



PRIME V2TM

Protocol for Review of
Instructional Materials for ELLs V2

WIDA PRIME V2 CORRELATION





Introduction to PRIME

WIDA developed PRIME as a tool to assist publishers and educators in analyzing their materials for the presence of key components of the WIDA Standards Framework. PRIME stands for Protocol for Review of Instructional Materials for ELLs.

The PRIME correlation process identifies how the components of the 2012 Amplification of the English Language Development Standards, Kindergarten through Grade 12, and the Spanish Language Development (SLD) Standards, Kindergarten through Grade 12 are represented in instructional materials. These materials may include core and supplemental texts, websites and software (e.g., apps, computer programs), and other ancillary materials. PRIME is not an evaluative tool that judges the effectiveness of published materials.

Those who complete WIDA PRIME Correlator Trainings receive PRIME Correlator Certification. This may be renewed annually. Contact WCEPS for pricing details at store@wceps.org or 877-272-5593.

New in This Edition

PRIME has been expanded to include

- Correlation to the WIDA Standards Framework
- Connections to English and Spanish Language Development Standards
- Relevance for both U.S. domestic and international audiences

Primary Purposes

- To assist educators in making informed decisions about selecting instructional materials for language education programs
- To inform publishers and correlators on the various components of the WIDA Standards Framework and of their applicability to the development of instructional materials

Primary Audience

- Publishers and correlators responsible for ensuring their instructional materials address language development as defined by the WIDA English and Spanish Language Development Standards
- District administrators, instructional coaches, and teacher educators responsible for selecting instructional materials inclusive of or targeted to language learners

At WIDA, we have a unique perspective on how to conceptualize and use language development standards. We welcome the opportunity to work with both publishers and educators. We hope that in using this inventory, publishers and educators will gain a keener insight into the facets involved in the language development of language learners, both in the U.S. and internationally, as they pertain to products.

Overview of the PRIME Process

PRIME has two parts. In Part 1, you complete an inventory of the materials being reviewed, including information about the publisher, the materials' intended purpose, and the intended audience.

In Part 2, you answer a series of yes/no questions about the presence of the criteria in the materials. You also provide justification to support your "yes" responses. If additional explanations for "No" answers are relevant to readers' understanding of the materials, you may also include that in your justification. Part 2 is divided into four steps which correspond to each of the four elements being inventoried; see the following table.

PRIME at a Glance

Standards Framework Elements Included in the PRIME Inventory
1. Asset-based Philosophy
A. Representation of Student Assets and Contributions
2. Academic Language
A. Discourse Dimension
B. Sentence Dimension
C. Word/Phrase Dimension
3. Performance Definitions
A. Representations of Levels of Language Proficiency
B. Representations of Language Domains
4. Strands of Model Performance Indicators and the Standards Matrices
A. Connection to State Content Standards and WIDA Language Development Standards
B. Cognitive Challenge for All Learners at All Levels of Language Proficiency
C. Supports for Various Levels of Language Proficiency
D. Accessibility to Grade Level Content
E. Strands of Model Performance Indicators

PRIME Part 1: Provide Information about Materials

Provide information about each title being correlated.

Publication Title(s): Reveal Math

Publisher: McGraw-Hill

Materials/Program to be Reviewed: Reveal Math Algebra 1, Geometry, Algebra 2 (Grades 9, 10, 11)

Tools of Instruction included in this review: Language Development Handbook, Teacher Edition and Student Edition

Intended Teacher Audiences: High School Math Teachers

Intended Student Audiences: High School Students (Grades 9, 10 & 11)

Language domains addressed in material: Listening, Speaking, Reading, and Writing

Check which set of standards will be used in this correlation:

WIDA Spanish Language Development Standards

WIDA English Language Proficiency Standards

WIDA Language Development Standards addressed: (e.g. Language of Mathematics). Language of Mathematics, Social and Instructional Language

WIDA Language Proficiency Levels included: The WIDA language proficiency levels are not explicitly named as WIDA levels, but the materials do provide support, activities and descriptors for three sets of levels: Entering/Emerging, Developing/Expanding, and Bridging. These are the same names as WIDA levels 1-5.

Most Recently Published Edition or Website: Copyright ©2020

In the space below explain the focus or intended use of the materials: Academic research and the science of learning provide the foundation for this powerful K-12 math program designed to help reveal the mathematician in every student. Reveal Math used findings from research on teaching and learning mathematics to develop its instructional model. Based on analyses of research findings, these areas form the foundational structure of the program: rigor, productive struggle, formative assessment, rich tasks, mathematical discourse, and collaborative learning.

PRIME Part 2: Correlate Your Materials

1. Asset-Based Philosophy

A. Representation of Student Assets and Contributions

The WIDA Standards Framework is grounded in an asset-based view of students and the resources and experiences they bring to the classroom, which is the basis for WIDA’s Can Do Philosophy.

- 1) **Are the student assets and contributions considered in the materials?** Yes No
- 2) **Are the student assets and contributions systematically considered throughout the materials?** Yes No

Justification: Provide examples from materials as evidence to support each “yes” response for this section. Provide descriptions, not just page numbers.

