Lesson 1: Numberless Word Problems (90 minutes)

Lesson Overview: This lesson will be introduced to multi-step problem solving with the use of numberless word problems. Students will learn story problems through reading the actual problem and discussing the context before being given the numbers to solve the problem. This will reinforce higher order thinking required to solve this type of problem. This will also increase student understanding on the foundation skill that will enable them to solve problems that are more complex in the future.

Resources/Materials:

- Numberless word problem PPT
- story problem printout
- pencil
- Khan Academy
- Mathological Liar
- projector
- computer

Performance Objective: Given three multistep word problems, students will solve the problem correctly 100 % of the time in 3 out of 5 opportunities.

Whole Group Instruction: 15 minutes

Pre-Instructional Activities: Teacher will introduce numberless word problem concept. Problem of the Day will be scaffolded into steps that start with the problem being presented without using numbers to connect literacy to the story problem.

Content Presentation: The teacher will present the problem:

Numberless word problem PPT

Teacher will ask and keep track of student thinking with focus on key words some, fewer, less on board:

1. What do you notice about the problem? wait time/discussion
2. What do you wonder? wait time/discussion

Students will brainstorm about what type of equations will be used to solve the problems, estimate possible answers, scaffold higher order thinking that will have the students read the problem and to understand context before given numbers to solve.

Independent Practice: 15 Minutes

Students will each be given the problem with numbers on a printout. Students will work with a partner to discuss the problem and find the solution. Students will show work and thought processes on the paper. Story problem printout

Small Groups: 60 minutes (4 groups will rotate every 15 minutes, every students will rotate to use the 4 stations)

Technology: SuccessMaker for progress monitoring (the technology station can be interchanged with resources that any school uses for monitoring student growth and progress, I am not able to provide login information for this activity as it is confidential as well as purchased for our school.)

Independent Practice: Khan Academy class code TB9M7HMV

Partner Practice: Mathological Liar

Teacher Table/Formative Assessment:

Students will be given three word problems to solve. After students have solved the problem they will share their work with the teacher, discuss answer and thought processes. Teacher will give feedback if problem is not solved correctly and students will rework if necessary.

Performance Assessment: Given three multistep word problems, students will solve the problem correctly 100 % of the time in 3 out of 5 opportunities.

Jerry had a box of 64 crayons. He lost eight of them, and his little sister broke three of them. How many crayons does Jerry have left?

Step One: _____

Step Two: _____

Jerry has _____ crayons left. Since the problem tells two ways that Jerry lost some crayons, he should have less crayons than he started out with. Is your answer reasonable?

Samantha and Krystal have twenty minutes to walk to school together. It takes them six minutes to get to the corner where the library is. It takes them another seven minutes to get to the fire station. How much longer do they have to get to school without being late?

Step One: _____

Step Two: _____

They have _____ minutes left. Since the problem tells two amounts of time that the girls use up while walking, the amount they have left should be less than the amount of time they started with. Is your answer reasonable?

Robert wants to practice goal kicks for soccer. He decides to have 12 kicks before going home from the park. He takes 5 kicks before taking a break to get a drink of water. He then takes another 4 kicks. How many more kicks does he need to make before he goes home?

Step One: _____

Step Two: _____

He still needs to take _____ kicks. Since the problem tells two amounts of kicks that he has already made, the amount of kicks he has left should be less than the amount of kicks he needed to take in the beginning. Is your answer reasonable?