Games and Skill Reinforcement:

How can Games be used to Maximize Learning and Reinforce Skills with my Second Graders?

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Table of Contents

3: Description of Teaching Context
3-4: Wondering and Sub Wonderings
5-8: Data Collection and Analysis
9-10: Explanation of Findings
10-12: Reflection and Implications for Future Practice

Appendices

Appendix A-Inquiry Brief
Appendix B- Chart of Student Skills
Appendix C- Pre-assessment Chart
Appendix D- Parent Surveys
Appendix E- Money Post-Assessment
Appendix F- Punctuation and Capitalization Post-Assessment
Appendix G- Time Post-Assessment
Appendix H- Pre/Post-Assessment Chart
Appendix I- Student Surveys
Appendix J- Annotated Bibliography
Games and Skill Reinforcement

**Description of Teaching Context:**

I have had the wonderful opportunity to participate in a student teaching program as part of a Professional Development School (PDS). My experience in the Professional Development School program is a result of a partnership between Penn State University and The State College Area School District. This internship has allowed me to be in the classroom from the first in-service day in August until the last day of school in June. I was placed in a heterogeneous, self-contained second grade classroom at Lemont Elementary. In the course of the year, I have observed many things in the classroom and have consistently had questions and wonderings about this profession.

This inquiry occurred in a classroom with 19 students, 10 boys and 9 girls. Ability levels vary greatly within the classroom. There are four different guided reading levels that are split by ability. The lowest group is composed of three students who go to Title I services. There is one student who has the Autism Spectrum Disorder of Asperger’s Syndrome. This student has an IEP and receives individual help with academic work, particularly in writing. There are four students who attend math enrichment and one who is an English Language Learner. One of the male students attends speech therapy twice a week. A female student has recently been referred to the Instructional Support Team due to her lack of improvement throughout the school year. This inquiry project centered on particular students who were having difficulty with some of the concepts in our curriculum. (See Appendix A for complete Inquiry Brief.)

**Wondering:**

Games and Skill Reinforcement:

How Can Games be used to Maximize Learning and Reinforce Skills With my Second Graders?
This inquiry evolved from my desire to explore ways in which to individually help students in one area when my whole group instruction needs to be focused in another area. This is an important part of teaching that I strive to better understand. There is one student who has driven my inquiry about differentiation within stations. I have watched her struggle with many concepts and when I try to be helpful and pull her aside during times like opening and read aloud, she is uninterested in the topics. She does, however, love to play games and thus has led me to my wondering about how games can be used to maximize the skills of my students.

It is so important to create meaningful and effective stations where students could be independent in the classroom. Students gain skills such as independence, self-pacing in work, and cooperative work with classmates. While these skills are essential for success, the content of the activities is crucially important. With a better understanding of differentiating stations to help meet individual academic needs, I can make the work beneficial for every student. I am hoping the games will help me achieve the goal of implementing effective station games and activities. I want to understand how to create more effective stations because I feel it will make me a more effective teacher.

**Sub-Wonderings:**

- Can interactive and educational games be effective in increasing student’s understanding of certain subjects and/or concepts?
- How can multiple games be created and implemented for various levels of understanding?
- How can I boost excitement and motivation within my students?
- How can I fit these differentiated games into my daily lessons?
• What are the best methods for ensuring that these games are independent activities so that they can be successfully implemented at stations?

**Data Collection and Analysis:**

After thorough observations of my students and their abilities, I finally decided upon my topic of creating games to develop and reinforce skills. The first step in this process was to take notes during regular instruction of which specific concepts proved most challenging to the students. I created a list (See Appendix B) where I recorded areas of difficulty for each student. The indicators of their struggles were common: an inability to answer questions in specific content areas, frequent questions that pointed to their lack of understanding, and an unwillingness to participate in certain areas. After about a week of recording their difficulties, I made decisions about which concepts were the most vital to incorporate in my inquiry. The skills I chose to create games for were homophones, compound words, capitalization and punctuation, money, and time.

Before I implemented any games, I sent surveys home to parents with a few questions about educational games in the home (See Appendix C). It was my hope to find correlations between struggling students and a lack of educational games at home. However, I did not find any correlation like this. All but two students returned the parent surveys, and because those two were not struggling students, no comparison can be drawn between games at home and struggling learners.