- 1) Students’ assets and contributions are considered in the materials. In the Language Development Handbook (LDH) for each grade level, the Guiding Principles for Supporting English Learners explain their philosophy about ELLs. One asset-based statement within this description on page v of the LDH says, “A great many ELLs come to school with a variety of rich linguistic and cultural backgrounds from Spanish-speaking communities and countries all throughout the Americas...The experiences and identities acquired in the context of ELLs’ homes and communities can transform the simplest classroom into a unique cultural and linguistic microcosm.” All the lessons in the LDH differentiate instruction through a table entitled “English Language Development Leveled Activities.” These activities take students’ language levels into account and often encourages collaborative learning and student engagement. There are also often “Multicultural Teacher Tips” which points out cultural differences that teachers may observe in their students during the lesson. An example can be seen here, from the LDH, Algebra 1, page T11:

English Language Development Leveled Activities

Beginning Level	Intermediate Level	Advanced Level
<p>Making Connections</p> <p>Ask students if they know what the symbol \emptyset means. Show examples of signs, such as no smoking signs, that use this type of symbol.</p> <p>Remind students of situations where there may be <i>no solution</i> to an equation. Help students recognize different ways of saying or showing that an equation has no solution, such as <i>empty set</i> or the symbol \emptyset.</p>	<p>Partners Work</p> <p>Provide each pair of students with a few absolute value equations to solve. Ask them to take turns completing one step at a time, passing the paper back and forth, until the problem is solved. As they work, have students explain their work to their partner using appropriate vocabulary words: <i>solve, solution, inverse operation, add, subtract, multiply, divide, product, quotient, and absolute value.</i></p>	<p>Public Speaking</p> <p>In pairs, have students research the term <i>margin of error</i> using the Internet. Ask students to find three real-world examples of people using or referencing margin of error. Have each student share at least one of their examples with the class, relating margin of error to absolute value.</p>

Multicultural Teacher Tip

When evaluating students' understanding of absolute value, be aware that English learners may handwrite their numbers with slightly different notation than what is done in English. For example, some students may put a line through the stem of 7 or add a serif to the top of 1. Ensure that you do not mistake these added marks as negative symbols.

- 2) Students' assets and contributions are systematically considered throughout the materials. An asset-based philosophy is stated in the Guiding Principles for Supporting English Learners mentioned above but is also considered through the scaffolds and supporting activities which occur in each lesson. In the "Launch" component of the lesson, the students will "view a real-world scenario and image to pique their interest in the lesson content." Then, in the "Explore" section, the students "work in partners or small groups to explore a rich mathematical problem related to the lesson content" (page iv, Algebra 1 Teacher Edition Volume 1). There are also specific resources for English Language Learners, often incorporating Spanish language materials and resources. An example can be seen here, from pages xvi-xviii of the table of English/Spanish Cognates used in Algebra 2:

English/Spanish Cognates Used in Algebra 2

English Term	Spanish Term	Lesson
absolute value	valor absoluto	2-2
algebraic notation	notación algebraica	1-1
asymptote	asíntota	7-1
binomial	binomio	4-3
circular function	función circular	11-3
combined variation	variación combinada	9-5
common logarithms	logaritmos comunes	8-3
complex conjugates	conjugados complejos	3-3
complex fraction	fracción compleja	9-1
complex number	número complejo	3-3
conjugates	conjugados	6-5
consistent	consistente	2-4
constant function	función constante	1-7
continuous function	función continua	1-1
cosecant	cosecante	11-2
cotangent	cotangente	11-2
coterminal angles	ángulos coterminales	11-1
critical values	valores críticos	10-5
cycle	ciclo	11-3
dependent	dependiente	2-4
direct variation	variación directa	9-5
discontinuous function	función discontinua	1-1
discrete function	función discreta	1-1
discriminant	discriminante	3-6
distribution	distribución	10-3
elimination	eliminación	2-5
equation	ecuación	2-1
experiment	experimento	10-1
experimental probability	probabilidad experimental	10-2
explicit formula	fórmula explícita	7-4
exponential equation	ecuación exponencial	7-2
exponential form	forma exponencial	6-3
exponential function	función exponencial	7-1
extrema	extrema	1-3
finite sequence	secuencia finita	7-4
frequency	frecuencia	11-4
geometric sequence	secuencia geométrica	7-4
geometric series	series geométricas	7-4
horizontal asymptote	asíntota horizontal	9-2
hyperbola	hipérbola	9-2
identity	identidad	5-3
identity function	función identidad	1-7

These tables can be found in each Language Development Handbook for each of the three courses.

2. Academic Language

WIDA believes that developing language entails much more than learning words. WIDA organizes academic language into three dimensions: discourse, sentence, and word/phrase dimensions situated in sociocultural contexts. Instructional material developers are encouraged to think of how the design of the materials can reflect academic language as multi-dimensional.

A. Discourse Dimension (e.g., amount, structure, density, organization, cohesion, variety of speech/written text)

- | | | |
|---|-------------------|----|
| 1) Do the materials address language features at the discourse dimension in a consistent manner for all identified proficiency levels? | <u>Yes</u> | No |
| 2) Are the language features at the discourse dimension addressed systematically throughout the materials? | <u>Yes</u> | No |

Justification: Provide examples from materials as evidence to support each "yes" response for this section. Provide descriptions, not just page numbers.

1) The materials address language features at the discourse dimension in a consistent manner for all identified proficiency levels. The LDH provides a chart on collaborative conversations, because students engage in whole and small group and also partner discussions during each lesson. The chart, seen below, provides frames for these conversations:

Collaborative Conversations

Students engage in whole-class, small-group, and partner discussions during every lesson. The chart below provides prompt frames and response frames that will help students at different language proficiency levels interact with each other in meaningful ways.

You may wish to post these frames in the classroom for student reference.

