Learning Through a Cooperative Endeavor
Implementing Complex Instruction

Nancy Heffernan
University of Vermont

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INTRODUCTION

In the fall of 2001, I embarked on a fifteen-week student teaching internship at the Spencer Street School in Northern Vermont. Two of the requirements of my internship were to assess the status order in the classroom and implement a complex instruction unit. The purpose of assessing status order in the classroom was to observe the intersection of the academic structure and social structure. The goal was to assess how the children viewed each other with respect to academic status. The information gained from assessing status order laid the foundation for grouping children in Complex Instruction activities. The intent of the Complex Instruction assignment was to learn how to structure cooperative learning activities in which every student learns. The purpose was to implement Complex Instruction in the classroom successfully. When I first read the criteria for the classroom structures and Complex Instruction assignment, I thought I was merely going to find out whom the most popular student in class was and design groupwork. Simple, right? Wrong! This assignment was a valuable tool for me to take an in-depth look at my students, organize my thoughts, and create engaging learning opportunities in which each child could learn. This paper is the story of that project unfolding.

DEMOGRAPHICS

School Demographics

Spencer Street School is located in northern Vermont. It houses grades pre-kindergarten through fifth grade with 457 students, 23 classroom teachers and 18 instructional assistants. The city in which Spencer Street School is located is Vermont's most welcoming community. Its school population has grown at the rate of four percent annually. The growth will continue for eight to ten years. This city is one square mile and is the home of five large federally supported housing complexes, a sixth is under construction and a seventh is under-going a massive rehabilitation program. I speculate that this city has the largest percentage of subsidized housing of any school district in Vermont.

- The median family income is about 10% below the State average, $35,616.
- Over 10% of the students enrolled are of limited English proficiency. This is the highest percentage of any Vermont school district.
- This city has 32.5% of single-parent families, which is almost double the Vermont average.
- 31.4% of its children under 18 years old living in poverty, which is 2.5 times the Vermont average.
- 50% of the “first births” are to mothers with at least one of the high risk factors.
- 62% of the elementary school population is eligible for free lunches; thus, two out of three students live in low-income homes. The elementary school population eligible for free lunches has been as high as 78%.
- About 35% of the elementary school population turns over every year. This means that each classroom has six to eight different faces in June that did not start the year in September.
The elementary school Special Education population is in excess of 16%.

Classroom Demographics

There are twenty-three fourth grade students in the classroom that I student taught in. Fourteen boys and nine girls make up the twenty-three students. Three students are African-American, two students are Vietnamese, and eighteen students are Caucasian. In terms of ethnicity, this is the most diverse class I had been a part of. Fifteen students, nine boys and six girls, receive free lunch, due to the fact that their family’s annual income cannot afford to pay for lunch. There have been many occasions where students did not have a snack to eat during the school day.

There were five students on Individualized Educational Plans. G1’s IEP was for reading, speech and language. G2 and B2 both had IEP’s for Emotional Behavioral Disorder. B11’s IEP was for reading, and G9’s IEP was for speech and language. Six students received special education services. G1’s special education services were for reading, speech and language. B2 received special education services for Emotional Behavioral Disorder. B2 met with a child psychologist once a week and also met with the school’s guidance counselor once a week. B10 received special education services for his Auditory Processing Disorder in his left ear. G9 also received special education services for speech and language. B14, a recent immigrant from Vietnam, was enrolled in the English Language Learner program at Spencer Street School. Three students received medical services. Ritalin medicated G1 for Attention Deficit Disorder. She took her medication twice a day. Once before she came to school and directly following lunch. Paxil and Risperdol to treat anxiety and depression medicated G2. She received her medication in the morning before school. B2 also took medication for Emotional Behavioral Disorder. His IEP did not reveal what type of medication he takes. Like G2, B2 also received his medication before he came to school.

