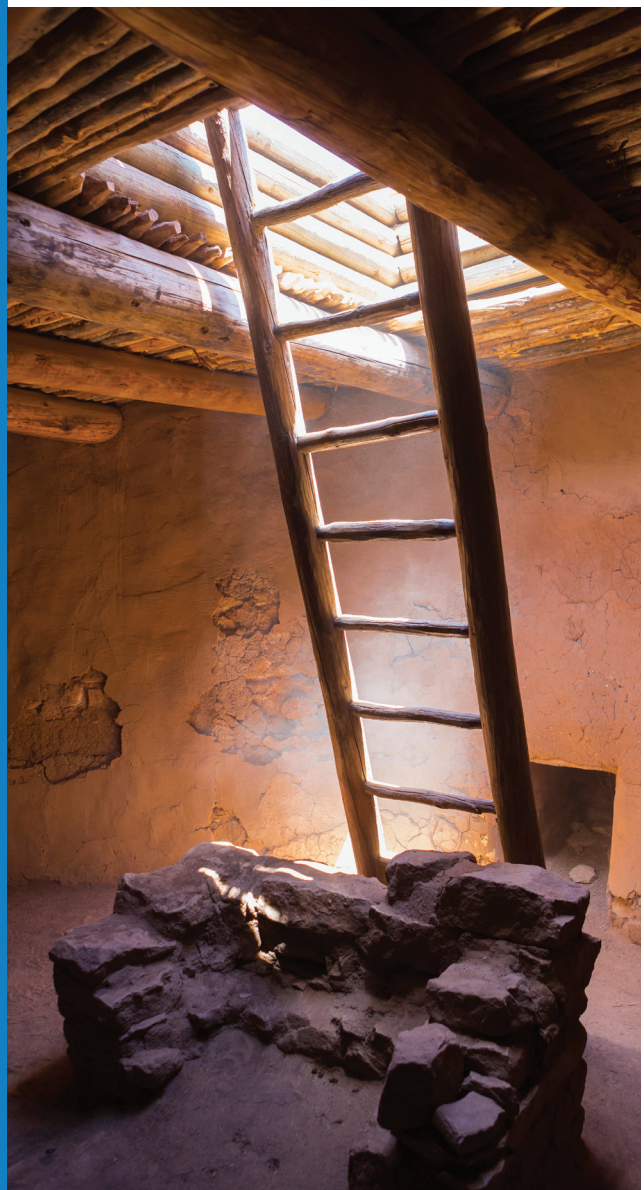
6–8
Sample

Reveal MATH®

New Mexico Connections



Mc Graw Hill

CONNECT TO NEW MEXICO

Reveal Math contains print and digital resources to support teachers and all learners in alignment with the CCSS, New Mexico Math Framework, and New Mexico Instructional Scope.

Alignment to Mathematical Content and Practice Standards

Reveal Math is 100% aligned to the Common Core State Standards for Mathematics. The program provides formative assessment to monitor student learning, including Math Probes, Example Checks, Exit Tickets, and Put It All Together questions. The Teacher Edition and online Reporting Dashboard provide feedback to modify instruction and help direct student learning. Summative assessments evaluate student learning against the standards covered at the module and course levels.

Multi-Layered Systems of Support

The Teacher Edition module and lesson opener pages map out learning goals, focus standards, rigor, coherence outlines, and differentiation resources to support vertical alignment and universal support frameworks. Additional Approaching Level and Beyond Level activities help differentiate math instruction for students. The embedded *Arrive Math Booster* mini-lessons provide supplemental intervention resources for students who need extra topic support.

Culturally and Linguistically Responsive Instruction

Reveal Math also includes student and teacher resources to support students who are simultaneously learning grade-level math and building their English proficiency, such as the Language Development Handbook, Spanish interactive Student Edition, and Multilingual eGlossary, and Spanish Personal Tutors. Appropriate, research-based language scaffolds are also provided to support students as they engage in rigorous mathematical tasks and discussions. The program also supports the social, emotional, and academic needs of all students with Mindset Matters tips in each module providing specific examples of how *Reveal Math* content can be used to promote a growth mindset in all students.