Core Skills	Prompt Frames	Response Frames
Elaborate and Ask Questions	Can you tell me more about it? Can you give me some details? Can you be more specific? What do you mean by...? How or why is it important?	I think it means that... In other words... It's important because... It's similar to when...
Support Ideas with Evidence	Can you give any examples from the text? What are some examples from other texts? What evidence do you see for that? How can you justify that idea? Can you show me where the text says that?	The text says that... An example from another text is... According to... Some evidence that supports that is...
Build On or Challenge Partner's Ideas	What do you think of the idea that...? Can we add to this idea? Do you agree? What are other ideas/ points of view? What else do we need to think about? How does that connect to the idea...?	I would add that... I want to follow up on your idea... Another way to look at it is... What you said made me think of...
Paraphrase	What do we know so far? To recap, I think that... I'm not sure that was clear. How can we relate what I said to the topic/ question?	So, you are saying that... Let me see if I understand you... Do you mean that...? In other words... It sounds like you are saying that...
Determine the Main Idea and Key Details	What have we discussed so far? How can we summarize what we have talked about? What can we agree upon? What are main points or ideas we can share? What relevant details support the main points or ideas? What key ideas can we take away?	We can say that... The main idea seems to be... As a result of this conversation, we think that we should... The evidence suggests that...

viii

In another section of the LDH, called “Strategies for Classroom Discussion,” guidance and sentence frames are provided at each identified level for helping students use discourse in the classroom:

Strategies for Classroom Discussion

Providing multiple opportunities to speak in the classroom and welcoming all levels of participation will motivate English learners to take part in class discussions and build oral proficiency. These basic teaching strategies will encourage whole class and small group discussions for all language proficiency levels of English learners.

✓ Wait time/Different Response

- Be sure to give students enough time to answer the question. They may need more time to process their ideas.
- Let them know that they can respond in different ways depending on their levels of proficiency. Students can:
 - Answer in their native language; then you can rephrase in English
 - Ask a more proficient ELL speaker to repeat the answer in English
 - Answer with nonverbal cues.

✓ Elaborate

- If students give a one-word answer or a nonverbal clue, elaborate on the answer to model fluent speaking and grammatical patterns.
- Provide more examples or repeat the answer using proper academic language.

✓ Elicit

- Prompt students to give a more comprehensive response by asking additional questions or guiding them to get an answer, such as can you tell me more?
- This strategy is very effective when students are asked to justify or explain their reasoning.

✓ Asking about Meaning

- Repeating an answer offers an opportunity to clarify the meaning of a response.
- Repeating an answer allows you to model the proper form for a response. You can model how to answer in full sentences and use academic language.
- When you repeat the answer, correct any grammar or pronunciation errors.

ENTERING/EMERGING

- What is _____?
- What does _____ mean?
- _____ is _____.
- _____ means _____.

DEVELOPING/EXPANDING

- Could you tell me what _____ means?
- _____ is similar to _____.
- _____ is another way of saying _____.

BRIDGING

- Could you give me a definition of _____?
- Can you point to the evidence from the text?
- What is the best answer? Why?

2) Language features at the discourse dimension are systematically addressed throughout the materials. In the margins of the Student Editions are prompts that the students can use to talk or write about what they've just learned. Usually, there is also a prompt for students to think about something before they discuss. An example can be seen below, taken from page 238 of the Student Edition, Geometry:

 **Think About It!**

Compare and contrast the processes for finding the distance between a point and a line and for finding the distance between parallel lines.

The Teacher Edition provides example sample responses for these questions.

B. Sentence Dimension (e.g., types, variety of grammatical structures, formulaic and idiomatic expressions; conventions)

- | | | |
|--|-------------------|----|
| 1) Do the materials address language features at the sentence dimension for all of the identified proficiency levels? | <u>Yes</u> | No |
| 2) Are the language features at the sentence dimension appropriate for the identified proficiency levels? | <u>Yes</u> | No |
| 3) Are the language features at the sentence dimension addressed systematically throughout the materials? | <u>Yes</u> | No |

Justification: Provide examples from materials as evidence to support each “yes” response for this section. Provide descriptions, not just page numbers.

- 1)** The materials address the language features at the sentence dimension for all identified proficiency levels. Each lesson contains a chart, organized by the three identified proficiency levels (Entering/Emerging, Developing/Expanding, and Bridging) with leveled

activities for the lesson topic. As seen in the example below, there are often sentence frames and other grammatical features to support student discussion. This example comes from the LDH, Algebra 1, page T19:

English Language Development Levelled Activities		
Beginning Level	Intermediate Level	Advanced Level
<p>Turn and Talk Have students fill in the sentence frames from the word list and take turns reading the sentence frames to each other. Word list: <i>extrema, symmetry, positive/negative extremes, domain, range, relative maximum, and end behavior.</i></p> <p>The _____ determines what goes into a function, and the _____ is what comes out of a function. [domain, range]</p> <p>_____ is when each half of a graph mirrors itself. [Symmetry]</p> <p>The _____ is one part of the _____. [relative maximum, extrema]</p>	<p>Listen and Write Have students create several webs using the vocabulary review words in their math journal. Use the words in the following sentence frames and record them under the math webs.</p> <p>The _____ determines what goes into a function and the _____ is the output of a function. [domain, range]</p> <p>_____ is when each half of a graph mirrors itself. [Symmetry]</p> <p>The _____ is one part of the _____. [relative maximum, extrema]</p>	<p>Look, Listen, and Identify Have students create a graph by drawing a smooth curve through the following points: $(-4, -4)$, $(-3, -2)$, $(-2, 2)$, $(-1, 1)$, $(0, 0)$, $(2, -3)$, $(3, 0)$, and $(5, 3)$.</p> <p>Have students label the key elements of the graph using the review vocabulary. Then have advanced students share what they can interpret from the graph with the beginning and intermediate students.</p>