Many of the students have endured hardships in their short ten years of life. The majority of students in the class came from single parent homes. Some children had little or no contact with one of their parents. G7 lived with her grandmother, because both of her parents died of a drug overdose. B4 also lost his father to drugs when he was three years old. B4 kept a picture of his father in his desk at school. B6, a student who was above grade level academically did his homework every night in the car that he was living in. He and his mother were on a waiting list for a shelter. B5, a quiet and reserved student was coming to grips with the fact that his father was losing his battle with cancer. B9 began the year with a positive attitude. Since then there was a dramatic decrease in his behavior, motivation and overall personality. The cause for this dramatic change was that Social Services were investigating his mother for abuse and neglect. There were times when I caught myself staring at the students with amazement to the fact that they can come to school and function. In many cases, the classroom is the one place the students can shine.

ASSESSING STATUS ORDER

To complete my survey I created four questions. Question 1 and question 2 assessed peer status. Question 3 and question 4 assessed academic status. The survey was conducted over a period of three days. First, I asked a student to meet with me
individually in a part of the room where few students were sitting. Next, I told the student that I was conducting a survey to get to know the class better. Most importantly, I assured each student that the results would not be shared with anyone. Students read each question silently and circled the names of the students that applied to the question. There was no talking during the survey. Each student took the survey seriously and did not share their answers to the survey questions. When a student had completed the survey I thanked them for their cooperation and put the results in a folder. I did not share the results with the students. The following is a sample survey.

Name:

1. Who would you invite to your birthday party?
2. Who would you like to play with after school?
3. Who are the good readers in our class?
4. Who is good at math in our class?
<table>
<thead>
<tr>
<th>Name</th>
<th>Peer Status</th>
<th>Academic Status</th>
<th>Co-Status</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caroline</td>
<td>25</td>
<td>38</td>
<td>63</td>
<td>1</td>
</tr>
<tr>
<td>B8</td>
<td>29</td>
<td>32</td>
<td>61</td>
<td>2</td>
</tr>
<tr>
<td>B1</td>
<td>24</td>
<td>29</td>
<td>51</td>
<td>3</td>
</tr>
<tr>
<td>B3</td>
<td>24</td>
<td>29</td>
<td>51</td>
<td>3</td>
</tr>
<tr>
<td>B7</td>
<td>34</td>
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<td>52</td>
<td>5</td>
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<tr>
<td>B10</td>
<td>26</td>
<td>20</td>
<td>46</td>
<td>6</td>
</tr>
<tr>
<td>B11</td>
<td>25</td>
<td>18</td>
<td>43</td>
<td>7</td>
</tr>
<tr>
<td>B6</td>
<td>13</td>
<td>29</td>
<td>42</td>
<td>8</td>
</tr>
<tr>
<td>G7</td>
<td>21</td>
<td>19</td>
<td>40</td>
<td>9</td>
</tr>
<tr>
<td>Tim</td>
<td>21</td>
<td>18</td>
<td>39</td>
<td>10</td>
</tr>
<tr>
<td>B5</td>
<td>23</td>
<td>16</td>
<td>39</td>
<td>10</td>
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<tr>
<td>B4</td>
<td>17</td>
<td>19</td>
<td>36</td>
<td>12</td>
</tr>
<tr>
<td>Jill</td>
<td>13</td>
<td>21</td>
<td>34</td>
<td>13</td>
</tr>
<tr>
<td>G1</td>
<td>16</td>
<td>12</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td>G8</td>
<td>20</td>
<td>8</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td>G3</td>
<td>15</td>
<td>12</td>
<td>27</td>
<td>16</td>
</tr>
<tr>
<td>B9</td>
<td>11</td>
<td>15</td>
<td>26</td>
<td>17</td>
</tr>
<tr>
<td>B12</td>
<td>9</td>
<td>11</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Chris</td>
<td>9</td>
<td>10</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>G6</td>
<td>8</td>
<td>9</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>G2</td>
<td>7</td>
<td>8</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>G9</td>
<td>8</td>
<td>6</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>B13</td>
<td>7</td>
<td>5</td>
<td>12</td>
<td>23</td>
</tr>
</tbody>
</table>
FOCUS CHILDREN

There were four children in the class who had a significant impact on the academic and social structure of the classroom. Two students; Caroline and Tim had a positive impact, and two students; Chris and Jill had a less positive impact.

