Connecticut Mathematics Model Curricula Alignment

Resource Name: REVEAL MATH GRADE 7

Alignment Grade 7				
Model Unit Name	Model Unit Standards	Resource Unit(s) Number	Resources Lessons	Pacing
This is the title of the unit in the model curricula	These are the standards addressed in the unit	This is the unit(s) that aligns with the model unit from the resource	These are the lessons from the identified units that align to the standards within the model unit	This is the expected number of days for instruction
			,	
Operating with Rational Numbers (Addition & Subtraction)	7.NS.A.1, 7.NS.A.3	Module 3: Operations with Integers	Lesson 3-1: Add Integers Lesson 3-2: Subtract Integers	35 days
Subtraction		Module 4: Operations with Rational Numbers	Lesson 3-3: Multiply Integers Lesson 3-4: Divide Integers	
		Madula C. Meita and Calus	Lesson 3-5: Apply Integer Operations	
		Module 6: Write and Solve Equations	Lance 44 Bellined Name	
		Module 8: Geometric Figures	Lesson 4-1: Rational Numbers Lesson 4-2: Add Rational Numbers	
		Module 9: Measure Figures	Lesson 4-3: Subtract Rational Numbers	
			Lesson 4-4: Multiply Rational Numbers	
			Lesson 4-5: Divide Rational Numbers	

			Lesson 4-6: Apply Rational Numbers	
			Lesson 6-1: Write and Solve One-Step Equations	
			Lesson 8-4: Scale Drawings	
			Lesson 9-1: Circumference of Circles	
			Lesson 9-2: Area of Circles	
			Lesson 9-3: Area of Composite Figures	
			Lesson 9-4: Volume	
			Lesson 9-5: Surface Area	
			Lesson 9-6: Volume and Surface Area of Composite Figures	
Operating with Rational	7.NS.A.2, 7.NS.A.3, 7.EE.A.2,	Module 2: Solve Percent	Lesson 2-1: Percent of Change	59 days
Numbers (Multiplication &	7.EE.B.3	Problems	Lesson 2-2: Tax	,
Division)			Lesson 2-3: Tips and Markup	
		Module 3: Operations with Integers	Lesson 2-4: Discounts	
		писвета	Lesson 2-5: Interest	
			Lesson 2-6: Commission and Fees	

Module 4: Operations with Rational Numbers	Lesson 2-7: Percent Error
Module 5: Simplify Algebraic Expressions	Lesson 3-1: Add Integers Lesson 3-2: Subtract Integers Lesson 3-3: Multiply Integers
Module 6: Write and Solve Equations	Lesson 3-4: Division Integers Lesson 3-5: Apply Integer Operations
Module 7: Write and Solve Inequalities	Lesson 4-1: Rational Numbers
Module 8: Geometric Figures	Lesson 4-2: Add Rational Numbers Lesson 4-3: Subtract Rational
	Numbers Lesson 4-4: Multiply Rational Numbers
	Lesson 4-5: Divide Rational Numbers Lesson 4-6: Apply Rational
	Number Operations
	Lesson 5-1: Simplify Algebraic Expressions
	Lesson 6-1: Write and Solve One-Step Equations

	Lancar C 2: Calva Tiva Chan
	Lesson 6-2: Solve Two-Step
	Equations px + q = r
	Lesson 6-3: Write and Solve
	Two-Step Equations: px + q = r
	Lesson 6-4: Solve Two-Step
	Equations: $p(x + q) = r$
	Lesson 6-5: Write and Solve
	Two-Step Equations: $p(x + q) = r$
	Lesson 7-1: Solve One-Step
	Addition and Subtraction
	Inequalities
	inequalities
	Lesson 7-2: Write and Solve
	One-Step Addition and
	Subtraction Inequalities
	Lesson 7-3: Solve One-Step
	Multiplication and Division
	Inequalities with Positive
	Coefficients
	Lesson 7-4: Solve One-Step
	Multiplication and Division
	Inequalities with Negative
	Coefficients
	Lesson 7-5: Write and Solve
	One-Step Multiplication and
	Division Inequalities
	Lesson 7-6: Write and Solve
	Two-Step Inequalities
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			Lesson 8-1: Vertical and Adjacent Angles Lesson 8-2: Complementary and Supplementary Angles Lesson 8-4: Scale Drawings	
Two and Three Dimensional Geometry	7.G.A.2, 7.G.A.3, 7.G.B.4, 7.G.B.5, 7.G.B.6	Module 8: Geometric Figures	Lesson 8-1: Vertical and Adjacent Angles	17 days
		Module 9: Measure Figures	Lesson 8-2: Complementary and Supplementary Angles	
			Lesson 8-3: Triangles Lesson 8-5: Three-Dimensional	
			Figures	
			Lesson 9-1: Circumference of Circles	
			Lesson 9-2: Area of Circles	
			Lesson 9-3: Area of Composite Figures	
			Lesson 9-4: Volume	
			Lesson 9-5: Surface Area Lesson 9-6: Volume and Surface Area of Composite Figures	
Proportional Reasoning	7.RP.A.1, 7.RP.A.2, 7.RP.A.3, 7.G.A.1	Module 1: Proportional Relationships	Lesson 1-1: Unit Rates Involving Ratios of Fractions	28 days
		Module 2: Solve Percent Problems	Lesson 1-2: Understand Proportional Relationships	