Additionally, students are provided with many types of graphic organizers, such as Cornell Notes, throughout the materials to help provide understanding. According to the description, on page xv of the LDH, Cornell Notes “provide students with a method to take notes, thereby helping them with language structure. Scaffolded sentence frames are provided for students to fill in important math vocabulary by identifying the correct word or phrase according to context.” An example of this method is seen here, from page 54 of the LDH for Geometry:

NAME _____ DATE _____ PERIOD _____

Note-Taking

Similar Triangles: AA Similarity

Complete the notes. Then write a summary of similar triangles.

Questions	Notes
1. What is true of the angles in similar triangles?	Similar triangles have angles that are <u>congruent</u> or identical.
2. What is true of the sides of similar triangles?	Similar triangles have sides that are <u>proportional</u> or have the same ratio.

Summary

What are similar triangles?

Similar triangles have the same shape, but different sizes. Corresponding angles of similar triangles are congruent, and corresponding sides are proportional.

54 *Reveal Geometry*

2) The sentence dimension language features are appropriate for the identified proficiency levels. As mentioned above, the LDH contains leveled activities for each lesson, which contain appropriate sentence dimension features. In this example, from Algebra 2, page T5, the teachers are reminded to ask questions based on their students' level of English comprehension:

Graphing Linear Functions and Inequalities

English Learner Instructional Strategy

Language Structure Support: Tiered Questions

Before the lesson, review the terms *slope*, *x-intercept*, *y-intercept*, and *table* to ensure that students understand how to graph a function by using the given information. Provide a visual example of each, and ask students the following questions based on their language proficiency.

Beginning: *Can you point to where the y-intercept goes in a table?*

Intermediate: *Where can you find the slope in the equation of a function? What letter is used to represent slope?*

Advanced: *When given the x-intercept, how can you find the y-intercept?*

English Language Development Leveled Activities

Beginning Level	Intermediate Level	Advanced Level
Sentence Frames Identify the symbols $<$ and $>$, and explain to students that they mean <i>less than</i> and <i>greater than</i> when used to compare two numbers. Have students draw cards from a deck with the face cards removed and use the numbers to complete the sentence frames aloud: _____ is greater than _____. _____ is less than _____.	Word Knowledge Identify the symbols \leq and \geq , and ask students <i>What do these symbols mean?</i> If students are unfamiliar with them, explain that they mean <i>less than or equal to</i> and <i>greater than or equal to</i> . Explain that we use the words <i>less</i> and <i>greater</i> to compare. Ask students to identify other comparative words that end in <i>-er</i> and create an illustrated poster for the classroom.	Word Knowledge Identify the symbols \leq and \geq , and ask students <i>What are these symbols called?</i> If students are unfamiliar with them, explain that they mean <i>less than or equal to</i> and <i>greater than or equal to</i> . Explain that we use the words <i>less</i> and <i>greater</i> to compare. Ask students to identify irregular comparative words that do not follow the <i>-er</i> ending rule (such as <i>good/better</i>) and create an anchor chart for the classroom.

Multicultural Teacher Tip

English language learners may be unfamiliar with the percent-based grading system we use in the United States. Many countries use different numbered scales, words, and standards. Before completing the real-world example in the lesson, make sure students understand the U.S. grading scale.

3) The features at the sentence dimension are present systematically throughout the materials. Every lesson contains the aforementioned English Language Development Leveled Activities, which address the lesson content in an appropriate manner for each of the three identified proficiency levels. Oftentimes there are additional tips, and language support, as seen here in this example from the LDH, Geometry, page T17, for using Tiered Questions:

Language Structure Support: Tiered Questions

Tiered questions, instruction, and assessments increase understanding. Ask advanced English language learners yes/no questions such as *Does the sentence have the word if?* After students identify the word, instruct them to point to or underline the hypothesis. For counterexamples, ask *Can you think of another _____ that doesn't _____?* Then have students verbally provide an example. For beginning students, provide two pictures. For intermediate students, provide written statements, and ask *Which is represented, the converse, the inverse, or the contrapositive?* For advanced students, provide two pictures or written statements, and ask *How are the two statements related to each other?*

C. Word/Phrase Dimension (multiple meanings of words, general, specific, and technical language¹)

- | | | |
|--|------------|----|
| 1) Do the materials address language features at the word/phrase dimension in a consistent manner for all identified proficiency levels? | <u>Yes</u> | No |
| 2) Are words, expressions, and phrases represented in context? | <u>Yes</u> | No |
| 3) Is the general, specific, and technical language appropriate for the targeted proficiency levels? | <u>Yes</u> | No |
| 4) Is the general, specific, and technical ² language systematically presented throughout the materials? | <u>Yes</u> | No |

Justification: Provide examples from materials as evidence to support each "yes" response for this section. Provide descriptions, not just page numbers.