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WHAT IS **NEW MEXICO CONNECTIONS?**

Your New Mexico Connections booklet provides a module-by-module content map to highlight the alignment of *Reveal Math* to the New Mexico Instructional Scope and Math Framework. You will find a summary of the content and key features of each module and lesson, along with references to additional resources to help teachers plan for multi-layered systems of support. Additional New Mexico-specific cross-curricular activities for each module are provided to support culturally and linguistically responsive instruction for all students.

Module Content Maps

The module Content Maps provide details about important features of each module:

- **Essential Question**
- **Pacing Guide**
- **Module Opener—Ignite Activity**
- **Launch the Module—Math in the Real World**
- **Lessons at a Glance**
- **Lesson Goals**
- **Standards for Mathematical Practice**
- **CCSS Standards Coverage**

Planning for Multi-Layered Systems of Support

The Planning for Multi-Layered Systems of Support section calls out additional resources available in the Teacher Edition designed to help teachers support all learners. These features include additional student activities and worksheets as well as professional development opportunities for teachers to explore different instructional strategies.

- **Pre-Teach:** Prepare student understandings and promote productive struggle.
- **Re-Teach:** Identify and prepare content to revisit for targeted and intensive interventions.
- **Extension:** Challenge and broaden students' mathematical knowledge.

Culturally and Linguistically Responsive Instruction

Each module includes new activities to support Culturally and Linguistically Responsive Instruction. These activities provide additional opportunities to spark students' curiosity and connection to mathematics with culturally and historically specific examples from New Mexico. Each activity aligns with the content in the corresponding module. These are powerful tools to promote conversations that validate, affirm, build, and bridge connections between mathematical concepts and diverse cultural identities.

Course 1

Scope and Sequence

Module	No. of 45-min Class Periods	No. of 90-min Class Periods
Module 1 Ratios and Rates	20 days	10 Days
Module 2 Fractions, Decimals, and Percents	15 days	7.5 Days
Module Pretest and Launch the Module Video	1	0.5
Lesson 1 Understand Percents	1	0.5
Lesson 2 Percents Greater Than 100% and Less Than 1%	1	0.5
Lesson 3 Relate Fractions, Decimals, and Percents	3	1.5
Put It All Together 1 Lessons 2-1 through 2-3	0.5	0.25
Lesson 4 Find the Percent of a Number	3	1.5
Lesson 5 Estimate the Percent of a Number	1	0.5
Lesson 6 Find the Whole	2	1
Put It All Together 2 Lessons 2-4 through 26	0.5	.025
Module Review and Assessment	2	1
Module 3 Compute with Multi-Digit Numbers and Fractions	16 days	8 Days
Module 4 Integers, Rational Numbers, and the Coordinate Plane	21 days	10.5 Days
Module 5 Numerical and Algebraic Expressions	20.5 days	10.25 Days
Module 6 Equations and Inequalities	16.5 days	8.25 Days
Module 7 Relationships Between Two Variables	10.5 days	5.25 Days
Module 8 Area	15.5 days	7.75 Days
Module 9 Volume and Surface Area	13.5 days	6.75 Days
Module 10 Statistical Measures and Displays	15 days	7.5 Days
Interim and Final Assessments	3 days	1.5 Days

Module 2 Fractions, Decimals, and Percents

Module Essential Question

How can you use fractions, decimals, and percents to solve everyday problems?

