If you decide to participate please understand that your child will be asked to do the following, and these are typical classroom activities that involve no risk to your child.

- 1) Your child will be working in small groups with others to complete various projects regarding Earth science.
- 2) Your child will not only be working to solve the problems given to them, but also working on the skills of teamwork, participation, communication, and responsibility.
- 3) Students will be tested on two separate units. One with cooperative learning installed and one as the traditional lecture style. The information will be used to see which setting students learned best in.

Although Principal Mike Suckert has granted me permission to conduct this study, since this information is being used to help me complete my master's degree at Minnesota State University Moorhead, I need to have parental consent to use this information in my final paper that I am required to do as part of my degree. If I didn't need this information to complete my master's degree, I would still be conducting this same type of research in my normal everyday lessons and I would not need signatures. If you sign this form, you are giving me consent to use the information that I gather. All information that is used that is used will be confidential, no names will be used. Please also note that your child can choose not to participate at any time without consequences.

Please feel free to ask any questions regarding this study. You may contact me by email at [jajohnson@detlakes.k12.mn.us](mailto:jajohnson@detlakes.k12.mn.us) or by phone at 218-234-8277. You may also contact my Principal Investigator Dr. Tiffany Bockelmann at 218-780-0757, or by email at [tiffany.bockelmann@mnstate.edu](mailto:tiffany.bockelmann@mnstate.edu). Any questions about your rights may be directed to Dr. Lisa I. Karch, Chair of the MSUM Institutional Review Board, at 218-477-2699 or by email at [irb@mnstate.edu](mailto:irb@mnstate.edu).

You will be offered a copy of this form to keep. You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above and decided to participate. You may withdraw at any time without any consequences.

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Signature of Parent or Guardian

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Date

Student Success While Incorporating Cooperative Learning In The 6th Grade Classroom

---

Signature of Investigator

---

Date

### Appendix C



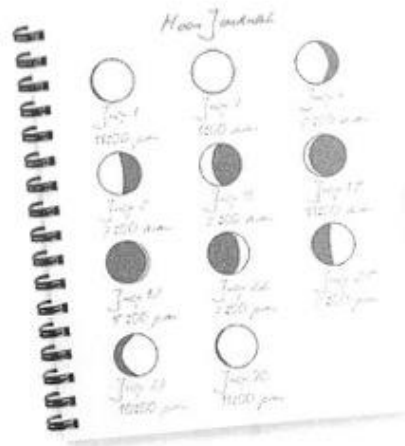
Earth, Sun, and Moon System

## Accessing Prior Knowledge

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Earth, Sun, and Moon System

A student observed the Moon every few days for one month and sketched its shape in a journal each night.

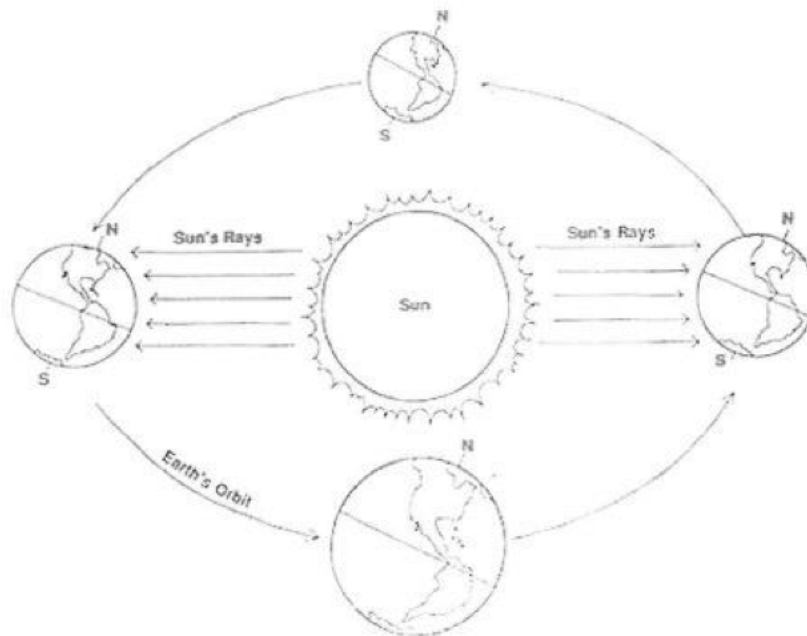


Using the space below, provide your best explanation for why the shape of the Moon appeared to change over time.