The next step was to either create or find games to suit my objectives. There were some that I found in teacher resource books. Others, however, I created myself. For almost every game I created ways to play it with varying skill levels. After the games were created, I pre-assessed the students just to make sure that I had a skill game to meet the needs of every child. I
Games and Skill Reinforcement

used symbols in a chart (See Appendix D) and used my results to place them into groups. I made sure that there was at least one other person to play the game with in each station group.

I did not give typical pre-assessments to my students. My assessments were conducted through each game. I essentially explained a new game before stations each day during one week. That game was a station activity. During their completion of the games, the students were to fill out worksheets that required them to list what they had doing, including compound words they created, homophone pairs they matched, different coins that equaled a certain amount of money, writing digital times after seeing analog times, and the editing of a short story involving numerous capitalization and punctuation errors.

In analyzing students’ pre-assessments, I realized that there were two areas I assessed that did not need any skill development for any of the students. These areas were homophones and compound words. Therefore, I did not use these games during the inquiry process. The three skills that needed the most development were money, time, and capitalization/punctuation. There were some students who did not need help in any of these three areas. However, I thought back to that student whom I helped individually and who seemed a bit embarrassed about the individualized instruction. This recollection prompted me to assign every student a game to work on. I felt that this would ensure that no student felt singled out with his/her assignment of a game.

As previously stated, I observed students to find common skills that challenged them. This process, along with the pre-assessment, fulfilled part of my wondering that questioned what skills were important to develop within my second graders. By creating and teaching the games to my students, I fulfilled the second part of my wondering stating whether or not games were successful in building motivation and skill levels.
Games and Skill Reinforcement

After implementing the games, I needed a way to make sure they were playing them, thus getting the differentiated practice I strived to create. I came up with the idea to write out index cards for each student. On each card, I wrote their name, assigned skill, and the dates for that week. The cards were numbered one to four and after each time they played a game, they had to have an adult sign their card to acknowledge they played it. Each week, they received new cards. It was my hope that if they played the games a minimum of four times per week, they would receive enough skill practice to develop their knowledge in a particular skill area. This was beneficial to my inquiry because the possibility of a correlation existed between frequency of game playing and the degree to which skills were developed. There were also game-specific ways for the students to assess each other during the game. This insured accuracy and that all the students’ skills were being correctly built and reinforced.

The cards did not give any definitive correlation between frequency of playing and skill development. However, this is only the case because all students played the games about the same amount of times. While it did not give the correlation I was hoping for, it was a nice reinforcer of how motivating these games really were.

The last part of my data collection was two-fold; a post-assessment and a student survey. Each game had to have its own post-assessment due to the different skills being assessed (See Appendices E, F, and G). This occurred after approximately three weeks of playing the games independently. These results have an obvious impact on my inquiry in that they provide the primary answer to my main wondering.

Through my post-assessments, I found that almost all students improved in their targeted academic area. The only two exceptions to this were the student who needed no improvement in any area and the student who displayed the same results in both the pre and post-assessments
Games and Skill Reinforcement

(See Appendix H). These results show a strong correlation in how playing the games resulted in a higher level of skill knowledge within my students.

The second form of data collection I did was a student survey (See Appendix I). This was a basic survey that consisted of the students circling different emotion-filled faces that described how they felt about playing educational games. There were also a few questions asking students to compare how they felt about the games and how they felt about usual classroom and station work. This piece of data collection directly addresses the sub-wondering that questions excitement and motivation within students.

The results from the survey indicate that the vast majority of students, or 91%, enjoyed the games and looked forward to playing them. With a few exceptions, they not only liked the games but they also preferred playing them to doing other activities, such as silent reading or fun folder sheets. The students also found the games to be either easy or average in terms of difficulty. This was my goal because I wanted every student to feel successful with the games. These responses are strong support for my wonderings about whether the games were motivating and what the best methods are for creating work that is independent for all students.

Another form of data collection that helped to answer this question of motivation was through observations. The very first day I introduced the games, the students played them at a station during the morning. I thought that I was going to have to really push them to play the games. On the contrary, when I came back to the room from lunch that day, they were all playing their respective games. What’s even more noteworthy is that all of the students were excited about them. This excitement and willingness to use free time for educational games is a very strong piece of data that positively correlates motivation in the classroom with fun activities.
Games and Skill Reinforcement

**Explanation of Findings**

My data and observations have led me to be able to make a variety of claims.

