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Technology Integration Workshop
2021

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| **Unit Title: Solving System of Equations** |
| **Grade Level:** *8th* |
| **Subject Area:** *Math* |
| **Duration/Length/Number of class periods:** *7 days* |
| **Description: This unit is about solving a system of equations.** |
| Established Goals (National, State, Local):<br>8.2.4.7<br>Represent relationships in various contexts using systems of linear equations. Solve systems of linear equations in two variables symbolically, graphically and numerically. |

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| **What Enduring Understandings are desired?**<br>Real world problems can be represented in a system of equations to compare and contrast for the best solutions. |
| **What Essential Questions will be considered?**<br><br>How can you solve the system of equations? |
| **Students will know / be able to:**<br>Solve systems of equations by graphing, elimination, and substitution methods and apply it in real world problems. |

| **Description: There will be 7 days in this unit. First, is the introduction of what are the solutions in the system of equations, then ease into the graphing method, then elimination method, and the substitution method, the real-world problems. However, teachers should reserve extra days for practice or reteaching depending on the group of students they have. So teachers should reserve around 14 days for this unit.** | Formative | Summative | Introductory Activity | Learning Activity | Student Technology Used | Teacher Technology Used | ISTE Standards |
|---|---|---|---|---|---|---|---|
| Day 1: Introduction to solution - see more details below | x | | x | x | x | x | 3 |
| Day 2: Graphing method | x | | x | x | x | x | 3 |
| Day 3: Elimination method | x | | x | x | x | x | 3 |
| Day 4: Substitution method | x | | x | x | x | x | 3 |

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| Day 5: Real world problems<br>Day 6: Review<br>Day 7: Test | x | <br><br>x | x | x | x | x | 1 |

**Materials, tools and resources:**

- We will use Notebook to create lesson plans- use on Smartboard
- We also use 1-1 iPad – Take notes and do work
- Schoology – to get information.
- Notability - to take notes
- Jamboard - group work
- IXL (QR and link are at the end of each lesson plan for assignments)

**Unit Plan Author** Hoang-kim Nguyen, Roseville Area High School.

Day-to-day lesson plan:
If we are working in person: the setup is 4 students in a group. They are to work collaboratively with each other, they are expected to assist each other, expectation is to ask three before you ask me.

If we are in distance learning: setup is small break out group work and the lesson will be written in Jamboard so students can follow, write in answers and work collaboratively.

You can convert any documents into powerpoint, Jamboard, Pear Deck, or any teaching platform that your school is using. I use Schoology by converting my document into pdf files, then uploading it into schoology. My students will be able to download it into Notability so they can follow along. This is used for day 1- day 4. Day 5 - I will convert my document into Jamboard so students can work collaboratively. In Jamboard, they will also have to list out 3 things they are confident about, two they need a bit more practice and 1 question that they still need to go over again in a big group. Day 6 is also Jamboard. Day 7, the worksheet is put into the Assessment in Schoology, make sure the timer is set to 60 minutes in Schoology, and enable the test on test day.

Day 1: We cover what are the solutions for the system of equations. What it would look like and how to check if the answer is correct or not.

Day 2: We will be covering graphing. Before class starts, please review graphing linear equations. Then practice graphing two equations, then find the solutions.

Day 3: We will cover substitution.

Day 4: We will cover elimination.

Day 5: Real world problems - group work (using Jamboard). One problem gets assigned to each group, then the group presents it in the big group setting.

Day 6: Review system of equations (using Jamboard). Use break out rooms - assign 4 students in each group to work together on it.

Day 7: Test system of equations (copy and cut this into the testing option in Schoology).