Caroline

Caroline was an above grade level student who interacted positively with each student in the classroom. She ranked first in the class status survey. Academically, Caroline was a positive role model for her peers. She completed her work to the best of her abilities, participated in every activity, and asked thought provoking questions. Socially, Caroline got along well with every student in the class. Every day during snack time Caroline shared her snack with her peers. She made a habit of bringing in microwave popcorn and visiting each student to offer them her popcorn. A quality of Caroline's that I admired most was her willingness to help. Through each day Caroline helped students by explaining directions, offering suggestions and encouraging her peers. Caroline had a positive impact on the academic and social structure of the classroom.

Tim

Tim arrived in the United States of America from Vietnam in the beginning of August. He ranked tenth in the class status survey. On the first day of school, Tim knew how to say two words in English, “bathroom” and “water”. I was very concerned for Tim early on in the school year. I wasn’t sure as to how the class would react to him, or if they would interact with him at all. To my pleasure the class welcomed Tim with open arms. All of the students took Tim under their wings, supported, and encouraged his learning. During reading workshop Tim played a series of matching games, read a beginner’s dictionary, and explored word games on the computer. There was always a student available to answer his questions, read him a book, and give directions when needed. As a result Tim learned many words in English and could understand when someone was speaking to him in English. Tim brought out the best in all of the students. He had a positive impact on the academic and social structure of the classroom.

Jill

Jill was a student who I had great difficulty with from the first day of school. She ranked thirteenth in the class status survey. Jill was above grade level and had great potential. When Jill felt threatened or was told that she couldn’t do something, she shut down and put on a whole different persona different from the humorous and upbeat Jill that I came to love. This new persona was negative, sarcastic, and defensive. For example, during a reading group meeting Jill was upset because another student interrupted her. I told the student that Jill was talking and that we as a group needed to hear what she had to say. The reading group meeting was unsuccessful from that point on. Jill refused to continue, and spent the remaining time of the reading group playing
with her pencil. Jill had the potential to have a positive impact on the academic and social structure of the classroom, but overall, she had a less than positive impact.

Chris

Chris ranked nineteenth in the class status survey. Chris got angry very quickly, and took out his anger physically. Early on in the school year there were two occasions when Chris got physical with two boys in the classroom. On both occasions, the two boys antagonized Chris. B12 antagonized Chris by calling him names during gym class. B5 also antagonized Chris by calling him names during recess. Chris was then put on a behavior management plan designed by the school psychologist, my cooperating teacher, and Chris. The plan called for Chris to remove himself from an activity when he felt angry and to sit under the white board easel and draw in a journal. This relaxed Chris and reduced his anger. Chris had a less than positive impact on the academic and social structure of the classroom because of his difficulty controlling his anger and also because other students in the classroom felt frustrated that Chris could remove himself from an activity.

COMPLEX INSTRUCTION

During week 13 of my student teaching internship, the students of room 49 participated in Complex Instruction. Each student in the class was assigned a role in a group according to their strengths observed during the 12 weeks prior to Complex Instruction. The Complex Instruction rotations took place each morning over five days from 8:20 AM to 9:05 AM. At my request, my cooperating teacher did not participate in Complex Instruction.

Big Idea

The big idea for this Complex Instruction unit blossomed from five lessons the students participated in during my solo teaching weeks. These five math lessons were based on maps. The topics covered in the five lessons include: Rectangular Coordinate Grids for Maps, Grid Search: A Coordinate Game, The Global Grid System, Locating Places on the Globe and World Map, and Finding Direction. During the lessons each student in the class was engaged and genuinely interested in the topic. Therefore, I decided to design three activities for this Complex Instruction unit based on maps. The big idea was “Finding Our Way”.

Multiple Abilities

The following is a list of the multiple abilities in this Complex Instruction unit:

- Ability to discuss a picture
- Ability to notice detail
- Ability to summarize
- Ability to make connections
- Ability to see a perspective
- Ability to apply knowledge from another source
• Ability to diagram mathematical ideas
• Ability to spot differences in pictures, diagrams, or graphs
• Ability make a model
• Ability to record data accurately
• Ability to observe carefully
• Ability to measure exactly
• Ability to break a task into its parts
• Ability to think through a plan
• Ability to reason
• Ability to predict a possible solution

Pre-test

With the cards designed and all children assigned to a group, the class was ready to begin Complex Instruction. Students began day one of Complex Instruction unit by completing a pre-test. The pre-test consisted of six questions. Questions 1-4 measured students ability to locate points of interest on a grid map. Questions 5-6 measured students ability to define the terms latitude and longitude. I scored the pre-test that afternoon.

