Teacher: J. Cummins	Course: Algebra I	Grade Level: 9	# of Students: 25
Theme: Using Algebra to Save Money	Unit: Solving Systems of Equations		Lesson: Which method is right for me?
Standards	Common Core Math Standard A.REI.6: Solve systems of linear equations exactly and approximately (e.g. with graphs), focusing on pairs of linear equations in two variables.		
Learning Objectives	Students will be able to compare the three methods of solving systems of equations (graphing, substitution, elimination) by writing advantages and disadvantages to each method. Given a system of linear equations, students will be able to choose the best method for solving (graphing, substitution, elimination) and use it to solve the system by writing the solution as an ordered pair.		
Prior Knowledge	• Solving systems of equations by graphing • Solving systems of equations by substitution • Solving systems of equations by elimination		
Engage	Think-Pair-Share activity responding to the question, "What is the best method (graphing, substitution, elimination) for solving a system of equations? Why?"		
Elicit	Whole class discussion gathering student opinions on which is the best method and why. Use Google Docs Drawings to model creating a concept map of student responses. Encourage students to play 'devil's advocate' to others' opinions.		
Explore	Group activity (see handout) working in groups of three, students must determine which method would be best for each equation and give reasons. Then each group member should take one of the systems and solve it.		
Explain	Return to whole class discussion. Allow three different groups to briefly explain their choice of method and reasoning to present to class.		
Elaborate/Extend	Concept mapping assignment (see handout). Students will work with Chromebooks and Google Drive Drawings to create a mind map either showing the pros/cons of each method OR a flowchart showing a mental process of deciding which method to use.		
Evaluate	Exit slip: Solve the following system of equations using any method of your choosing. $3x - 4y = 12$ and $y = x - 4$		
Assessment	Formative assessment: think-pair-share responses, group activity responses Summative assessment: concept map assignment, see rubric on handout.		
Materials Needed	Group activity handout Concept mapping handout Projector & laptop to demonstrate concept mapping Chromebooks		
Technology	Chromebooks will be used to access students' Google Drive accounts where they will use Drawings to create a concept map. Final product will be emailed to the teacher through the school's Google email accounts.		

Differentiated Instruction	Students in my class are already seated in heterogeneous groups of three that are used frequently during instruction. Students already know who their group members are and the procedures for getting in and out of group work time. Due to the mixed ability groupings, stronger students are able to help struggling students understand concepts. In the concept mapping assignment, students have a choice in which type of mind map to create. All students should be able to complete the pros/cons of each method. Synthesizing the mental decision making process into a flowchart requires higher level thinking and would be a more challenging assignment for students who are ready for a challenge. This is a co-taught class, so both teachers are able to circulate during paired activity, group activity, and independent work time providing additional support as needed.