PACING: 15 days

LESSON		LESSON GOAL	STANDARDS FOR MATHEMATICAL PRACTICE	STANDARDS
Module Opener IGNITE!		Learn about the relationship between fractions, decimals, and percents, and apply that relationship to finding the percent of a number.		
Launch the Module		The Launch the Module video introduces the idea of fractions, decimals, and percents.		
2-1	Understand Percents	Students will use 10 x 10 grids and bar diagrams to model percents.	Students will reason abstractly and quantitatively.	Foundational for **6.RP.A.3,** 6.RP.A.3.C
2-2	Percents Greater Than 100% and Less Than 1%	Students will use 10 x 10 grids to model percents that are greater than 100% and less than 1%.	Students will make sense of problems and persevere in solving them.	Foundational for **6.RP.A.3,** 6.RP.A.3.C
2-3	Relate Fractions, Decimals, and Percents	Students will relate fractions, decimals, and percents.	Students will construct viable arguments and critique the reasoning of others.	Foundational for **6.RP.A.3,** 6.RP.A.3.C
2-4	Find the Percent of a Number	Students will use bar diagrams, equivalent ratios, double number lines, and ratio tables to find the percent of a number.	Students will model with mathematics.	**6.RP.A.3,** 6.RP.A.3.C
2-5	Estimate the Percent of a Number	Students will estimate the percent of a number.	Students will use appropriate tools strategically.	**6.RP.A.3,** 6.RP.A.3.C
2-7	Find the Whole	Students will find the whole given the percent and the part.	Students will attend to precision.	**6.RP.A.3,** 6.RP.A.3.C

Planning for Multi-Layered Systems of Support

The Teacher Edition provides additional module and lesson resources and instructional strategies to support all learners.

Pre-Teach

These tools help teachers prepare student understandings and promote productive struggle.

- **Formative Assessment Math Probe** p. 77b
- **Module Opener Activities** pp. 77–78
- **Mindset Matters** p. 78
- **Warm Up Activities** pp. 79b, 85b, 93b, 103b, 113b, 121b

Re-Teach

These tools help teachers identify and prepare content to revisit for targeted and intensive interventions.

- **Exit Ticket** pp. 83, 91, 100, 110, 118, 126
- **Language Development Handbook** pp. 79a, 85a, 93a, 103a, 113a, 121a
- **Reflect and Practice** pp. 83–84, 91–92, 100–102, 110–112, 118–120, 126–128
- **Module Review** pp. 129–132
- **Go online for additional Practice, Review, and Take Another Look Exercises for each lesson**

Extension

These tools provide teachers with additional activities to challenge and broaden students' mathematical knowledge.

- **Enrichment Activities** pp. 81, 97, 113
- **Go online for additional Extension and Take Another Look Exercises for each lesson**

Teacher Notes

Culturally and Linguistically Responsive Instruction

Reveal Math provides flexibility in instructional and implementation options to meet the range of instructional settings and support the social, emotional, and academic needs of all learners. The following activities provide additional opportunities to spark students' curiosity and connection to mathematics with culturally and historically specific examples from New Mexico.

Business Connection

Sandia Peak Tramway Ridership

Tell students that the Sandia Peak Tramway can carry about 100 people each half hour. Ask them to draw a double line graph to determine the number of people it can carry when it is 25, 50, and 75 percent full during that time. Then challenge them to estimate additional percentages such as 20, 40, and 60 percent full. Ask volunteers to explain what their graphs show.

Science Connection

Gila National Forest Species

Have students determine the percent of a number using tree species from the Gila National Forest. Provide scenarios using data from the U.S. Department of Agriculture or other sources. For example, write that 6 out of 20 trees in an area are Ponderosa Pines. Then ask students to determine what percent of 20 is 6. Have them repeat with other trees and ratios. You may wish to have students choose one example and represent it as a drawing.

Arts Connection

New Mexican Craft Fair Pricing

Provide examples of traditional New Mexican crafts (e.g., woven blankets, pottery). Have students choose an item to pretend to sell at a craft fair. Ask them to make signs with various sale prices, such as 60% of the original price of a blanket is $75 or 90% of the original price of a vase is $26. Then have students go around to determine the original prices at each other's craft tables.

Social Studies Connection

New Mexico Population Data

Have students explore the most recent census data available. Ask them to make a display showing the percentage of the population made up by each ethnicity as a percent, a fraction, and as a decimal. Encourage students to analyze the displays to compare the amounts and discuss what the data means to them.