Roles

Next, the class gathered together on the rug and brainstormed ideas as to what Complex Instruction meant. As a class we discussed what the term meant and I explained and modeled each of the roles children would be performing throughout the week. These roles included: facilitator, reporter, recorder, and materials manager.

Norms

All children were then assigned to their groups and given their first task. The task was for each group to create a poster that illustrated one of six Complex Instruction norms. These posters were posted in the classroom throughout the week.

The following is a list of the norms in this Complex Instruction unit:
• You have the duty to assist anyone who asks for help
• No one of us is as smart as all of us together
• You have the right to ask anyone in your group for help
• Pay attention to what other group members need
• Everyone is good at some of the abilities
• Everybody helps

Assigning Competence

The children completed Complex Instruction rotations during days two through four. On each day I circulated through the room with a clipboard to make informal observations. While visiting groups I observed and assigned competence. Each time I assigned competence my evaluations were public and specific. Assigning competence
greatly increased the participation and motivation of all children, especially low status children. Assigning competence was empowering in the classroom.

Post-Test

On day five of Complex Instruction the children completed self-evaluation forms. To conclude our unit the class gathered on the rug and shared responses to Complex Instruction. Two weeks later I returned to the classroom to complete my post Complex Instruction assessment. To my pleasure the class growth average was 2.48. The students' enthusiasm for Complex Instruction was still evident during the post-test.
Table II

Complex Instruction Pre And Post Test Data

<table>
<thead>
<tr>
<th>Name</th>
<th>Pre-Test Score</th>
<th>Post-Test Score</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>5</td>
<td>6</td>
<td>+1</td>
</tr>
<tr>
<td>G2</td>
<td>0</td>
<td>6</td>
<td>+6</td>
</tr>
<tr>
<td>B1</td>
<td>5</td>
<td>6</td>
<td>+1</td>
</tr>
<tr>
<td>G3</td>
<td>0</td>
<td>6</td>
<td>+6</td>
</tr>
<tr>
<td>Chris</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Caroline</td>
<td>5</td>
<td>6</td>
<td>+1</td>
</tr>
<tr>
<td>B3</td>
<td>0</td>
<td>6</td>
<td>+6</td>
</tr>
<tr>
<td>B4</td>
<td>6</td>
<td>6</td>
<td>+0</td>
</tr>
<tr>
<td>B5</td>
<td>5</td>
<td>6</td>
<td>+1</td>
</tr>
<tr>
<td>B6</td>
<td>6</td>
<td>6</td>
<td>+0</td>
</tr>
<tr>
<td>Jill</td>
<td>6</td>
<td>6</td>
<td>+0</td>
</tr>
<tr>
<td>B7</td>
<td>0</td>
<td>5</td>
<td>+5</td>
</tr>
<tr>
<td>G6</td>
<td>5</td>
<td>6</td>
<td>+1</td>
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<td>B8</td>
<td>6</td>
<td>6</td>
<td>+0</td>
</tr>
<tr>
<td>B9</td>
<td>6</td>
<td>6</td>
<td>+0</td>
</tr>
<tr>
<td>B10</td>
<td>0</td>
<td>6</td>
<td>+6</td>
</tr>
<tr>
<td>G7</td>
<td>0</td>
<td>5</td>
<td>+5</td>
</tr>
<tr>
<td>B11</td>
<td>5</td>
<td>6</td>
<td>+1</td>
</tr>
<tr>
<td>G8</td>
<td>0</td>
<td>5</td>
<td>+5</td>
</tr>
<tr>
<td>B12</td>
<td>5</td>
<td>6</td>
<td>+1</td>
</tr>
<tr>
<td>B13</td>
<td>0</td>
<td>5</td>
<td>+5</td>
</tr>
<tr>
<td>G9</td>
<td>5</td>
<td>6</td>
<td>+1</td>
</tr>
<tr>
<td>Tim</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Growth Average \[ \frac{52}{21} = 2.48 \]
EFFECT ON FOCUS CHILDREN

There were four children in the class who were analyzed by their significant impact on the academic and social structure of the classroom in the beginning of the semester. Two students; Courtney and Tim had a positive impact, and two students; Chris and Jill had a less positive impact prior to complex instruction. The following paragraphs summarize the students' participation and overall performance in Complex Instruction.

