University of Mary Division of Education Instructional Sequence

Grade Level: 5th Grade

Subject(s) Area: Physical Education and Mathematics (distance)

Materials Needed:

 -Math Workbook

 - Pencil

 - Notebook

-Classroom Set Up (labels for each city along with the distance in miles from starting point: New York)

**S**tandards:

-**5.NBT.5** Fluently multiply multi-digit whole numbers using the standard algorithm

-**5.NBT.6** Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models

-**S3.E2.5** Actively engages in all the activities of physical education.

-**S2.E1.5** Combines spatial concepts with locomotor and nonlocomotor movements for small groups in gymnastics, dance/rhythmic activities/dance environments.

-**S2.E2.5** Pathways, shapes, levels Combines movement concepts with skills in small-sided practice tasks in game environments, gymnastics and rhythmic activities/dance with selfdirection.

**O**bjectives:

-The students will be able to use subtraction to solve word problems.

-The students will be able to visualize and represent a person traveling various distances and understand how to solve the remaining distance needed to travel.

-Students will have a greater understanding of how to go about finding the remaining distance.

**L**earning Activities:

1. As a class we will join at the back white board where they will sit on the back carpet. Each student will have their math workbook and notebook along with a pencil.
2. As a class we will do a few (2 to 3) subtraction problems together.
	1. Write the problem on the board and the first one we will all solve together (use cold call).
	2. Then write two or three more problems, one at a time on the board and give the students time to do the problem independently.
	3. Have students share their answers with their elbow partner next to them. –they will either agree or disagree with their answer and need to be able to defend it
	4. As a class we will go over the problem together and solve for the solution.
3. I will read aloud a sample story problem where the students know the distance to a certain spot and how far they have already traveled. The student’s job will be to discover how much further the person must travel.
4. The class will infer how they could go about solving this problem.
5. I will have the classroom set up and we will walk through the problem which will allow the students to visualize. \*See map on back
	1. The class will gather at one point in the classroom and the various destinations will be labeled throughout the classroom along with their distance from the start (in this case New York).
	2. Choose one student to walk the distance given in the problem (the number of miles they already traveled). Have them stand at this point and ask the students how we would figure out the remaining amount of miles they need to travel.
6. The students will solve several problems with their partners and we will all simulate (have a student walk the distance for each of the questions) the problems together.
	1. The students will be working with a partner and need to write out each problem and solve for their answer.
	2. The students will be working on their ability to defend their answer. They will need to be able to show their work and write it concisely.
7. With their partners the students will receive work time to complete a few pages in their math workbook.
	1. Make sure to walk around and answer questions the students may have.
8. The students will then receive two pages in their math workbook which they are supposed to complete and hand in on their own.

**A**ssessment:

 -The informal assessment will be their participation of the activity in class and their ability to answer the subtraction problems correctly (independently and being able to defend their work to a partner).

 - A formal assessment will be the worksheet (page 26 and 27) from their math workbooks and their ability to display their work concisely and formulate the correct answer.

**R**eflection: (physical education and mathematics)

 The lesson today went fairly smoothly. For many of the students it really seemed to help visually seeing and moving to see the distance they traveled. When I asked the class before we had a student model it they had difficulty come up with how they would solve for how many miles are left. Once there was a student standing half way between New York and one of the cities they knew they had to subtract how many miles they had already traveled. I think if I were to do this lesson again I might have fewer places spread throughout the classroom because I think it was a little overwhelming. It probably depends on the size of the classroom and the number of students because if it is too busy or not enough room it wouldn’t be as effective.

 The students seemed to really be able to understand and comprehend the subject of distance once we moved around the classroom. I think getting up and moving around was a fun way to do math for the day. A lot of times the students in this class get annoyed or overwhelmed with math and they are all at very different levels of math. Some of the students are visual learners so for them walking through their math problem really seemed to help them understand. I thought this lesson was really fun, but it definitely took a lot of work and planning because you have to set up the classroom before you begin the lesson for the day.