The Open Road Images/ Aurora Open

Course 2

Scope and Sequence

Module	No. of 45-min Class Periods	No. of 90-min Class Periods
Module 1 Proportional Relationships	17 days	8.5 Days
Module 2 Solve Percent Problems	13 days	6.5 Days
Module 3 Operations with Integers	15.5 days	7.75 Days
Module 4 Operations with Rational Numbers	12 days	6 Days
Module Pretest and Launch the Module Video	1	0.5
Lesson 1 Rational Numbers	2	1
Lesson 2 Add Rational Numbers	2	1
Lesson 3 Subtract Rational Numbers	1	0.5
Put It All Together 1 Lessons 4-1 through 4-3	0.5	0.25
Lesson 4 Multiply Rational Numbers	1	0.5
Lesson 5 Divide Rational Numbers	1	0.5
Put It All Together 2 Lessons 4-1 through 4-5	0.5	0.25
Lesson 6 Apply Rational Number Operations	1	0.5
Module Review and Assessment	2	1
Module 5 Simplify Algebraic Expressions	11.5 days	5.75 Days
Module 6 Write and Solve Equations	17 days	8.5 Days
Module 7 Write and Solve Inequalities	13 days	6.5 Days
Module 8 Geometric Figures	12.5 days	6.25 Days
Module 9 Measure Figures	14 days	7 Days
Module 10 Probability	15 days	7.5 Days
Module 11 Sampling and Statistics	11.5 days	5.75 Days
Interim and Final Assessments	3 days	1.5 Days

Module 4 Operations with Rational Numbers

Module Essential Question

How are operations with rational numbers related to operations with integers?

PACING: 12 days

LESSON		LESSON GOAL	STANDARDS FOR MATHEMATICAL PRACTICE	STANDARDS
Module Opener IGNITE!		Students observe how repeating decimals are annotated and used in mathematical operations.		
Launch the Module		Students will use measurement, altitude, and the stock market to introduce the idea of operations with rational numbers		
4-1	Rational Numbers	Students will identify terminating and repeating decimals, and use long division to convert rational numbers to decimals	Students will reason abstractly and quantitatively.	**7.NS.A.2, 7.NS.A.2.B, 7.NS.A.2.D, 7.NS.A.3, 7.EE.B.3**
4-2	Add Rational Numbers	Students will demonstrate application of the additive inverse, and an understanding of addition of rational numbers.	Students will look for and make use of structure.	**7.NS.A.1, 7.NS.A.1.A, 7.NS.A.1.B, 7.NS.A.1.D, 7.EE.B.3, 7.NS.A.3**
4-3	Subtract Rational Numbers	Students will demonstrate understanding of subtraction of rational numbers as adding the additive inverse and apply it to solving real-world problems.	Students will attend to precision.	**7.NS.A.1, 7.NS.A.1.C, 7.NS.A.1.D, 7.EE.B.3**
4-4	Multiply Rational Numbers	Students will apply understanding of multiplication to rational numbers, and use the order of operations to solve real-world problems.	Students will make sense of problems and persevere in solving them.	**7.NS.A.2, 7.NS.A.2.A, 7.NS.A.2.C, 7.NS.A.3, 7.NS.A.1.D, 7.EE.B.3**
4-5	Divide Rational Numbers	Students will apply understanding of division to rational numbers, and use the order of operations to solve real-world problems.	Students will model with mathematics.	**7.NS.A.2, 7.NS.A.2.B, 7.NS.A.2.C, 7.NS.A.3, 7.NS.A.1.D, 7.NS.A.2.A, 7.EE.B.3**

LESSON		LESSON GOAL	STANDARDS FOR MATHEMATICAL PRACTICE	STANDARDS
4-6	Apply Rational Number Operations	Students will apply understanding of the four operations with rational numbers to evaluate mathematical expressions.	Students will construct viable arguments and critique the reasoning of others.	**7.NS.A.1,** 7.NS.A.1.D, **7.NS.A.2,** 7.NS.A.2.C, **7.NS.A.3, 7.EE.A.2, 7.EE.B.3**

Planning for Multi-Layered Systems of Support

The Teacher Edition provides additional module and lesson resources and instructional strategies to support all learners.

Pre-Teach

These tools help teachers prepare student understandings and promote productive struggle.

- **Math Probe:** p. 175b
- **Module Opener Activities:** pp. 175–176
- **Mindset Matters:** p. 176
- **Warm Up Activities:** pp. 177b, 185b, 197b, 203b, 213b, 221b

Re-Teach

These tools help teachers identify and prepare content to revisit for targeted and intensive interventions.

