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| Date:  | Duration of Lesson: 60 minutes |
| Title of Unit: Systems of Equations | Title of Lesson: Zap the Line |
| Lesson Objectives: To graph equations of lines to solve a system. To substitute values for *x* and *y* and make sure they make the equation true. |
| Groupings (e.g., whole class, small groups, co-teaching): Small Groups/Partners |
| Skills & Standards:  CCSS.8.EE.C.8a: Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. |
| **Progression of Learning & Teaching**  |
| Opener:  | * I will have the students explain how to graph the equation of a line as a review.
 | **Points to Remember**  |
| Activities & Tasks:  | **Instructional Lesson:*** I will work through the Warm Up problem from the Desmos activity with the students.
* Students will work with a partner finding the solution (intersection) of the line so that they can zap it.
* We Do: Facilitate a class discussion
	+ As students work with their partner, I will circle the room if they have any questions or if they need assistance.
* You Do**:**Students will complete some practice problems using substitution, elimination, and graphing.

 **Activities/Tasks:** * Desmos lesson requires students to ‘zap’ the line by listing the point of intersection.
* As the lesson goes on, they will see that the value for x and y will satisfy both equations and be the point of the intersection, which allows them to zap the most lines.
 | Resources: Desmos Activity: <https://teacher.desmos.com/activitybuilder/custom/5df166d1fa83ee79c328d37d> Vocabulary:  * Intersection- point where to lines cross
* Solution- a value or values which, when substituted for a variable in an equation, make the equation true
* Elimination- the process of solving a system of simultaneous equations by using various techniques to remove the variable successively
* Substitution- putting values where the letters are.

 Monitoring/Scaffolding: * I will be monitoring the students as they work and providing assistance as needed.
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| Level of Cognitive Complexity:  | ☐ Creating ☐ Evaluating  ☐ Analyzing  | ☐ Applying ☐ Understanding ☐ Remembering  |
| Key questions:  | * What does the line *y* = 8 look like?
* What method would be best using that equation of the line?
* What else could you try?
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| Closure:  | * The lesson will be summarized on the last screen of the Desmos activity.
* What does the intersection represent?
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| Next Steps:  |  Functions | **Formative Assessment Criteria for Success:** * Students will work with a partner using a Desmos lesson and I will walk around the room to check on student progress. Completed Desmos Activity (lines all zapped)
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