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Grade Level/Subject: Algebra 1

Topic: Mixture Problems

Objectives (P.A.S.S.): Standard 2 Relations and Functions

8. Problem Solving

Introduction: You will need a bag of brown beans and a bag of white beans. Give each student 10 of each type of bean. Start with a mixture of 40% white beans. Have students get two white beans and 3 brown beans. Remind them that two out of five is 40%. Ask "How can you make the mixture have 70% white beans without removing any of the brown beans? Allow students to investigate adding white beans until they arrive at an answer. Adding one white bean will make mixture have 3 to 6 or 50% white beans. When they have added five more white beans the mixture will have seven white beans and three brown beans. It will be a 70% white bean mixture.

Instructional process: After the hands-on activity was completed showed it as a story problem and introduced the model of a table in working mixture problems. Discussing the set-up, plugging in information, meaning of the problem, working the problem, and then emphasizing the importance of substituting back in and evaluating the validity of our answer helped the students to better understand. Played DVD Unit B Algebra's cool Module 4 Lesson 4 on mixture problems on the SmartBoard. The students interactively filled-in-the blanks on the guided notes and guided practice.

Closure: Had students work in groups to see if they could make up their own mixture problems. Discussed different possibilities in their own world like FF A selling sausage and chicken, STUCO having a dance buy ticket early or at the door, Junior Class fundraiser selling mums for homecoming small mums and large mums etc.

Assessment: Walking around the room, watching, and listening to the group work definitely gives you an insight on what must be done. Assigned five problems from their textbook to do in their groups and had each group explain one problem.

Modifications! Accommodations: Mixture problems involving coins is another tangible way to get across the concept. Bring different coins first giving them the information to see if they can work the problem and then have them open the coin purse to see if they were correct. They could make their own story problem and see if a friend could work it and if they get it correct they can keep the money.

Reflection: Mixture problems seem to be difficult for most students so I always spend two or three days on this concept. The more they make up their own problems the more they seem to grasp the ideas.