- **Exit Ticket:** pp. 182, 194, 201, 210, 218, 224
- **Language Development Handbook:** pp. 177a, 185a, 197a, 203a, 213a, 221a
- **Reflect and Practice:** pp. 182–184, 194–196, 201–202, 210–212, 218–220, 224–226
- **Module Review:** pp. 227–230
- **Go online for additional Practice, Review, and Take Another Look Exercises for each lesson**

Extension

These tools provide teachers with additional activities to challenge and broaden students' mathematical knowledge.

- **Enrichment Activities:** pp. 182, 194, 202, 210, 218, 224
- **Go online for additional Extension and Take Another Look Exercises for each lesson**

Teacher Notes

Culturally and Linguistically Responsive Instruction

Reveal Math provides flexibility in instructional and implementation options to meet the range of instructional settings and support the social, emotional, and academic needs of all learners. The following activities provide additional opportunities to spark students' curiosity and connection to mathematics with culturally and historically specific examples from New Mexico.

Science Connection

New Mexico Hot Springs

Guide students to plot the temperatures of various New Mexico hot springs on a number line, using both positive and negative values to represent changes from the standard hot spring temperature (e.g., +10°F, −5°F from a base temperature of 104°F). Ask students to compare the different temperatures and discuss what these values mean relative to the "normal" temperature.

Economics Connection

Household Budgets

Ask students to discuss with their families how managing finances or resources in their homes might involve income (positive numbers) and expenses (negative numbers). Then have students work in pairs or small groups to imagine income and expenses for a small household or for a small business they might run. Have students use a number line to model how the income and expenses affect the amount of money in an account, demonstrating how adding positive integers increases the total, while adding negative integers decreases it. Invite students to share their work, reinforcing that subtracting a number is equivalent to adding its opposite.

Social Studies Connection

Population Changes in New Mexico

Provide data on population changes using charts or graph in a New Mexican city, such as Albuquerque, over the past decade. In particular, call out the portion of the population made up by different ethnic groups. Ask students to calculate the percentage increase or decrease over time for each group and discuss what these changes might mean for the community. Encourage them to share their thoughts on how population shifts can impact resources and infrastructure, connecting their learning to social studies and real-world challenges in local communities.

Jeffrey M. Frank/Shutterstock

Course 3

Scope and Sequence

Module	No. of 45-min Class Periods	No. of 90-min Class Periods
Module 1 Exponents and Scientific Notation	15.5 days	7.75 Days
Module 2 Real Numbers	14 days	7 Days
Module 3 Solve Equations with Variables on Each Side	13.5 days	6.75 Days
Module 4 Linear Relationships and Slope	17 days	8.5 Days
Module Pretest and Launch the Module video	1	0.5
Lesson 1 Proportional Relationships and Slope	2	1
Lesson 2 Slope of a Line	3	1.5
Lesson 3 Similar Triangles and Slope	1	0.5
Lesson 4 Direct Variation	2	1
Put It All Together 1 Lessons 4-1 through 4-4	0.5	0.25
Lesson 5 Slope-Intercept Form	3	1.5
Lesson 6 Graph Linear Equations	2	1
Put It All Together 2 Lessons 4-5 and 4-6	0.5	.025
Module Review and Assessment	2	1
Module 5 Functions	16 days	8 Days
Module 6 Systems of Linear Equations	17.5 days	8.75 Days
Module 7 Triangles and the Pythagorean Theorem	15.5 days	7.75 Days
Module 8 Transformations	15 days	7.5 Days
Module 9 Congruence and Similarity	15 days	7.5 Days
Module 10 Volume	15.5 days	7.75 Days
Module 11 Scatter Plots and Two-Way Tables	15 days	7.5 Days
Interim and Final Assessments	3 days	1.5 Days

Module 4 Linear Relationship and Slope

Module Essential Question

How are linear relationships related to proportional relationships?