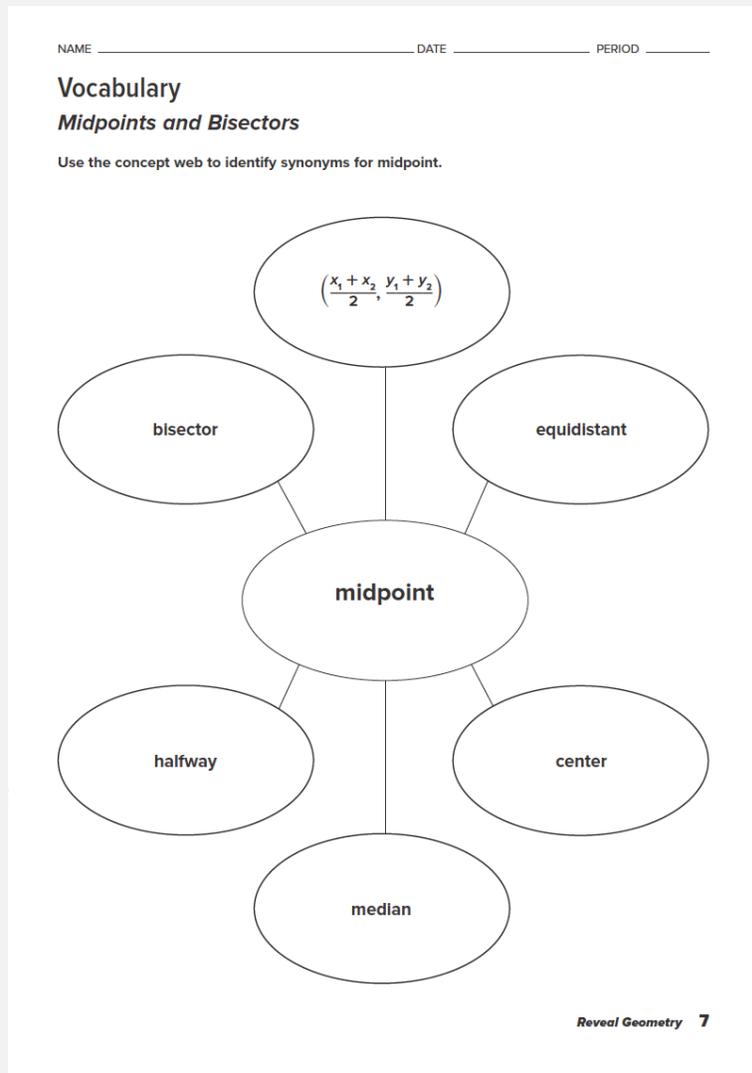
- 1) The materials address the language features of the word/phrase dimension in a consistent manner for all three identified proficiency levels. There is a relatively strong

²General language refers to words or expressions not typically associated with a specific content areas (e.g., describe a book).

Specific language refers to words or expressions used across multiple academic content areas in school (chart, total, individual).

Technical language refers to the most precise words or expressions associated with topics within academic content areas in school and is reflective of age and developmental milestones.

emphasis on vocabulary development throughout the series. For example, in the English Language Development Leveled Activities chart in the LDH, the Entering/Emerging level often targets academic vocabulary. There are also many accompanying graphic organizers to help with these new vocabulary words. An example of a vocabulary graphic organizer can be seen below, taken from Geometry, page 7:



Another example of a graphic organizer for vocabulary development gives the students opportunities to connect the vocabulary words to the same word in Spanish. These activities also give students the opportunity to recognize cognates that may be familiar to

them:

NAME _____ DATE _____ PERIOD _____

Vocabulary

Angle Relationships

Use the word cards to define each vocabulary term and give an example.

Word Card

<div style="border: 1px solid gray; border-radius: 5px; padding: 5px; text-align: center;">complementary angles</div>	<div style="border: 1px solid gray; border-radius: 5px; padding: 5px; text-align: center;">ángulos complementarios</div>
<small>Definition</small> <u>Two angles with measures</u> <u>that have a sum of 90°.</u>	<small>Definición</small> <u>Dos ángulos con medidas</u> <u>que tienen una suma de 90°.</u>
<small>Example Sentence</small> <u>Adjacent complementary angles form a right angle.</u>	

Copyright © McGraw-Hill Education

Word Card

<div style="border: 1px solid gray; border-radius: 5px; padding: 5px; text-align: center;">supplementary angles</div>	<div style="border: 1px solid gray; border-radius: 5px; padding: 5px; text-align: center;">ángulos suplementarios</div>
<small>Definition</small> <u>Two angles with measures</u> <u>that have a sum of 180°.</u>	<small>Definición</small> <u>Dos ángulos con medidas</u> <u>que tienen una suma de 180°.</u>
<small>Example Sentence</small> <u>Adjacent supplementary angles form a straight angle.</u>	

Copyright © McGraw-Hill Education

Reveal Geometry 9

2) Words, phrases and expressions are represented in context throughout the materials. All the vocabulary and phrases used within a lesson connect to the math content of the lesson. Often, as in the example below from Algebra 2, Module 4, the students will check off the vocabulary they already know before beginning the Module:

What Vocabulary Will You Learn?

Check the box next to each vocabulary term that you may already know.

- | | | |
|---|---|--|
| <input type="checkbox"/> binomial | <input type="checkbox"/> monomial function | <input type="checkbox"/> quintic function |
| <input type="checkbox"/> closed | <input type="checkbox"/> Pascal's triangle | <input type="checkbox"/> standard form of a polynomial |
| <input type="checkbox"/> degree | <input type="checkbox"/> polynomial in one variable | <input type="checkbox"/> synthetic division |
| <input type="checkbox"/> degree of a polynomial | <input type="checkbox"/> polynomial function | <input type="checkbox"/> trinomial |
| <input type="checkbox"/> FOIL method | <input type="checkbox"/> power function | |
| <input type="checkbox"/> leading coefficient | <input type="checkbox"/> quartic function | |

The students then proceed with the lesson and encounter the words in context:

Learn Graphing Power Functions

A **power function** is any function of the form $f(x) = ax^n$ where a and n are nonzero real numbers. For a power function, a is the **leading coefficient** and n is the **degree**, which is the value of the exponent. A power function with positive integer n is called a **monomial function**.