**Claim 1: Educational games are successful in building skills in particular academic areas.**

In looking at the chart where the results of the pre- and post-assessment are listed, it is clear to see that skills improved with my students. Not only do their advanced skills show up on paper, but also I was able to see their growth first-hand. When administering the post-assessments to some students who were assigned the subject of money, I was working with the child who drove this inquiry. Before implementing the games, she could barely tell the coins apart, let alone say what their values were or add any together. When I was giving instruction for the post-assessment, however, she confidently stated, “This is easy!” and excitedly started to complete the worksheet. She only missed three on the post-assessment, which is not bad considering that before she couldn’t tell the difference between a nickel and a quarter.

**Claim 2: The games were successful in promoting motivation about academic topics presented in a fun medium.**

In observing the students as they played the games during their free time, it was easily seen that the students found these games enjoyable. It was also clear to see through observation that the students’ motivation levels were elevated due to the frequency in which they wanted to play the games. While these observations can only be validated by my interpretation of their actions, the students’ surveys displayed exactly what I observed. Students not only enjoyed these games, but they were eager to play them as often as possible. I know this is the case because if they were just playing them to meet the weekly requirement, no one would have gone above and beyond what was asked. Many students did, however, and this shows their elevated
Games and Skill Reinforcement

levels of motivation. These results were taken from the cards that they were required to have signed by a teacher after each time of playing a game.

**Claim 3: Initial whole group instruction is the key to ensuring that your students can be successful independent workers.**

One of my sub-wonderings questioned how to efficiently create and implement games to be used for independent instruction. I found through my own planning and instruction that the best method was to teach each game one at a time to ensure that all students received proper practice in playing the games. This method of instruction led to minimal questions during times like guided reading group when I had to work with another group of students. This not only allowed me to better help the students with whom I was working, but it also gave the students playing the games a sense of independence and success while still learning and expanding their skills.

In creating these games that allowed students to be so independent, it was easier to fit this instruction into daily lessons. With the exception of about one station time per week, there was no other time scheduled for the students to play their games. They were still successful in completing these activities because I had created an atmosphere that allowed them to make choices about how to spend their free time. These games were valid choices because the students had become independent with them. My ability to get the students to play the games also reinforces my claim that initial whole group instruction is key in allowing students to feel independent and successful with their work.

**Reflections and Implication for Future Practice**

In completing this inquiry, I have experienced first-hand what it takes to differentiate and individualize instruction. Individualizing means that you look at each student as an individual
Games and Skill Reinforcement

and assess where each requires skill reinforcement. Through both forms of my pre-assessment, I have gained the necessary skills to look at my students to see where skills are lacking. Pre-assessing is the vital first step in understanding what the students do and do not know.

Creating games to individualize instruction turned out to be a great idea. The students loved that they were able to play games during free time and occasionally during stations. More importantly, I was able to build different skills without singling-out particular students. It is my goal with these games to continuously build and strengthen academic skills. Therefore, the same game will not always be sufficient for the students. I solved this problem by either creating multiple games of differing skill levels for students who grew into bigger challenges or I added more challenging elements to the same game. In both cases, students were still able to feel successful. Where I created multiple games, if the students faced difficulty with the newer, harder game they could go back to the previous game to build their knowledge a bit more. When I added more challenging elements to the same game, students could still feel successful because if they got something wrong during one turn, they had a good chance of getting a slightly easier task during the second turn. It is vital that through all instruction, students feel a sense of success and accomplishment; this nurtures their motivation and desire to succeed.

Another valuable teaching tool I picked up was that games are always good to have around for free time. While there is no doubt that a large amount of reading is beneficial for all students, many will grow tired of always being told to read independently. The games provide another choice for students should they desire to do something other than read. Not only is this offering choices and promoting independence, but it is also a great management tool to reduce bored students during free time. By increasing this student engagement you achieve minimal distractions and acquire more learning time.
Games and Skill Reinforcement

Post-assessment is also of great importance when implementing any kind of individualized instruction. When students complete work where the teacher cannot directly supervise the activity, it is vital to regularly assess their understandings. This will allow for continuously challenging but success-filled activities to take place within the classroom. My post-assessments gave me information and guidance as to where I should have led my students next. This is an essential skill for any effective teacher to have.