Caroline

During the Complex Instruction activities Caroline’s role was as facilitator of one group. As I had expected, Caroline performed her role to the best of her abilities. She understood her role in the group. Throughout each activity Caroline’s group was on-task, engaged, and displayed ownership. Prior to beginning of each activity Caroline made a point of checking in with each group member to make sure the instructions were understood. She immediately stopped an activity when she observed a group member not participating and pulled that student back in. Caroline was not bossy or overbearing during the activities. Rather, she was a wonderful model to her group members. Caroline was a true facilitator. On her self-evaluation sheet, Caroline wrote, “This unit was very successful”.

Tim

Tim was only able to participate in one of the Complex Instruction rotations. This was due to the fact that Tim received individual instruction on the English language between the time of 8:30 and 9:00 each morning. I had hoped Tim would be able to participate more, but I was only able to negotiate one morning away for Complex Instruction with the Instructional Assistant. On the day that Tim was able to participate, he looked like a child in a candy store. His excitement for the group activity was hard to contain. To my pleasure, Tim’s group members did not start their assigned activity until they had explained the activity, and answered his questions. Tim’s group members were very sensitive to his individual needs. Tim understood what the role of materials manager required of him. I feared that Tim would have difficulty with the activity because of his limited English, but to my surprise it had little effect on his performance or his groups performance.

Jill

During the Complex Instruction rotations Jill’s role was as reporter in one of the groups. When I assigned students their role, I assumed Jill would not approve because she wasn’t a facilitator. When our class discussed each role and its responsibilities, Jill raised her hand and said, “So one of my jobs is to make sure everyone in the class understands what my group did in the activity”. I said “yes”, and Jill responded, “I can do that”. Jill performed her role to the best of her abilities. The negative, sarcastic, and defensive persona that sometimes came out in class was not available during the week of Complex Instruction. Throughout the internship Jill had continuously asked me to work
with a partner during reading, writing, and math. When the activity called for paired work she was able to work with partner. When the activity called for independent work I didn’t allow her to work with a partner. Jill’s success in complex instruction stemmed from her excitement over the opportunity to work with not one, but three other students to complete an activity.

Chris

During the Complex Instruction activities Chris’s role was as recorder of one group. On the second day of Complex Instruction Chris’s group was in the process of completing an activity when I noticed him storm off and sit under the easel. When I approached Chris he told me that he wanted to participate but that his group members wouldn’t let him. I then pulled the facilitator of that group aside and discussed what was going on. The facilitator informed me that Chris was not completing the responsibilities of his role. I then sat down with Chris and reviewed what his role required of him. His response was, “okay, I get it now”. Chris then returned to his group and helped complete the activity. Chris thrived during Complex Instruction for three reasons. First, the activities and content genuinely interested him. Second, Chris enjoyed working in a small group. Third, Chris took pride in his role. This may have been the first time that Chris felt needed in a small group activity. He felt that his group could not complete the task without him. I agreed.

COMPLEX INSTRUCTION ASSESSMENT

Complex Instruction in room 49 was a whirlwind of excitement, challenges, and pleasant surprises. On the first day, I didn’t expect the students to make it through the week. As the days went by I saw tremendous growth in all of the students. The following documents my challenges, likes, and learning; as well as the students’ participation, learning, and adjustment.

My biggest challenge during Complex Instruction was not jumping into an activity. My teaching style is very up-front and hands-on. I enjoy interacting with my students. Sitting on the sidelines was difficult for me. There were times when I had to hold myself back from pulling up a chair and becoming a group member. To prevent myself from doing this I continuously moved around the room. I didn’t observe any one group for more than one minute at a time. I got better as the days went on but it was still a challenge. What I liked best about Complex Instruction was the student interaction and motivation. I saw a sense of motivation in some students that I had not observed prior to Complex Instruction. What I learned from this Complex Instruction unit was that even with a classroom full of twenty-three unique learners, cooperative group activities can be successful. It is necessary to take the time to assign students roles according to their strengths.