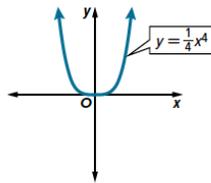
Key Concept • End Behavior of a Monomial Function

Degree: even

Leading Coefficient: positive

End Behavior:

As $x \rightarrow -\infty$, $f(x) \rightarrow \infty$.
As $x \rightarrow \infty$, $f(x) \rightarrow \infty$.



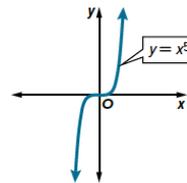
Domain: all real numbers
Range: all real numbers ≥ 0

Degree: odd

Leading Coefficient: positive

End Behavior:

As $x \rightarrow -\infty$, $f(x) \rightarrow -\infty$.
As $x \rightarrow \infty$, $f(x) \rightarrow \infty$.



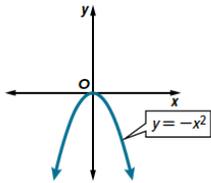
Domain: all real numbers
Range: all real numbers

Degree: even

Leading Coefficient: negative

End Behavior:

As $x \rightarrow -\infty$, $f(x) \rightarrow -\infty$.
As $x \rightarrow \infty$, $f(x) \rightarrow -\infty$.



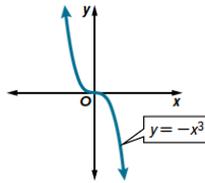
Domain: all real numbers
Range: all real numbers ≤ 0

Degree: odd

Leading Coefficient: negative

End Behavior:

As $x \rightarrow -\infty$, $f(x) \rightarrow \infty$.
As $x \rightarrow \infty$, $f(x) \rightarrow -\infty$.



Domain: all real numbers
Range: all real numbers

- 3) The general, specific, and technical vocabulary are appropriate for the targeted proficiency levels. The LDH is designed for educators to be able to differentiate the language of math and provide support for students as they navigate the academic content. In the example below, from Algebra 1, Module 1, Lesson 1-1, the students will

learn about Numerical Expressions. At the Entering/Emerging level, students are using a memory device strategy to help them remember and understand the order of operations. The students then create a phrase in their native language to help them remember the order. At the Developing/Expanding level, students will engage in a listen and write activity that has them writing the order of operations on index cards, then listening to the teacher read numerical expressions. The students will then determine, by holding up the index cards, which operation should be completed first. At the Bridging level, students will be working in pairs to compare and contrast their answers from the lesson, while the teacher monitors and reminds students to use mathematical vocabulary.

English Language Development Leveled Activities

Beginning Level	Intermediate Level	Advanced Level
<p>Memory Device</p> <p>The expression <i>Please Excuse My Dear Aunt Sally</i> is often used in math classes to help students remember the order of operations. Encourage students to create a phrase in their native language to help them remember that when simplifying expressions, they should start with parentheses, then exponents, followed by multiplication and division, and ending with addition and subtraction.</p>	<p>Listen and Write</p> <p>Distribute index cards with the words <i>parentheses, exponents, multiply, divide, add, and subtract</i> written on them. Read several numerical expressions aloud. Have students write the expressions in symbolic form as they hear them. Then, ask them to hold up the index card that shows the operation that should be completed first to simplify the given expression.</p>	<p>Pairs Check</p> <p>After completing several exercises from the lesson, have students compare their answers with a partner. If their answers differ, have each student explain how their answer was calculated until they can determine where an error was made. Monitor conversations and listen for students to use mathematical vocabulary, such <i>order of operations, multiply before adding, and calculate within parentheses first.</i></p>

- 4) The general, specific, and technical language is systematically presented throughout the materials. As mentioned above, at the beginning of each module the students see a section called “What Vocabulary Will You Learn?” which provides a checklist of the vocabulary words presented in the module, and instructions for students to check off what vocabulary they already know. Following this are explicit definitions, accompanied by graphic support and activities to help them understand and apply the meaning of the vocabulary. The LDH for every grade level provides blank templates for the vocabulary

that will be presented in each lesson. See examples here:

Lesson _____

Use the word cards to define each vocabulary word or phrase and give an example.

Word Cards

<p>Definition</p> <p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p>
<p>Example Sentence</p> <p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p>

Copyright © McGraw-Hill Education

Word Cards

<p>Definition</p> <p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p>
<p>Example Sentence</p> <p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p>

Copyright © McGraw-Hill Education

Lesson _____

Use the three column chart to organize the vocabulary in this lesson.

English	Native Language	Definition

xix

Vocabulary

Numerical Expressions

Use the three-column chart to organize the vocabulary in this lesson. Write the term in your native language. Then write the definition of each term.

Three-Column Chart		
English	Native Language	Definition
numerical expression		
define a variable		
exponent		
order of operations		

3. Performance Definitions

The WIDA Performance Definitions define the WIDA levels of language proficiency in terms of the three dimensions of academic language described above (discourse, sentence, word/phrase) and across six levels of language development.