PACING: 17 days

LESSON		LESSON GOAL	STANDARDS FOR MATHEMATICAL PRACTICE	STANDARDS
Module Opener IGNITE!		Graph and write equations to represent linear relationships.		
Launch the Module		The Launch the Module video uses the topics of skiing and airplanes to introduce the idea of linear relationships and slope.		
4-1	Proportional Relationships and Slope	Students will graph and compare proportional relationships, interpreting the unit rate as the slope of the line.	Students will make sense of problems and persevere in solving them.	**8.EE.B.5**
4-2	Slope of a Line	Students will find the slope of a line from a graph, table, and using the formula.	Students will look for and express regularity in repeated reasoning.	Foundational for **8.EE.B.6, 8.F.B.4,** 8.SP.A.3
4-3	Similar Triangles and Slope	Students will relate the slope of a line to similar triangles.	Students will reason abstractly and quantitatively.	**8.EE.B.6**
4-4	Direct Variation	Students will derive the equation $y = mx$ from graphs, tables, and verbal descriptions of proportional relationships.	Students will attend to precision.	**8.EE.B.5, 8.EE.B.6**
4-5	Slope-Intercept Form	Students will write linear equations to represent relationships in the form $y = mx + b$.	Students will look for and make use of structure.	**8.EE.B.6**
4-6	Graph Linear Equations	Students will graph lines in slope-intercept form, vertical lines, and horizontal lines.	Students will construct viable arguments and critique the reasoning of others.	Foundational for **8.EE.C.8.B, 8.F.A.3**

Planning for Multi-Layered Systems of Support

The Teacher Edition provides additional module and lesson resources and instructional strategies to support all learners.

Pre-Teach

These tools help teachers prepare student understandings and promote productive struggle.

- **Formative Assessment Math Probe** p. 173b
- **Module Opener Activities** pp. 173–174
- **Mindset Matters** p. 174
- **Warm Up Activities** pp. 175b, 191b, 205b, 213b, 225b, 237b

Re-Teach

These tools help teachers identify and prepare content to revisit for targeted and intensive interventions.

- **Exit Ticket** pp. 188, 202, 210, 222, 234, 244
- **Language Development Handbook** pp. 175a, 191a, 205a, 213a, 225a, 237a
- **Reflect and Practice** pp. 188–190, 202–204, 210–212, 222–224, 234–236, 244–246
- **Module Review** pp. 247–250
- **Go online for additional Practice, Review, and Take Another Look Exercises for each lesson**

Extension

These tools provide teachers with additional activities to challenge and broaden students' mathematical knowledge.

- **Enrichment Activities** pp. 188, 202, 210, 222, 234, 244
- **Go online for additional Extension and Take Another Look Exercises for each lesson**

Teacher Notes

Culturally and Linguistically Responsive Instruction

Reveal Math provides flexibility in instructional and implementation options to meet the range of instructional settings and support the social, emotional, and academic needs of all learners. The following activities provide additional opportunities to spark students' curiosity and connection to mathematics with culturally and historically specific examples from New Mexico.

Economics Connection

Understanding Unit Rates in New Mexico's Farmers' Markets

Have students graph the cost per pound of produce from two different New Mexico farmers' markets. You can either collect prices or present fictitious examples. Ask students to identify which market offers a better unit rate by analyzing the slopes of their graphs. Encourage students to determine the most cost-effective option.

Science Connection

Exploring the Slopes Of New Mexico's Mountains

Have students use elevation data from two New Mexico mountains to plot points on a graph and calculate the slope between different elevations. Ask students to compare their findings to see if the slopes remain consistent. Guide students to recognize how the slopes represent rate of elevation change.

Social Studies Connection

Modeling New Mexico's Population Growth

Provide students with a simple table with population data for a New Mexico city over a few years. Have them plot this data on graph paper and draw a line that best represents the trend. Guide them to create a linear equation that matches this line. Help students understand how to create a linear model from real-world data and recognize if the trend has a single, no, or infinite solutions.

STEM Connections

Frequency Patterns in Native American Flutes

Provide students with a short list of flute lengths and corresponding frequencies. Ask them to plot this data as points on graph paper and draw a line that best fits the data. Help them identify whether the relationship is increasing, decreasing, or not linear. Have students discuss whether a pattern is linear or nonlinear based on the plotted data.

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Reveal MATH®

Learn more at
mhk12.us/new-mexico

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