The students’ participation in Complex Instruction far exceeded my expectations. When the badges were put on, it was time to get down to business. Our classroom was loud, but it buzzed with their combined interest and learning. Their learning was both academic and social. Students not only learned how to read and locate places on a map, but they also learned how to work cooperatively in a positive and successful manner.
The students adjusted very well to their new structure. At first, they were a bit confused as to how it worked. When they did finally grasp the concept, they perfected it more and more each day. On the final day of Complex Instruction we had a sharing time where students could share their response to Complex Instruction. Many of them said that they wanted to do it again next week. Other students wondered if we could do complex instruction activities for the rest of the year. When I told them how much planning went into the week’s activities, they said, “So you can do that every week can’t you?”

CONCLUSION

At the beginning of my student teaching internship I set three goals for myself. This first was to provide a safe environment for children to learn. The second goal was to support my students’ growth as learners. And the third goal was to support my students’ growth as people. Complex Instruction helped the students and myself achieve these goals.
Wally World

Examine the obstacle course in the map and give the point of interest to the
Team. Then discuss and explain on the map.

You have just arrived at Wally World, the best amusement park in the
country. Your church group won a contest to spend 2 days at
Wally World. In order to ride on all the roller coasters, you will have to plan
your travel route. Below is the route that will give you the least time to
travel on.

<table>
<thead>
<tr>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map, enough erasable pencil, and paper</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedure</th>
</tr>
</thead>
</table>
| 1. Examine the ordered points in the table that give the point of
| interest on the map. |
| 2. Put a mark at each location. |
| 3. Individually predict and map out the route you think is the shortest |
| starting from location 0.0. |
| 4. As a group discuss each of the routes examined by all group members. |
| 5. Conclude what would be the best route for you to travel. |
| 6. Create a tentative traveling schedule for your day at Wally World. |

APPENDICES

Find your way to your destination

Completion = 10 sections as required

Latitude = measured in degrees

Longitude = measured in degrees

Erase unnecessary sections

Fill in the blank
CI Assessment

Examine the ordered pairs in the table that give the point of interests on the map. Then identify each location on the map.

<table>
<thead>
<tr>
<th>Point of Interest</th>
<th>Campground</th>
<th>Barbeque</th>
<th>Lake</th>
<th>Canoe Rental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>2,1</td>
<td>1,2</td>
<td>4,5</td>
<td>5,3</td>
</tr>
</tbody>
</table>

Map

FILL IN THE BLANK

Latitude = is measured in degrees either ________ or ________ of the equator

Longitude = is measured in degrees either ________ or ________ of the prime meridian.
Finding Our Way

Activity 1
Wally World
Activity Card

You have just arrived at Wally World, the best amusement park in the country. Unfortunately you arrived late, and have little time to spend at Wally World. In order to ride on all six roller coasters you will have to plan your travel route wisely. Find the route that will take the least time to travel on.

Materials
Map, straightedge, pencil, and paper.

Procedure
1. Examine the ordered pairs in the table that give the point of interests on the map.
2. Identify each location.
3. Put a dot on each location.
4. Write the letter for the point of interest next to the dot.
5. Individually predict and map out the route you think is the shortest starting from location 0,0.
6. As a group discuss each of the routes examined by all group members.
7. Conclude what would be the best route for you to travel.
8. As a group map out the route.
9. Create a tentative traveling schedule for your day at Wally World.

Content Assessment

Completion of map and traveling schedule.
Finding Our Way

Activity 1
Wally World
Individual Report Card

Map

<table>
<thead>
<tr>
<th>Point of Interest</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superman</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Space Ride</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Ultimate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wally's Ride</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Viper</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>T47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>5, 5</td>
<td>3, 2</td>
<td>3, 5</td>
<td>4, 2</td>
<td>1, 2</td>
<td>2, 5</td>
</tr>
</tbody>
</table>

Travel Schedule


Finding Our Way

Activity 2
The First Americans
Activity Card

During the Ice Age glaciers covered much of Canada and the northern United States. The first humans in North America fled south through a valley between glaciers. In this activity you will measure the distance of the humans route and explain why you think the humans traveled in the direction they did.