A. Representation of Levels of Language Proficiency

- | | | |
|--|------------|----|
| 1) Do the materials differentiate between the language proficiency levels? | <u>Yes</u> | No |
| 2) Is differentiation of language proficiency developmentally and linguistically appropriate for the designated language levels? | <u>Yes</u> | No |
| 3) Is differentiation of language systematically addressed throughout the materials? | <u>Yes</u> | No |

Justification: Provide examples from materials as evidence to support each "yes" response for this section. Provide descriptions, not just page numbers.

- 1) Although not explicitly identified as WIDA proficiency levels, the materials do differentiate between language proficiency levels that are similar in name and description to WIDA's levels. The Language Development Handbook (LDH) provides differentiated instructional support and guidance for teachers, beginning with an understanding of what skills students may have at each level:

An Entering/Emerging Level ELL	A Developing/Expanding Level ELL	A Bridging Level ELL
<ul style="list-style-type: none"> • New to this country; may have memorized some everyday phrases like, "Where is the bathroom", "My name is....", may also be in the "silent stage" where they listen to the language but are not comfortable speaking aloud • Struggles to understand simple conversations • Can follow simple classroom directions when overtly demonstrated by the instructor 	<ul style="list-style-type: none"> • Is dependent on prior knowledge, visual cues, topic familiarity, and pretaught math-related vocabulary • Solves word problems with significant support • May procedurally solve problems with a limited understanding of the math concept. 	<ul style="list-style-type: none"> • May struggle with conditional structure of word problems • Participates in social conversations needing very little contextual support • Can mentor other ELs in collaborative activities.

The lessons contain leveled discussion questions, to use with students who are approaching level (AL), beyond level (BL) or are on level (OL). The lessons also provide resources to support any ELLs the teachers may have, as outlined in this example from the Algebra 2, Teacher Edition, page 511a:

DIFFERENTIATE

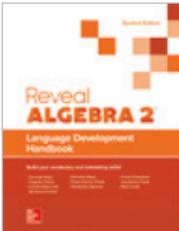
 View reports of student progress on the **Checks** after each example.

Resources	AL	OL	BL	ELL
Remediation: Summarizing Categorical Data	●	●		●
Extension: Stratified Surveys		●	●	●

Language Development Handbook

Assign page 57 of the *Language Development Handbook* to help your students build mathematical language related to classifying and identifying bias in surveys and studies.

ELL You can use the tips and suggestions on page T57 of the handbook to support students who are building English proficiency.



2) The differentiation of language proficiency is developmentally and linguistically appropriate for the secondary school target age of the materials. On page ix of the LDH

for each grade level, there is a page that outlines strategies for classroom discussion. This is a helpful resource for guiding teachers' work with students of varying linguistic abilities. The section "Asking about Meaning" provides sentence frames to use at each of the three proficiency levels in order to encourage all students to participate in classroom discussions, thus building oral competency and confidence in all students:

Strategies for Classroom Discussion

Providing multiple opportunities to speak in the classroom and welcoming all levels of participation will motivate English learners to take part in class discussions and build oral proficiency. These basic teaching strategies will encourage whole class and small group discussions for all language proficiency levels of English learners.

✓ Wait time/Different Response

- Be sure to give students enough time to answer the question. They may need more time to process their ideas.
- Let them know that they can respond in different ways depending on their levels of proficiency. Students can:
 - Answer in their native language; then you can rephrase in English
 - Ask a more proficient ELL speaker to repeat the answer in English
 - Answer with nonverbal cues.

✓ Elaborate

- If students give a one-word answer or a nonverbal clue, elaborate on the answer to model fluent speaking and grammatical patterns.
- Provide more examples or repeat the answer using proper academic language.

✓ Elicit

- Prompt students to give a more comprehensive response by asking additional questions or guiding them to get an answer, such as can you tell me more?
- This strategy is very effective when students are asked to justify or explain their reasoning.

✓ Asking about Meaning

- Repeating an answer offers an opportunity to clarify the meaning of a response.
- Repeating an answer allows you to model the proper form for a response. You can model how to answer in full sentences and use academic language.
- When you repeat the answer, correct any grammar or pronunciation errors.

ENTERING/EMERGING

- What is _____?
- What does _____ mean?
- _____ is _____.
- _____ means _____.

DEVELOPING/EXPANDING

- Could you tell me what ____ means?
- ____ is similar to ____.
- ____ is another way of saying _____.

BRIDGING

- Could you give me a definition of _____?
- Can you point to the evidence from the text?
- What is the best answer? Why?

x

3) Language differentiation occurs systematically throughout the materials. In the LDH, each lesson contains a section called "English Language Development Activities." An example of this chart, seen below, contains specific activities to support the lesson, divided up by proficiency level:

English Language Development Leveled Activities

Beginning Level	Intermediate Level	Advanced Level
<p>Act It Out</p> <p>Ask one student to stand in the middle of the room. Use a meter stick to measure 2 meters from that student in any direction. Mark the spot with a piece of tape on the floor and ask another student to stand on that spot.</p> <p>Distribute meter sticks and ask the rest of the students to find a spot to stand that is <i>equidistant</i> from the student in the middle of the room.</p>	<p>Word Knowledge</p> <p>Ask students to break down the vocabulary word <i>equidistant</i> into two similar words, <i>equal</i> and <i>distance</i>. Then have them write synonyms for each word in their native language followed by synonyms for the words in English, such as <i>same</i> and <i>length</i>.</p> <p>Read sentences that contain the word <i>equidistant</i> and ask students to repeat them, first replacing the word with synonyms from their native language, then with English synonyms, and finally with the word <i>equidistant</i>.</p>	<p>Making Connections</p> <p>Display two parallel lines on a coordinate grid cut by several transversals drawn at different angles. Ensure that at least one of the transversals is drawn at a 90° angle.</p> <p>Ask students to calculate the length of each transversal. Then, ask them to identify which length represents the distance between the two lines. Have students write a paragraph explaining why the length they chose is the only correct distance between the two lines.</p>

The 9-12 Reveal Math Program Overview also explains the tools and resources they provide for differentiated instruction, both digitally and in the LDH, Student, and Teacher Editions:

Resources for Differentiating Instruction

When needed, resources are available to differentiate math instruction for students who may need to see a concept in a different way, practice prerequisite skills, or are ready to extend their learning.