	Lesson 1-3: Tables of
Module 8	Proportional Relationships
	Lesson 1-4: Graphs of
	Proportional Relationships
Module 9	: Measure Figures Lesson 1-5: Equations of
	Proportional Relationships
Module 1	1: Sampling and Lesson 1-6: Solve Problems
Statistics	Involving Proportional
	Relationships
	Lesson 2-1: Percent of Change
	Lesson 2-2: Tax
	Lesson 2-3: Tips and Markup
	Lesson 2-4: Discounts
	Lesson 2-5: Interest
	Lesson 2-6: Commission and
	Fees
	Lesson 2-7: Percent Error
	Laccor S. A. Coola Drawings
	Lesson 8-4: Scale Drawings
	Lesson 9-6: Volume and Surface
	Area of Composite Figures
	Lesson 11-2: Make Predictions

			Lesson 11-3: Generate Multiple Samples	
Algebraic Reasoning II	7.EE.A.1, 7.EE.A.2, 7.EE.A.4	Module 2: Solve Percent Problems	Lesson 2-2: Tax Lesson 2-3: Tips and Markup	14 days
		Module 4: Operations with Rational Numbers	Lesson 2-4: Discounts Lesson 2-6: Commission and Fees	
		Module 5: Simplify Algebraic Expressions	Lesson 4-6: Apply Rational Number Operations	
			Lesson 5-1: Simplify Algebraic Expressions	
			Lesson 5-2: Add Linear Expressions	
			Lesson 5-3: Subtract Linear Expressions	
			Lesson 5-4: Factor Linear Expressions	
			Lesson 5-5: Combine Operations with Linear Expressions	
Probability	7.SP.C.5, 7.SP.C.6, 7.SP.C.7, 7.SP.C.8	Module 10: Probability	Lesson 10-1: Find Likelihoods Lesson 10-2: Relative Frequency of Simple Events Lesson 10-3: Theoretical	11 days
			Probability of Simple Events	

			Lesson 10-4: Compare Probabilities of Simple Events Lesson 10-5: Probability of Compound Events Lesson 10-6: Simulate Chance	
			Events	
Inferences and Populations	7.SP.A.1, 7.SP.A.2, 7.SP.B.3, 7. SP.B.4	Module 11: Sampling and Statistics	Lesson 1: Biased and Unbiased	8 days
	Jr.b.4	Statistics	Samples	
			Lesson 2: Make Predictions	
			Lesson 3: Generate Multiple	
			Samples	
			Lesson 4: Compare Two	
			Populations	
			Lesson 5: Assess Visual Overlap	

Reveal Math® was designed based on a learning progression of mathematical content and connecting concepts across all grades and within each grade. A program scope and sequence is available in the Teacher Digital Center: Program Resources. In support of effective implementation and best practices, guiding principles of the instructional design & pedagogy, professional learning videos, and other program features can be found in the Teacher Digital Center: Program Resources.

