

**ED 101 Educational Technology Lab – Spring 13  
Boston University – School of Education**

## LESSON PLAN

<b>Grade(s) Content Area(s) Topic of Lesson</b>	<i>4<sup>th</sup> grade math: Problem Solving</i>
<b>Objective</b>	<i>Students will be able to correctly solve math word problems by using at least 8 of the 10 types of problem solving methods when given a worksheet of various problems and identify each type of word problem.</i>
<b>Technology standard</b>	<p><i>Standard 1. Demonstrate proficiency in the use of computers and applications, as well as an understanding of the concepts underlying hardware, software, and connectivity.</i></p> <p>G3-5: 1.14 Explain and use age-appropriate online tools and resources (e.g., tutorial, assessment, Web browser).</p>
<b>Curriculum Framework</b>	<ul style="list-style-type: none"> <li>➤ <b>Massachusetts Mathematics Frameworks</b></li> <li>➤ <b>Grade 4</b></li> <li>➤ <b>Operations and Algebraic Thinking</b></li> </ul> <p>1. Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p>
<b>Materials, Resources, Technology, Personnel</b>	<i>It would be best if each student had their own computer so they could explore the website individually and then take the quiz alone. Internet access is definitely needed in order for the students to successfully learn from the website. The teacher would make a “checklist” hand out that would be distributed to each student and as the student’s explored the website, they would check off on the handout everything they had seen. For the stations activity, the teacher will have to create 5 different separate word problems and print them each on one sheet and spread them in different locations in the classroom.</i>

<b>Lesson Introduction</b> <b>(5 minutes)</b>	<p><i>“Hello fourth graders! You are all probably wondering why you all have your own computer today. Today, we are going to do some exploring. You will see different videos, pictures and games that you may have not seen before. As a class, you each will have the opportunity to become stronger problem solvers. Today we aren’t going to be working with the workbook. I want to ask you all a question. Why do you think we are using computers today? (Wait time, see their response, respond) Why is technology important to have in school? Where have you used technology in your lives? Do you like it? What devices have you used before? What devices do you want to use? Are you good at technology? (wait time, see their response, respond) (Hopefully a short discussion on the importance technology would take place and then I’d introduce the website and the content material.)”</i></p>
<b>Guided Activity</b> <b>(10 – 15 minutes)</b>	<p><i>“Okay children, please log on to the computers and once you are on go to <a href="http://www.weebly.com/glyons">www.weebly.com/glyons</a>. (Write URL on the board.) Once you get to the website, click on the home page. Take 3 minutes to explore and look around. Alright, we are going to go over 10 different ways on how to solve problems.” (Teacher will click on the subtabs and go over all the ways, that the website shows, on how to solve problems, the students will follow along.) While doing this, there is a sample problem on each subtab of the different ways to solve word problems. The teacher will have a different student come up each time and solve the problem in front of the class. After the students have learned the different ways from the teacher and the website, they can explore the site and click on any videos and they can take the quiz. After the teacher explains to the students how they will use the website to help them find different ways to solve problems, they will know how to use age appropriate online tools because the website is designed for their specific age and they will be able to go on it as an online resource to help them.</i></p>
<b>Independent Student Activity</b> <b>(10-15 minutes)</b>	<p><i>The independent student activity will be stations. The teacher will gather students into groups of 4-5 kids randomly. Around the room, kids will go to 5 different stations and have about 3 minutes at each station. Each station will simply be a different (lengthy) word problem. The group has to figure out what required strategy to use for the problem (from what they learned on the website) and to solve it as a group. As a teacher, I will be walking around answering any questions. The students will not be on the physical website or on the computers for this activity.</i></p>
<b>Wrap-Up of Lesson (Closure)</b> <b>(5 minutes)</b>	<p><i>At the end of the lesson, the students will go around and say one thing they learned from the website or activity. It can be technological or educational based. This will give all the students opportunities to hear different ways for how their classmates reacted to the lesson.</i></p>
<b>How will students be</b>	<p><i>Objective: Students will be able to correctly solve math word problems by using at least 8 of the 10 types of problem solving methods when given a</i></p>

**assessed to  
make sure  
they are able  
to perform  
the  
objective?**

*worksheet of various problems.*

*Assessment: Students will be provided with a homework sheet that has 10 problems. Each problem given can be solved by using a different method. The students will complete the work sheet that night for homework and the teacher will grade it the day after and see if the students can successfully solve 8 out of the 10 word problems. The class will also review the group activity questions so they can see if they got the answers right and did the work correctly.*