This inquiry has been a valuable learning experience about differentiating instruction and creating a sense of independence through games. I feel very confident in my success upon going into my own classroom next year. Differentiated instruction is truly beneficial for the students but is often so difficult to obtain. I feel that the process I followed throughout this inquiry has led me to a successful and ever-growing way to meet each of my students’ individual needs.
Appendix A - Inquiry Brief

Jenelle Davis
Inquiry Brief
February 27, 2008

Context:

This inquiry will occur in a second grade classroom with 19 students. There are 10 boys and 9 girls in the class. There is one student who has the Autism Spectrum Disorder of Asperger’s Syndrome who has an IEP and receives individual help with academic work, particularly in writing. Ability levels vary greatly within the classroom. There are four different guided reading levels that are split by ability. The lowest group is composed of three students who go to Title I services. There are four students who attend math enrichment and one who goes to ESL class. One of the male students attends speech therapy twice a week. A female student will soon be receiving personal interventions from an Instructional Support Team’s suggestions.

Rationale:

The reasons behind this inquiry transpired from my second grade classroom. I noticed that many students struggle in just one or two areas, such as money and time, and the curriculum is not built to support those different understandings. While some lessons, such as calendar math and guided reading groups are directed at skills not covered by curriculum, students still struggle. I want to conduct this inquiry to explore ways in which to individually help students in one area when my whole group instruction needs to be focused in another area.

This is an important part of teaching that I strive to better understand. There is one student who has driven my inquiry about differentiation with stations. I have watched her struggle with many concepts and when I try to be helpful and pull her aside during times like opening and read aloud, she is uninterested in the topics. She does, however, love to play games and thus has led me to my wondering about how games can be used to maximize the skills of my students. It is so important to create meaningful and effective stations in the classroom. Students gain skills such as independence, self-pacing in work, and cooperative work with classmates. While these skills are essential for success, the content of the activities is crucially important. With a better understanding of differentiating stations to help meet individual academic needs, I can make the work beneficial for every student. I am hoping the games will help me achieve the goal of implementing effective station games and activities. I want to understand how to create more effective stations because I feel it will make me a more effective teacher.

Wondering:
Games and Skill Reinforcement:
How Can Games be used to Maximize Learning and Reinforce Skills With my Second Graders?

Sub-Wonderings:
• How can interactive games be effective in increasing student’s understanding of certain subjects and/or concepts?
Games and Skill Reinforcement

- Surveys, observations, interviews, student work samples, teacher resources, books.
- How can multiple games be created and implemented for various levels of understanding?
  - Journaling, books, interviews with teachers.
- How can I fit these differentiated games into my daily lessons?
  - Observations, journaling, interviews with teachers.
- What are the best methods for making these games an independent activity in order for them to be successfully implemented at stations?
  - Surveys, observations, journaling, interviews.

**Projected Timeline:**

Week of 2/18:
- Create Surveys for PDA and Mentor approval/input.
- Identify skills to focus on.
- Start creating games/activities for station based on specific skills
- Decide where station is going to be set up (Blue Table?)
- Start looking for times throughout the day that will work for students to complete the games at the station. (Station time, before the opening, before the busses are called, etc.)

Week of 2/25:
- Begin observing students understandings of material that seems to be difficult for them to understand.
- Record observations in a reflection journal.
- Continue working on games
- Survey the students about their enjoyment of learning through games. Do this at the beginning of the week.
- Send survey to parents in Friday Folders.

Week of 3/3:
- Continue/complete working on games.
- Set up station at end of week—preferably Friday afternoon (right before spring break) so that it is ready to be explained and implemented after spring break.

Week of 3/10: (Spring Break)
- Analyze data thus far and plan any other data collections not previously decided upon.
- Write lesson plans for the games and come up with times that work for the students who need to play them.
- If not already done, games definitely need to be completed during this week.

Week of 3/17:
- Begin implementing games at station time and/or other time periods that work for certain students—keeping in mind to have no embarrassment and to have little to no attention drawn to them as they complete the activity.
- Take pictures of students.
Games and Skill Reinforcement

Week of 3/24:
- Continue implementing games.
- Continue observing and writing in reflection journal.
- Create a couple interview questions to ask students about how they feel about the station games. Get mentor and PDA approval.
- Take pictures of students.

Week of 3/31:
- Continue implementing games.
- Continue observing and writing in reflection journal.
- Administer interviews to students.
- Take pictures of students.

