A.REI.6

Math 1 Demonstration Lesson: Focus Area D with SpEd

Lesson Objective:

Students will make sense of a system of equations by representing a situation with 2 strategies, explaining their thinking to other students, and then improving their work after getting feedback from other students.

Math Strategies (check all that apply)	* Hypothesis * Error Analysis * Similarities and Differences *** Multiple Representations** * Other: _____
Conceptual Category (check all that apply)	* Number and Quantity *** Algebra** * Functions * Geometry * Data and Statistics * Modeling
Content 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.
SMP's (check all that apply)	* Standard 1: Make sense of problems and persevere in solving them *** Standard 2: Reason abstractly and quantitatively** *** Standard 3: Construct viable arguments and critique the reasoning of others.** *** Standard 4: Model with mathematics** * Standard 5: Use appropriate tools strategically * Standard 6: Attend to precision * Standard 7: Look for and make use of structure * Standard 8: Look for and express regularity in repeated reasoning
<u>Structure of the experience</u> **Task and questions:** How is the task chunked? What are the key questions you're going to ask throughout the lesson? **Engagement:** TAPIN: Time limit, Amount of work, Public pressure, Instructions clear, Novel (change	**A. Prior knowledge:** * On board, have work completed showing all strategies with work. * Pair share: Name the strategies for the work. **B. Reading the Prompt** * Read silently, individually * Read to partner out loud * Think about chunks, put an x where you think the first chunk would be…compare your thinking with partner * Call on random to share where their x is and their reasoning. * Talk Move: Restate * In pairs, determine important info from the chunk * Freathy: Make notes on what students say * Repeat the chunking and write down important information **C. Try the prompt**

response type/time) Modes of response: How are students going to respond to questions/instructions? (Individual, partner, verbal, write it down, etc.) **Talk Moves** Re-voicing - asking students to restate another's thought, adding on, change the problem and send back into a mode, agree or disagree	* 1 minute to brainstorm 2 possible representations, then share and compare * IN pairs, decide which 2 reps you'll use and show the representations in the boxes. Take 20 minutes, 10 minutes for each representation. * After 20 minutes, have students write their explanation in the 3rd box: "Convince someone with a written explanation that your 2 representations show when each plan would make the most sense for Finn to choose." (10 minutes) **D. Share the work with another group** * Partner groups find another partner group * Protocol: Explain 1st rep, then the other group gives feedback: "I like that you…A question I have is…" Repeat for 2nd rep, then the explanation. * 5 minutes for 1st group, then 5 minutes for the 2nd group **E. Class model and feedback** * Choose a random group to come to the board to show the work and read their explanation. * Do the feedback protocol using pair shares about the feedback, then share out to the presentation group. **F. Revision** * Each person thinks about the feedback they gave and received, and take 10 minutes for a task. * Instruction: Make 1-2 changes to any part of your work, 2 reps, or explanation. Then describe in detail what your revisions are and why you think it made your work better.

Strategies Notecard for Solving Systems of Equations

There are _____ strategies we will be able to use when we solve systems of equations.

Strategy 1: _____ Solve the system: $y = 2x + 1$ $y = -3x + 6$	Strategy 2: _____ Solve the system: $y = 2x + 1$ $y = -3x + 6$
Strategy 3: _____ Solve the system: $y = 2x + 1$ $y = -3x + 6$	Strategy 4: _____ Solve the system: $y = 2x + 1$ $y = -3x + 6$

Picture (Visual Representation):	Important Information:	Equations:

Picture (Visual Representation):	Important Information:	Equations:

Name: _____

Lesson Objective:

_____

Situation:

Finn has recently been offered a part-time job as a salesperson at a local cell phone store. He has a choice of two different pay scales. The first option is to receive a base salary of $300 a week plus a 10% of the price of the merchandise he sells. The second option is a base salary of $220 a week plus 18% of the price of the merchandise he sells. The average phone sells for $200, but accessories are included in the merchandise sales. Find out when the 1st plan option makes more sense for Finn to choose, and also when the 2nd option would make more sense. Use two different strategies for showing this.

1st Strategy: _____	2nd Strategy: _____	

Explanation of your revision:

_____
_____
_____
_____