	Scope and Sequence		
If a district uses this resource to implement the stat and attention to the progressions of mathematics.	e model curriculum for grade 7, the follow	ring scope and sequence should be followe	ed to ensure alignment
Unit Number/Title and Lessons	Lesson Objectives	# of days (assume 1 hour of instruction)	Number of weeks

Lesson 1-1: Unit Rates Involving Ratios of Fractions	Students will find unit rates when or both quantities are fractions.	2	2 Weeks 3 Days
Lesson 1-2: Understand Proportional Relationships	Students will use models and ratio reasoning to understand how a proportional relationship can exist between quantities.	2	
Lesson 1-3: Tables of Proportional Relationships	Students will analyze the relationship between two quantities represented in tables to determine proportionality.	2	
Lesson 1-4: Graphs of Proportional Relationships	Students will analyze the relationship between two quantities graphed on a coordinate plane to determine proportionality.	3	
Lesson 1-5: Equations of Proportional Relationships	Students will write equations to represent proportional relationships.	2	
Lesson 1-6: Solve Problems Involving Proportional Relationships	Students will solve problems involving proportional relationships.	2	
Module 2: Solve Percent Problems			
Lesson 2-1: Percent of Change	Students will solve problems involving percent of increase and percent of decrease.	2	1 Week 4 Days
Lesson 2-2: Tax	Students will solve multi-step ratio and percent problems involving taxes.	2	
Lesson 2-3: Tips and Markups	Students will solve multi-step ratio and percent problems involving tips and markups.	1	
Lesson 2-4: Discounts	Students will solve multi-step ratio and percent problems involving discounts.	1	
Lesson 2-5: Interest	Students will solve problems involving simple interest.	1	
Lesson 2-6: Commission and Fees	Students will solve problems involving commission and fees.	1	
Lesson 2-7: Percent Error	Students will solve problems involving percent error.	1	

Module 3: Operations with Integers			
Lesson 3-1: Add Integers	Students will solve problems adding integers.	3	2 Weeks 2 Days
Lesson 3-2: Subtract Integers	Students will solve problems subtracting integers.	3	
Lesson 3-3: Multiply Integers	Students will solve problems multiplying integers.	3	
Lesson 3-4: Divide Integers	Students will solve problems dividing integers.	2	
Lesson 3-5: Apply Integer Operations	Students will solve problems by applying all operations to integers.	1	
Module 4: Operations with Rational Numb	pers		
Lesson 4-1: Rational Numbers	Students will identify terminating and repeating decimals, and use long division to convert rational numbers to decimals.	2	2 Weeks
Lesson 4-2: Add Rational Numbers	Students will demonstrate application of the additive inverse, and an understanding of addition of rational numbers.	2	
Lesson 4-3: Subtract Rational Numbers	Students will demonstrate understanding of subtraction of rational numbers as adding the additive inverse and apply it to solve real-world problems.	1	
Lesson 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.	1	
Lesson 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.	1	

Lesson 4-6: Apply Rational Number	Students will apply understanding of the four	1	
Operations	operations with rational numbers to evaluate		
	mathematical expressions.		
Module 5: Simplify Algebraic Expressions		1	
Lesson 5-1: Simplify Algebraic Expressions	Students will simplify algebraic expressions by combining like terms and using the Distributive Property.	2	1 Week 3 Days
Lesson 5-2: Add Linear Expressions	Students will add linear expressions and express the sum in simplest form.	2	
Lesson 5-3: Subtract Linear Expressions	Students will subtract linear expressions and express the difference in simplest form.	1	
Lesson 5-4: Factor Linear Expressions	Students will find the GCF of monomials and factor algebraic expressions.	2	
Lesson 5-5: Combine Operations with Linear Expressions	Students will combine operations to simplify linear expressions.	1	
Module 6: Write and Solve Equations			
Lesson 6-1: Write and Solve One-Step Equations	Students will write and solve one-step equations with rational numbers.	3	2 Weeks 3 Days
Lesson 6-2: Solve Two-Step Equations px + q = r	Students will solve two-step equations of the form $px + q = r$.	3	
Lesson 6-3: Write and Solve Two-Step Equations: px + q = r	Students will write and solve two-step equations of the form $px + q = r$.	2	
Lesson 6-4: Solve Two-Step Equations p(x + q) = r	Students will solve two-step equations of the form $p(x + q) = r$.	3	
Lesson 6-5: Write and Solve Two-Step Equations $p(x + q) = r$	Students will write and solve two-step equations of the form $p(x + q) = r$.	2	