# Student Success While Incorporating Cooperative Learning In The 6th Grade Classroom

Why does the Earth have different seasons and what causes those changes?

Label the following with the four different seasons: **Spring, Summer, Fall, Winter**.  
Make sure to look at which way the Earth is orbiting.





## Appendix D

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Earth, Sun, and Moon

#### Part 1: Vocabulary

Directions: Use the word bank of vocabulary words to fill in the correct definitions.

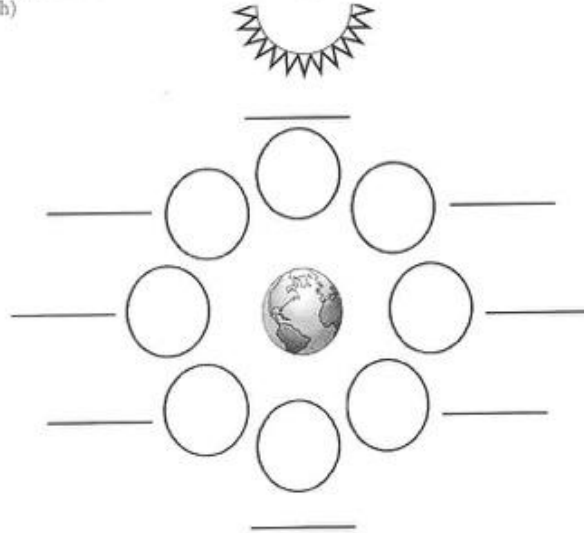
#### Word Bank

Rotation                      Axis                      Revolution                      Lunar Cycle  
Seasons                      Solar Eclipse                      Lunar Eclipse

- 1) When the moon blocks the sun and the moon's shadow falls onto Earth. \_\_\_\_\_
- 2) Caused by the tilt of the Earth on its axis (23.5 degrees). \_\_\_\_\_
- 3) Imaginary line which each planet or moon spins on. \_\_\_\_\_
- 4) Different observable patterns of the moon from Earth. \_\_\_\_\_
- 5) When the moon moves into Earth's shadow. \_\_\_\_\_
- 6) Orbiting around another celestial body. \_\_\_\_\_
- 7) The motion of a spinning object. \_\_\_\_\_

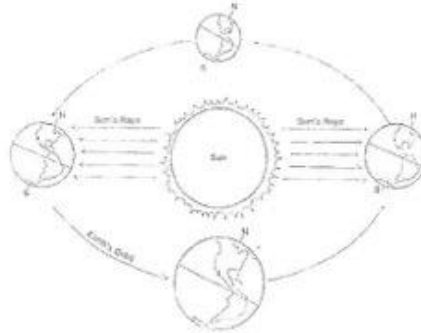
#### Part 2: Moon Phases

Directions: First, name all eight phases of the moon the cycle. Make sure you notice where the sun is at so you start with the correct moon in the correct spot. Second, shade in the part of the moon that is not visible from Earth. (hint: remember which way the moon revolves around Earth)



**Part 3: Seasons**

*Directions:* Label the four seasons for Earth in the northern hemisphere. Then, answer the question below. (hint: remember which way the Earth revolves around the sun)



- 1) What causes us to have seasons on Earth? And why does the northern hemisphere and southern hemisphere have different seasons?

**Part 4: Eclipses**

*Directions:* Draw and label the two different types of eclipses we have on Earth.

Lunar Eclipse:

Solar Eclipse: