



<p>Lesson Title:</p> <p>Lights...Camera...Answers</p>	<p style="text-align: center;"><u>Big Idea & Learning Objectives</u></p> <p>1. Students will act out multiple step word problems in order to come to a solution.</p>
<p>Content Area & Arts Discipline:</p> <p>Math and Theatre</p>	<p style="text-align: center;"><u>Overview of the Lesson</u></p> <p>Students will be given multiple step word problems and will create short skits to demonstrate the steps to finding the solution. <i>Through this, students want to begin to develop the ability to imagine and visualize word problems.</i></p>
<p>Grade Level:</p> <p>Grades 6, 7, and 8</p>	<p style="text-align: center;"><u>Procedures</u></p> <p>Engaging Students (“The Hook”):</p> <p>Word problems. Story Problems. No matter how we say it, we don’t seem to like them. We have to read and analyze, and then we have to solve a problem on top of all of the reading. I don’t know about you, but I am tired of the same old thing. But who says we have to do the same old thing the same old way?</p> <p>As Shakespeare once said, “All the world’s a stage, and the men and women merely players.” Your current stage is your math class, and you are the actors.</p>
<p>Proposed Time Frame:</p> <p>< 2 hours (2 class periods)</p>	<p>Building Knowledge:</p> <p>Research has shown us that being an active participant in our education helps us to learn information better, so why can’t we do this in math class with the same boring story problems we are required to do?</p> <p>In a movie, there is conflict; in math, there is a problem. In a movie, the conflict has a resolution, and in math, the problem has a solution.</p>
<p>Date Lesson Created:</p> <p>May 5, 2014</p>	<p>Modeling the Experience:</p> <p>The teacher will have a word problem on the board to present. The students will assist the teacher in finding the characters of the problem. They will also identify the conflict (problem) that is needing a resolution (solution). During this process, the students can also discuss the setting of the problem and the props that would be needed to develop the “scene.”</p>

<p>Lesson Author:</p> <p>Shasta Long -classroom teacher</p>	<p>Guided Practice:</p> <p>The teacher will have another word problem for the class. The students will work with a partner or in small groups to identify the parts of the problem that are necessary in developing the scene.</p> <p>The teacher will work as a facilitator during this process with guiding questions for groups that are struggling with identifying the needed information.</p> <p>The students will be given a chance to give their interpretation of the problem. Other groups will be allowed to give constructive feedback verbally.</p> <hr/> <p>Applying Understanding:</p> <p>Students will break off into their groups and will be given word problems to develop into skits.</p> <p>Students will be responsible for giving the solution in their skit.</p>
<p>Room Requirements & Arrangement:</p> <p>classroom -students in groups</p>	<p>Opportunities for Reflection (Closing):</p> <ul style="list-style-type: none"> •Students will present their skits to their classmates -- either in person or through a recording. •Students will be a proper audience for classmates. •Students will be allotted an amount of time to give constructive feedback verbally. •Conduct a discussion about how this method of looking at word problems can help math students improve and become more successful in class when it comes to solving word problems.
<p>Material Equipment:</p> <ul style="list-style-type: none"> •paper •pencil •copies of word problems •MacBook or video recorder •play money (for money problems) 	<p>Assessing the Learning:</p> <ul style="list-style-type: none"> •The teacher will observe students as they create skits and discuss ideas with each other. •The students will be graded on their skit and coming to a correct solution to the problem. •The students will also be graded on their participation in the audience.

Resources:

•JBHM Mathematics -- level 7

Standards & Principles

Common Core State Standards:

6.NS.1 Number System

Standard: Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.

7.NS.3 Number System

Standard: Solve real-world and mathematical problems involving the four operations with rational numbers.

8.EE.4 Expressions and Equations

Standard: Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities. Interpret scientific notation that has been generated by technology.

Arts Standards:

Theatre: Middle Level III

1 - Create scripts through the process of improvisation leading to scripted scenes based on personal experiences, heritage, imagination, literature, and history. (CP, HC, C)

b. Collaborate in small groups to refine original scripts and justify writing choices.