Lesson 7-1: Solve One-Step Addition and Subtraction Inequalities	Students will solve and graph one-step addition and subtraction inequalities.	2	1 Week 4 Days
Lesson 7-2: Write and Solve One-Step Addition and Subtraction Inequalities	Students will write and solve one-step addition and subtraction inequalities.	1	
Lesson 7-3: Solve One-Step Multiplication and Division Inequalities with Positive Coefficients	Students will solve and graph one-step multiplication and division inequalities with positive coefficients.	2	
Lesson 7-4: Solve One-Step Multiplication and Division Inequalities with Negative Coefficients	Students will solve and graph one-step multiplication and division inequalities with negative coefficients.	2	
Lesson 7-5: Write and Solve One-Step Multiplication and Division Inequalities	Students will write and solve one-step multiplication and division inequalities.	1	
Lesson 7-6: Write and Solve Two-Step Inequalities	Students will write and solve two-step inequalities.	1	
Module 8: Geometric Figures		•	
Lesson 8-1: Vertical and Adjacent Angles	Students will identify vertical and adjacent angles and use what they know to find missing values.	2	1 Week 4 Days
Lesson 8-2: Complementary and Supplementary Angles	Students will identify complementary and supplementary angles and use what they know to find missing values.	2	
Lesson 8-3: Triangles	Students will draw triangles with and without tools.	2	
Lesson 8-4: Scale Drawings	Students will solve problems involving scale drawings.	2	
Lesson 8-5: Three-Dimensional Figures	Students will analyze three-dimensional figures.	1	
Module 9: Measure Figures			
Lesson 9-1: Circumference of Circles	Students will use radius and diameter to find circumferences.	2	2 Weeks

Lesson 9-2: Area of Circles	Students will find the area of circles.	2	
Lesson 9-3: Area of Composite Figures	Students will find the area of composite figures.	1	
Lesson 9-4: Volume	Students will find the volume of prisms and pyramids.	2	
Lesson 9-5: Surface Area	Students will find the surface area of prisms and pyramids.	2	
Lesson 9-6: Volume and Surface Area of Composite Figures	Students will find the volume and surface area of composite figures.	1	
Module 10: Probability			
Lesson 10-1: Find Likelihoods	Students will solve problems that classify the likelihood of simple events.	2	2 Weeks 2 Days
Lesson 10-2: Relative Frequency of Simple Events	Students will find the relative frequency of simple events and compare relative frequency to experimental probability.	2	
Lesson 10-3: Theoretical Probability of Simple Events	Students will solve problems involving theoretical probability of simple events and their complements.	2	
Lesson 10-4: Compare Probabilities of Simple Events	Students will solve problems that compare probabilities and relative frequencies of simple events.	1	
Lesson 10-5: Probability of Compound Events	Students will solve problems involving the probability of compound events.	2	
Lesson 10-6: Simulate Chance Events	Students will solve problems by simulating compound probability events.	2	
Module 11: Sampling and Statistics	1	1	1
Lesson 11-1: Biased and Unbiased Samples	Students will identify samples as biased and unbiased and determine whether inferences from the samples are valid.	2	1 Week 3 Days

Lesson 11-2: Make Predictions	Students will make predictions based on data gathered using a valid sampling method.	1	
Lesson 11-3: Generate Multiple Samples	Students will understand that taking multiple samples can help them gauge the variation in their predictions.	2	
Lesson 11-4: Compare Two Populations	Students will make comparative inferences about two populations based on the data from random samples.	2	
Lesson 11-5: Assess Visual Overlap	Students will informally assess the degree of visual overlap between two distributions.	1	

Supports of Diversity, Equity and Inclusion

Please provide any information relative to supporting culturally responsive instruction, multi-language learners, and students with disabilities

Culturally Responsive Instruction | Reveal Math

Drawing from research, McGraw Hill understands there are a number of factors that support classroom equity and echo the tenets of culturally responsive practices: high academic expectations for all students; a socially and emotionally positive classroom; a safe school climate; authentic and rigorous tasks; inclusive, relevant, and meaningful content; open and accepting communication; drawing from students' strengths, knowledge, culture, and competence; critically and socially aware inquiry practices; and strong teaching and teacher professional support for equity and inclusion.

McGraw Hill is committed to publishing pedagogically sound, high-quality, instructional materials that are fair, unbiased, and that recognize the unique contributions of people of all races and cultures. *Reveal Math* prides itself on exceeding the requirements for equal opportunity and representation in its program. We believe that all children should be able to see themselves as doers of mathematics and that means showing students from a range of genders, ethnicities, cultural backgrounds, and with different disabilities. McGraw Hill is also committed to producing materials that are free from cultural, ethnic or gender bias. Utmost care was taken to ensure an antiracist, anti-biased, nonsexist, and nonstereotyping presentation in the production of this resource.