Materials
Ruler, map, and pencil.

Procedure
1. Read about the First Americans.
2. Examine the map.
3. In a group discuss what the map shows.
4. Using your compass measure the distance the humans traveled starting from Siberia to the southernmost tip of South America.
5. Compare distances with group members.
6. In a group discuss possible reasons for the humans direction of travel and possible reasons why they traveled.
7. In a drawing depict some of the challenges the humans may have faced on their journey.
8. Complete individual report.

Content Assessment
Discussion, participation, and drawing.
Fifty thousand years ago, glaciers covered much of Canada and the northern United States. These were huge sheets of ice, up to two miles thick. This period was called an Ice Age. A wide, grassy plain connected what are now Siberia and Alaska. No people lived in North or South America, but there were many animals, including mammoths, mastodons, bison, and elk.

The first humans in North America were hunters who may have crossed the land bridge from Siberia. No one knows when they came. Scientists estimate it was between twenty thousand and forty thousand years ago. These early Americans followed the animals south through a valley between glaciers. The number of humans increased, while the number of animals decreased quickly. About eleven thousand years ago, people had reached the southernmost tip of South America.

More than eleven thousand years ago, Earth’s climate warmed and the glaciers began to melt. The oceans rose and covered the land bridge that the First Americans had crossed. Today, Siberia and Alaska are separated by the Bering Strait, a body of water about 50 miles wide.
Finding Our Way

Activity 2

The First Americans

Individual Report Card

How far did the First Americans travel?

Why did they travel south?

What are some possible challenges the First Americans may have faced while traveling?

What did you learn from this activity?
Finding Our Way

Activity 3
Around the World
Activity Card

You are planning a trip to visit the seven largest cities in the world according to population. In this activity you will identify the location of the cities according to latitude and longitude. Once you have located all seven cities you will plan your trip.

Materials
Ruler, World Tour book, world globe, and pencil.

Procedure
1. Read about the seven largest cities in the world.
2. Examine the map.
3. Locate each city and identify its location.
4. Compare locations with group members.
5. Individually predict the route you think would be best to travel.
6. As a group discuss each of the routes examined by all group members.
7. Conclude what would be the best route for you to travel.
8. Create a tentative traveling schedule for your trip around the world.
9. In a group discuss possible preparations you would need to make for your trip.
10. Complete individual report.

Content Assessment
Discussion, participation, and completion of traveling schedule.
Finding Our Way

Activity 3
Around the World
Resource Card

Largest Cities (by population)

<table>
<thead>
<tr>
<th>City, Country</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo, Japan</td>
<td>27,245,000</td>
</tr>
<tr>
<td>Mexico City, Mexico</td>
<td>20,899,000</td>
</tr>
<tr>
<td>Sao Paulo, Brazil</td>
<td>18,701,000</td>
</tr>
<tr>
<td>Seoul, South Korea</td>
<td>16,792,000</td>
</tr>
<tr>
<td>New York, U.S.</td>
<td>14,625,000</td>
</tr>
<tr>
<td>Osaka, Japan</td>
<td>13,872,000</td>
</tr>
<tr>
<td>Bombay, India</td>
<td>12,101,000</td>
</tr>
</tbody>
</table>

Latitude = is measured in degrees either north or south of the equator
Longitude = is measured in degrees either east or west of the prime meridian.

Example:
Boston, U.S.        Latitude: 43 N        Longitude: 71 W
Finding Our Way

Activity 3
Around the World

Individual Report Card

<table>
<thead>
<tr>
<th>City</th>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo, Japan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico City, Mexico</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sao Paulo, Brazil</td>
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<td></td>
<td></td>
</tr>
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<td>Osaka, Japan</td>
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<td></td>
</tr>
<tr>
<td>Bombay, India</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Travel Schedule

What are some possible preparations you would need to make for your trip?

__________________________
__________________________
__________________________
__________________________

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