The month of April:
- Continue implementing games.
- Continue observing and writing in reflection journal.
- Take pictures of students.
- Start to assess students to see if their skills in certain subject areas have improved.
- Survey students using the faces to see what their feelings are about the games.
- Give self-assessments to students to see if they feel they’ve improved with certain areas and what those areas are. Can they do anything now that they know they couldn’t do before?

Data Collection Ideas:

*Student work samples (documents, artifacts, drawings, etc.)
- Written work/assessments in one subject before and after using the educational game station.

*Observations (field notes, video or audio analysis)
- Observations about their understandings of troubling subjects.
- Observations about their class participation before and after the games have been implemented.

*Teacher artifacts (lesson plans, tests, KLEW charts, etc.)
- The games themselves and the plan/instructions to go along with them.

*Reflective journals
- Weekly journals written by the intern that reflect on student’s progress and what has been achieved by the inquiry project.

*Literature
- Books (text, scholarly, teacher tools) will be used with help in planning, creating, and implementing the games.
Games and Skill Reinforcement

-These sources will also be used for evidence in making claims.

*Interviews*
-Student interviews about enjoyment of games.
-Student interviews before and after games are implemented (pre- and post-assessment).
-Interviews of teachers to see how they run stations so students can be more independent.

*Surveys*
-A survey of the students to see if they enjoy learning through games or written journals and worksheets more. Do they enjoy the current station work? Would they like to see more differences in the activities done at stations? What is their favorite activity that has been done at blue table?
-A survey of the parents to see if they use educational games at home and if so: have they noticed any improvements with their child’s comprehension and understanding of certain material?...if not: why are these kinds of games not used and do they think educational games would be beneficial for their children?

*Pictures*
-Pictures of the students completing the games at the station.

*Student self-assessments*
-Student self-assessments in how they feel they have improved in certain subject areas.
Appendix B- List of Student Difficulties

1. time
2. punc/cap
3. punc/cap
4. time
5. money, time
6. money, time
7. money, time
8. ------
9. time
10. money, time
11. punc/cap
12. ------
13. ------
14. ------
15. time
16. punc/cap
17. time
18. money, time
19. punc/cap

*------ means that there were no skills that the student had particular difficulty with.
Appendix C - Parent Survey

Dear Parents,

As part of my student teaching experience, I am conducting an inquiry project in the classroom. I am in the process of creating games and activities targeted at specific academic skills. As part of the inquiry process, I would like to gather your thoughts on using educational games to strengthen your child’s academic skills. I would greatly appreciate it if you would take just a few minutes to complete this survey and send it back to school with your child as soon as possible.

Thank you and have a great weekend,

Miss. Jenelle Davis

1. Do you use educational games with your child at home?
   - Yes
   - No

   - If you do use educational games, what games do you use?

   - Have you noticed any improvements with your child’s comprehension and understanding of certain material?

   - If you do not use educational games, why are these kinds of games not used and do you think educational games would be beneficial for your children?

2. Do you notice higher levels of excitement in your child when he/she comes home from school with news of a new game or interactive activity he/she played that day?

3. Would you be willing to play educational games at home if they were provided through the school?
Appendix D - Pre Assessments