The program displays males and females from various ethnic backgrounds in all types of environments, avoiding stereotypes. It provides every student with access and opportunities to learn. Throughout *Reveal Math*, all types of students are portrayed in all types of environments, so students of all backgrounds will be able to relate to the text.

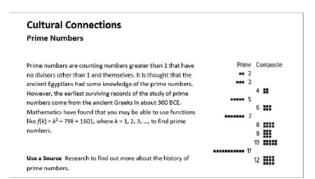
The focus on Social Emotional Learning also provides multiple opportunities for students and teachers to recognize and value differences between home cultures of students and the classroom. Each lesson has an SEL focus in the Math in Mindset that is seen as part of the Be Curious Moment and reflection at the end of the lesson. These were designed using the CASEL Core Competencies in SEL.

Reveal Math grades 6-12 displays males and females from various ethnic backgrounds in all types of environments, avoiding stereotypes. It provides every student with access and opportunities to learn. Throughout Reveal Math, all types of students are portrayed in all types of environments, so students of all backgrounds will be able to relate to the text.

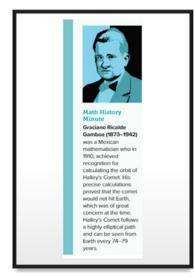
Each module open with an **Ignite! Activity** designed to spark all students' interest and curiosity. The Ignite activity is one example of an activity that provides students with opportunities to discuss individual interests and experiences. Lesson images and word problems portray a variety of demographics and cultural background. Mindset Matters tips provide students with opportunities to understand beliefs and how those beliefs impact student behavior and learning. The Multilingual eGlossary provides mathematics vocabulary translated into 13 common world languages.

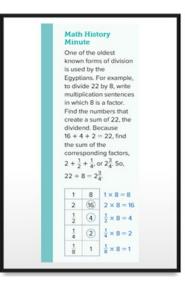
Cultural Connections

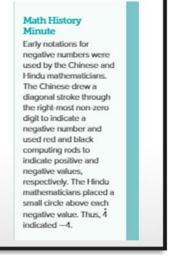
Module activities highlight various cultural contributions to mathematics and require students to use a source to do additional research on the culture or topic.

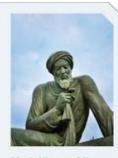


To provide students with diverse perspectives, **Math History Minutes** highlight multicultural, global mathematics influencers, past and present, and describe how they impacted the world with their work and how different cultures provided a variety of contributions to the work.









Math History Minute

Mathematician and astronomer Muhammad al-Khwarizmi (around 780-850) wrote the first known text in elementary algebra. The word algebra is derived from the word al-jabr, part of the title of this text. It means reunion of broken parts in Arabic. His texts were influential in bringing algebraic knowledge to Europe and were the first Arabic mathematics texts translated into Latin.

Additionally, the Language Development Handbook, Teacher Edition, includes Multicultural Teacher Tips throughout the handbook.

Please refer to the following link for further information on Equity and Cultural Responsiveness in *Reveal Math* 6-12:

NA Reveal Math 6-12 Equity and Cultural Responsiveness

Password: RevealCulturalResponsiveness

Multi-language learners and students with disabilities

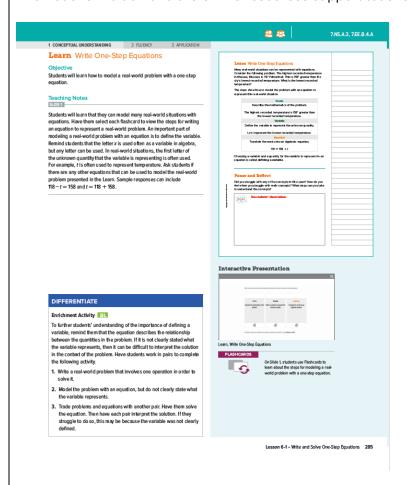
Reveal Math addresses the needs for all students and a variety of tiered instructional resources are provided for remediation or enrichment. Each lesson includes a list of suggested **Differentiated** resources that is based on assessment data from the **Checks** after each **Example**. Remediation resources (**Review** resources) target prerequisite skill knowledge. Leveled **Questions for Mathematical Discourse** are also included for every Example in the Teacher Edition. The supplemental materials differ in K-5 and 6-12 based on the different nature of these classrooms and age appropriateness for students.