2 - Develop acting skills to portray characters that interact in improvised or scripted scenes. (CP)

c. Interact as an invented character in improvised and scripted scenes.

7 - Recognize that theatre can communicate the artistic and social values and accomplishments cultures, times, and places. (HC, CA)

d. Practice positive audience etiquette.

9 - Know that relationships exist between theatre, other arts, other subject area, and everyday life. (CA, C)

a. Demonstrate the ability to use theatre skills to present content or concepts in other subject areas of everyday life.

c. Utilize acting skills in delivering an oral presentation in other subject areas.

Vocabulary (math):

- difference
- product
- quotient
- solution
- sum

Vocabulary (theatre):

- character
- conflict
- conflict resolution
- dialogue

Principles of Universal Design for Learning:

- I. Provide Multiple Means of Representation
 - 1: Provide options for perception
 - 1.1 Offer ways of customizing the display of information
 - 1.2 Offer alternatives for auditory information
 - 1.3 Offer alternatives for visual information
 - 2: Provide options for language, mathematical expressions, and symbols
 - 2.1 Clarify vocabulary and symbols
 - 2.2 Clarify syntax and structure
 - 2.3 Support decoding of text, mathematical notation, and symbols
 - 3: Provide options for comprehension
 - 3.3 Guide information processing, visualization, and manipulation
- II. Provide Multiple Means of Action and Expression
 - 5: Provide options for expression and communication
 - 5.3 Build fluencies with graduated levels of support for practice and performance
 - 6: Provide options for executive functions
 - 6.2 Support planning and strategy development
 - 6.3 Facilitate managing information and resources
- III. Provide Multiple means of engagement
 - 7: Provide options for recruiting interest
 - 7.2 Optimize relevance, value, and authenticity
 - 7.3 Minimize threats and distractions
 - 8: Provide options for sustaining effort and persistence
 - 8.1 Heighten salience of goals and objectives
 - 8.2 Vary demands and resources to optimize challenge
 - 8.3 Foster collaboration and community
 - 8.4 Increase mastery-oriented feedback

Appendix

Extended Learning Activities:

- Allow students to form groups and record performances for studying and future references.
- Students can write their own word problems and develop scripts for other groups to present.

TIPS/FAQs:

- If choosing to ability group students, make sure that the word problems given to them reflect their current ability. Do not give them something near or at their frustration level to start with.

References:

- <http://www.edweek.org/ew/articles/2011/07/13/36read.h30.html>
- JBHM Mathematics -- level 7

Ms. Maharrey was always borrowing from one friend to pay back another friend the next day. When all of her friends got together and realized that she was doing, they made the following list to show her how much she actually was in debt:

- Borrowed \$2 from Mrs. Knight for lunch
- Borrowed \$8 from Mrs. McCurdy for a book
- Earned enough money walking Mr. Cossey's dog to give Mrs. Bailey the \$20 she owed her for the movies
- Borrowed \$1 from Dr. Luse to buy paper from the school store
- Earned enough money to pay Mrs. Knight the \$2 back
- Borrowed \$10 from Coach McRae for shoelaces
- Borrowed \$4 from Mrs. Long to buy candy at the movies
- Earned enough money to pay Dr. Luse her \$1 back

How much does Ms. Maharrey still owe?

Kevin opened a checking account. He made an initial deposit of \$200.00. On Monday, he wrote a check for \$15. On Tuesday, he got \$20 out of the ATM. On Wednesday, he received \$25 as a birthday gift from his grandma, and he immediately deposited it into his account. On Thursday, he paid his friend, Johnny, back the \$5 that he owed him. On Friday, he received his paycheck from his boss, Mr. Harris, and deposited the entire \$150. What was Kevin's balance at the end of the week?

The Tupelo Golden Waves football team records the outcome of each play. A summary is shown below. Find the net gain or loss after the 3rd play?

Down	Result
1 st	lost 1 yard
2 nd	lost 6 yards
Penalty	lost 5 yards
3 rd	gained 8 yards
4 th	_____