8 Math Unit 05: Systems of Linear Equations

Content Area: **Mathematics**
Course(s):
Time Period: **January**
Length: **12 days**
Status: **Published**

Unit Overview

Chapter 5 extends what students have learned about graphing linear equations, solving multi=step equations, and rewriting equations and formulas. These are foundational skills for systems of linear equations.

Standards

MA.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.
MA.8.EE.C.8b	Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.
MA.8.EE.C.8c	Solve real-world and mathematical problems leading to two linear equations in two variables.

Materials

Big Ideas Mat

- 5.1 Solving Systems of Linear Equations by Graphing
- 5.2 Solve Systems of Linear Equations by Substitution
- 5.3 Solve Systems of Linear Equations by Elimination
- 5.4 Solve Special Systems of Linear Equations

Desmos

Unit 4b - Linear Systems

- ST Math
- Delta Math
- 3 Act Lessons
- Brainingcamp Manipulatives
- Nearpod Lessons
- Brainpop Resources
- Online Resources

Technology

8.1.8.DA.1	Organize and transform data collected using computational tools to make it usable for a specific purpose.
8.1.8.AP.6	Refine a solution that meets users' needs by incorporating feedback from team members and users.

Assessment

Formative Assessment

- Teacher Observation
- Daily Quick Check
- Quizzes
- Exit Tickets

Summative Assessment

- Topic Tests
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects
- NWEA Grade 8 Math Assessment

Accommodations & Modifications

Special Education

- Follow IEP Plan which may contain some of the following examples…
- In class/pull out support with special ed teacher
- Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Limit number of questions
- Scribe
- Manipulatives
- Calculators
- Reteach pages

- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

504

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

ELL

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Math Diagnosis & Intervention System

At-risk of Failure

- Additional time during intervention time
- Questions read aloud
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

Gifted & Talented

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities
- Today's Challenge

Interdisciplinary Connections

Topic 5 STEM Project - Daily Grind

In this project, students investigate the science behind the coffee industry. Students will analyze the factors involved in growing and producing coffee and the effects of coffee growth practices on the economy and environment.

Science Connection -

Students gather evidence and interpret data to describe how resource availability and environmental factors influence the growth of coffee. They will also learn about the effects of the coffee growing and harvesting processes on the environment.

ELA: NJSLSA.R1. Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

Science: MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

Career Readiness, Life Literacies & Key Skills

9.4.8.CI.2	Repurpose an existing resource in an innovative way (e.g., 8.2.8.NT.3).
9.2.8.CAP.2	Develop a plan that includes information about career areas of interest.
9.4.8.CT.2	Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option (e.g., MS-ETS1-4, 6.1.8.CivicsDP.1).
9.1.8.CP.1	Compare prices for the same goods or services.
9.1.8.EG.1	Explain how taxes affect disposable income and the difference between net and gross income.
9.1.8.FI.4	Analyze the interest rates and fees associated with financial products.
9.4.8.IML.9	Distinguish between ethical and unethical uses of information and media (e.g., 1.5.8.CR3b, 8.2.8.EC.2).

9.4.8.TL.1	Construct a spreadsheet in order to analyze multiple data sets, identify relationships, and facilitate data-based decision-making.
9.4.8.TL.2	Gather data and digitally represent information to communicate a real-world problem (e.g., MS-ESS3-4, 6.1.8.EconET.1, 6.1.8.CivicsPR.4).
9.4.8.TL.3	Select appropriate tools to organize and present information digitally.
9.4.8.TL.4	Synthesize and publish information about a local or global issue or event (e.g., MSLS4-5, 6.1.8.CivicsPI.3).

Career Ready Practices

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.