<table>
<thead>
<tr>
<th>Student</th>
<th>Compound Words</th>
<th>Money</th>
<th>Time</th>
<th>Punc./Cap.</th>
<th>Homophones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+ 4</td>
<td>+</td>
<td>X 5 mins</td>
<td>X -4</td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>+ 4</td>
<td>+</td>
<td>&gt;</td>
<td>X -6</td>
<td>+</td>
</tr>
<tr>
<td>3</td>
<td>~ 1</td>
<td>+</td>
<td>&gt;</td>
<td>X -4</td>
<td>+</td>
</tr>
<tr>
<td>4</td>
<td>+ 5</td>
<td>+</td>
<td>X 5 mins</td>
<td>+ -1</td>
<td>+</td>
</tr>
<tr>
<td>5</td>
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<td>&gt;</td>
<td>X -6</td>
<td>+</td>
</tr>
<tr>
<td>6</td>
<td>+ 5</td>
<td>X</td>
<td>&gt;</td>
<td>+ -0</td>
<td>+</td>
</tr>
<tr>
<td>7</td>
<td>+ 3</td>
<td>X</td>
<td>&gt;</td>
<td>X -8</td>
<td>+</td>
</tr>
<tr>
<td>8</td>
<td>+ 4</td>
<td>+</td>
<td>&gt;</td>
<td>&gt; -3</td>
<td>+</td>
</tr>
<tr>
<td>9</td>
<td>+ 4</td>
<td>X</td>
<td>X 5 mins</td>
<td>&gt; -2</td>
<td>+</td>
</tr>
<tr>
<td>10</td>
<td>+ 2</td>
<td>X</td>
<td>&gt;</td>
<td>X -8</td>
<td>+</td>
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<td>11</td>
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<td>+</td>
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<td>&gt; -3</td>
<td>+</td>
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<td>12</td>
<td>+ 4</td>
<td>+</td>
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<td>&gt; -3</td>
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<td>&gt; 4/5</td>
<td>+</td>
<td>&gt;</td>
<td>&gt; -3</td>
<td>+</td>
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<tr>
<td>14</td>
<td>+ 3</td>
<td>+</td>
<td>&gt;</td>
<td>&gt; -3</td>
<td>+</td>
</tr>
<tr>
<td>15</td>
<td>+ 3</td>
<td>+</td>
<td>X 5 mins</td>
<td>X -5</td>
<td>+</td>
</tr>
<tr>
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<td>+ 5</td>
<td>+</td>
<td>&gt;</td>
<td>X -7</td>
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<td>18</td>
<td>+ 3</td>
<td>X</td>
<td>&gt;</td>
<td>&gt; -2</td>
<td>~</td>
</tr>
<tr>
<td>19</td>
<td>+ 2</td>
<td>+</td>
<td>&gt;</td>
<td>&gt; -2</td>
<td>~</td>
</tr>
</tbody>
</table>

+ = excellent  
> = proficient  
X = needs work  
~ = not enough information
Appendix E- Money Post-Assessment

Name:_________________ Date:__________

Fill out the blanks after reading the questions. You can use coins if you need to.

How much is each coin worth?

1. Penny____________ 2. Nickel____________
3. Dime____________ 4. Quarter____________

Now, figure out how much money each group of coins is worth.

5. 25¢ + 5¢ + 20¢=____________
6. 25¢ + 25¢ + 25¢ + 10¢=____________
7. 5¢ + 5¢ + 10¢ + 10¢=____________
8. 1¢ + 1¢ + 1¢ + 5¢ + 25¢ + 10¢=____________
9. 10¢ + 10¢ + 10¢ + 25¢ + 25¢=____________
10. 25¢ + 1¢ + 1¢ + 1¢ + 5¢=____________
Read the following paragraph carefully. Make sure you catch all the mistakes!

Springtime is a great season. There are many fun things to do outside in the warmer weather. Hikings always fun because of the shaded wooded area and interesting trails. Bike riding is good exercise and allows you to explore new areas. My friend Rita and I go biking together all the time. Spring sports are fun too. Baseball, track, and lacrosse are great to watch and enjoyable to play. I love spring. What is your favorite thing to do in spring?
Appendix G- Time Post-Assessment

(After printing this out, I hand drew the numbers on each clock, therefore the numbers are missing on the clocks.)

Name:_________________   Date:______________

Draw the hands on each clock to show the correct time. Make sure the hands are the correct length.

1. 9:15
2. 4:35

3. 11:50
4. 7:45

5. 2:25
6. 9:30
### Appendix H - Pre/Post Assessments

<table>
<thead>
<tr>
<th>Student</th>
<th>Money</th>
<th>Time</th>
<th>Punc./Cap.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X 5 mins / +-1 *</td>
<td>X -6 / &gt;-3 *</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>X -4 / +-1 *</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>X 5 mins / &gt;-2 *</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>X / +-0 *</td>
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<td>19</td>
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<td>&gt; -2 / &gt;-2 ~</td>
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+= excellent  
>= proficient  
X = needs work  
~ = not enough information  
*= shows improvement
Appendix I- Student Survey

Name:_________________ Date:__________

Please circle the face or the words that best matches how you feel about each question. Please be honest and answer each question as best you can.