Reveal Math 6-12

Resources range from Remediation (**Review** resources) that target prerequisite skill knowledge to Enrichment (**Extension** resources) that extend student knowledge on the lesson topic. Each module has a readiness diagnostic and based on that, the teacher can use the embedded resources to support students in their classroom.

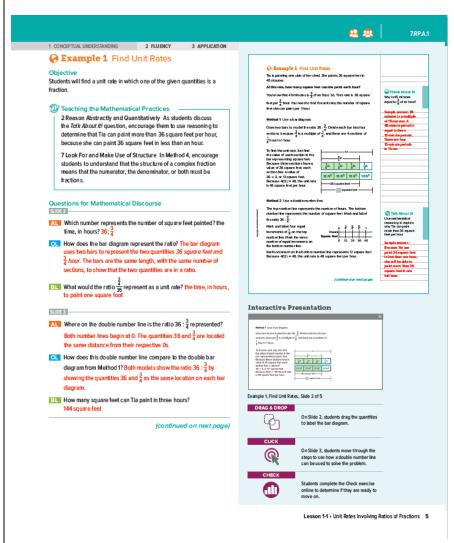
- The **Review Learn** and the **Review Example** are available to support students in acquiring pre-requisite skills.
- The **Take Another Look** Mini Lessons support students in remediation for the current topics under review.
- The **Personal Tutors** are available to support student understanding
- Online **Extension** activities are included for many lessons. In these activities, students extend their understanding of mathematical topics related to the lesson.
- The Teacher Edition includes **Enrichment Activity** suggestions at point-of-use for students who would benefit from a challenge or opportunity to extend their learning based on the checks in the lesson.
- In the Teacher Edition, **Questions for Mathematical Discourse** are included for each example to promote high expectations, critical thinking skills, and class discussion. On-level (OL) questions and beyond-level (BL) questions are appropriate for all students to answer, while approaching-level (AL) questions are included if students need more scaffolded support.
- The differentiated practice and assessment gives the teacher opportunities to support individual student needs.
- The Quick Review Handbook is included and targeted at point of use.
- A digital **Multilingual eGlossary** is provided that contains mathematics terms translated into 13 languages.

The Teacher Edition and the online resources support teacher guidance on which supports to use at the module and lesson levels.



Course 2 Teacher Edition, pg. 285: The Differentiate feature includes a Beyond-Level (BL) Enrichment Activity.

The **Extension** activities can be assigned to students who finish early or who need an extra challenge. These activities can be assigned to individual students, pairs of students, or a small group.



Course 2 Teacher Edition, pg. 5

A core instructional belief of McGraw Hill's *Reveal Math* K-12 is that the learning of mathematics requires a focus on language and the language of mathematics. To support students' development of the language of mathematics, the program includes rich support for language development, for both native and non-native speakers of English.

Each lesson features a language objective in addition to a content and SEL (social and emotional learning) objective to highlight the importance of language development in the program. In addition, these features provide support and scaffolds for building students' mathematical language proficiency:

- Language of Math (LOM) strategies and features focus on mathematical and academic terms that students need to understand to be successful.
- Math Language Development support at the unit level offer support and strategies that teachers can use to help students build proficiency with language skills.
- Math Language Routines (MLR) found in each lesson are specifically designed to help English language learners build fluency with math language. These routines were developed by a team of educators and researchers at Stanford Graduate School of Education.
- English Language Learner Supports also found in each lesson provide scaffolded support at three levels of proficiency: Entering/Emerging, Developing/Expanding, and Bridging/Reaching. These three levels align to the WIDA levels: Entering, Beginning, Developing, Expanding, Bridging, and Reaching.

The Teacher Edition also has specific pedagogical suggestions for teachers based on the WIDA levels. These are included both at the Unit/Module and Lesson Levels.

There are robust Spanish resources for *Reveal Math*. There is a Spanish translation of the Student Edition and other resources. The Student Edition includes support for all students in vocabulary development, notetaking, and writing skills using word cards, vocabulary squares, three-column charts, definition maps, concept webs, and other graphic organizers, along with English/Spanish cognates in Dinah Zike's Visual Kinesthetic Vocabulary[®].

As mentioned above, a course-level digital and print **Glossary** is provided with words translated into English and Spanish. For grades 6-12, a digital **Multilingual eGlossary** is provided that contains mathematics terms translated into 13 languages. Also, online are Math Replay Videos that provide additional support and review opportunities for concepts presented in the text.