1. How much did you like the games?

2. Did you enjoy playing the games in your free time, or would you have rather done something else, like read?

3. Did you find the games difficult or easy?

Difficult Somewhere in the middle Easy

4. Would you rather play games more or use worksheets more?

Games Worksheets I don't care

5. Did you want to play your assigned game more than the minimum of 4 times a week?

Yes No
Appendix J- Annotated Bibliography

Jenelle Davis
Inquiry-Annotated Bibliography
February 13, 2008


- This book is unlike any other I have found for this inquiry. It talks about how to set up a classroom for research. This includes effective ways of questioning students and how to prepare students for individual research. This will definitely be a valuable resource for all my data collection efforts.


- This article is about the value of differentiated instruction. The author talks about the two strands of teaching and learning. The first strand is the ‘what’ strand. This is what the students are going to learn, whether it’s the states or a mathematical equation or the parts of speech. The second strand, the differentiated part of learning, is the ‘how’ strand. This is where some students learn one subject better through a puzzle and others learn it better through reading in a book. The author claims that this gives the students a choice and will help to motivate them in the learning process. I can use the different ways of learning to better formulate the games and activities for the station.


- This book gives information on everything from keeping a clean work area to classroom displays to setting up for the curriculum. There are numerous pictures and descriptions of how to effectively set up a classroom for your student’s success. This book will be of great help during my planning for setting up my station with differentiated games and activities for students with different academic levels.


- This book focuses on independent writing. This will be helpful for creating the part of my station that is designed for writing. One part of the book discusses writing partnerships [pg. 111 (out of many)]. Writing partnerships are a group of 2 or three students who always work together on brainstorming, editing, and making suggestions for each other’s stories. The author has found that these partnerships create strong relationships and thus the student’s writing can only improve with the help of a peer whose opinion they value. This will be beneficial because it will have ideas of how to get students to successfully collaborate at a station where no intense adult supervision is available.
Games and Skill Reinforcement

- This article is about the school system in Holland. They have re-formatted their school system to better meet the individual needs of children. This process is called re-grouping and is done constantly throughout the day to ensure that children are receiving an education that is at their individual level and will be stimulating. The classes in each grade re-group for every lesson. Therefore, they all go to a certain teacher for vocabulary where different levels of understanding are taught. Then, they re-group in completely different groups to do single-digit subtraction. While this kind of re-grouping is obviously out of the question in my classroom, it will be of great support to my claim that individualized instruction is necessary and must be worked into the daily routine of a classroom.

Davis, Jim
- Garfield Pictures on Student Survey courtesy of Jim Davis. See entry below under McKenna for description of article.

- This book discusses multiple reasons why independent learning is important for students. The obvious choice, the one that has driven my inquiry, is that students have different abilities and they need to receive personalized instruction to fully develop in every subject. The other part is something I can use to back-up my intervention. It talks about how personalized instruction is beneficial for students socially and helps them to become more independent both as a learner and as a person.

- This article includes a survey for elementary students’ feelings on reading. I found inspiration in using the Garfield faces in a survey of my own.

- This book may very well be the single best resource I have found. It is full of helpful information on creating centers designed specifically for individualized instruction. In addition to this, it is overflowing with organizational charts and graphs for the teacher to use as a tool in creating his/her own literacy centers. There are also numerous worksheets that students can use during these stations. There are many useful resources that will be of great help during this inquiry process. Specifically, there is an Index of Centers (page 88) that lists different kinds of centers, such as comprehension and meaning making centers and fluency centers, and underneath each kind of center are numerous activities that focus on that particular skill.

Games and Skill Reinforcement

- This book clearly defines differentiated instruction. Through this definition, it shows one how to plan and carry out differentiated lessons. This will be helpful in the planning of my lessons and activities for my station that I will be creating. It especially focuses on struggling learners, which is the drive for my inquiry.

- This book is a fantastic example of how one teacher manages to differentiate her entire language arts curriculum in her classroom. She establishes different centers and has individual conferences with students. There is one section about noting progress over time (p. 59) that will be especially helpful as I am planning to gauge their improvement from where they are at before the station gets implemented to where they will be after a month of completing the activities.

- The valuable part of this book lies in the fact that it is laid out by age level. I can go straight to the seven and eight-year-old sections to see where my students statistically fall in every subject and in likes and dislikes. It will be helpful to see what aspects of each subject are good to emphasize and what students of this age typically enjoy doing. In reading thus far, it clearly states that the seven-year-olds prefer to play board games to active games and that both age groups enjoy group activities. This supports my intervention of creating station games for the reading groups to play during one of their stations.