AL Approaching Level Resources

- Remediation Activities
- Extra Examples

BL Beyond Level Resources

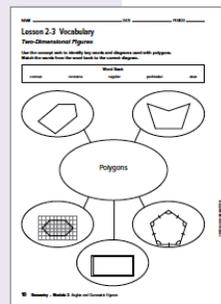
- Beyond Level Differentiated Activities
- Extension Activities

Resources for English Language Learners

Reveal AGA also includes student and teacher resources to support students who are simultaneously learning grade-level math and building their English proficiency. Appropriate, research-based language scaffolds are also provided to support students as they engage in rigorous mathematical tasks and discussions.

ELL English Language Learners

- Spanish Interactive Student Edition
- Spanish Personal Tutors
- Math Language-Building Activities
- Language Scaffolds
- *Think About It!* and *Talk About It!* Prompts
- Multilingual eGlossary
- Audio
- Graphic Organizers
- Web Sketchpad, Desmos, and eTools



B. Representation of Language Domains

WIDA defines language through expressive (speaking and writing) and receptive (reading and listening) domains situated in various sociocultural contexts.

- | | |
|---|----------------------|
| 1) Are the language domains (listening, speaking, reading, and writing) targeted in the materials? | <u>Yes</u> No |
| 2) Are the targeted language domains presented within the context of language proficiency levels? | <u>Yes</u> No |
| 3) Are the targeted language domains systematically integrated throughout the materials? | <u>Yes</u> No |

Justification: Provide examples from materials as evidence to support each “yes” response for this section. Provide descriptions, not just page numbers.

- 1) All four language domains are targeted in the materials and provide opportunities for students to listen, speak, read, and write in each lesson. There is a “Launch the Module” and “Launch the Lesson” feature where the teacher will play a video or introduces the topic for the students to listen to and discuss. As would be expected, the Student Books are filled with problems for the students to solve in writing, as well as fill in the blank-style items. See examples of each domain represented in one lesson (4-2) from Algebra 2:

Listening:



Go Online
You can learn how to graph and analyze a polynomial function on a graphing calculator by watching the video online.

Reading and Writing:

Check
COINS The number of quarters produced by the United States Mint can be approximated by the function $f(x) = 16.4x^3 - 149.5x^2 - 148.9x + 3215.4$, where x is the number of years since 2005 and $f(x)$ is the total number of quarters produced in millions. Use a graph of the function to complete the table and describe its key features.

Part A Complete the table.

x , Years	$f(x)$, Quarters (millions)
0	
2	
4	
6	
8	
10	

Part B Describe the key features.
The relevant domain is _____.
The relevant range is _____.
There is a relative minimum between _____ and _____.
The y -intercept is _____.
The graph of the function _____ have symmetry.
It is _____ to assume that the trend will continue indefinitely.

Speaking:



Talk About It!
It is reasonable that the trend will continue indefinitely? Explain.

- 2) On page vii of each Language Development Handbook (for all three Courses), there is a chart entitled “Proficiency Level Descriptors” which outlines the three targeted

proficiency levels of ELLs and then descriptors at each level, broken down by language domain. This chart, seen below, will guide the teacher as s/he works through the lessons and all four language domains:

Proficiency Level Descriptors				
	Interpretive (Input)		Productive (Output)	
	Listening	Reading	Writing	Speaking
<p>An Entering/Emerging Level ELL</p> <ul style="list-style-type: none"> • New to this country; may have memorized some everyday phrases like, "Where is the bathroom", "My name is..."; may also be in the "silent stage" where they listen to the language but are not comfortable speaking aloud • Struggles to understand simple conversations • Can follow simple classroom directions when overtly demonstrated by the instructor 	<ul style="list-style-type: none"> • Listens actively yet struggles to understand simple conversations • Possibly understands "chunks" of language; may not be able to produce language verbally 	<ul style="list-style-type: none"> • Reads familiar patterned text • Can transfer Spanish decoding somewhat easily to make basic reading in English seem somewhat fluent; comprehension is weak 	<ul style="list-style-type: none"> • Writes labels and word lists, copies patterned sentences or sentence frames, one- or two-word responses 	<ul style="list-style-type: none"> • Responds non-verbally by pointing, nodding, gesturing, drawing • May respond with yes/no, short phrases, or simple memorized sentences • Struggles with non-transferable pronunciations.
<p>A Developing/Expanding Level ELL</p> <ul style="list-style-type: none"> • Is dependent on prior knowledge, visual cues, topic familiarity, and pretaught math-related vocabulary • Solves word problems with significant support • May procedurally solve problems with a limited understanding of the math concept. 	<ul style="list-style-type: none"> • Has ability to understand and distinguish simple details and concepts of familiar/previous learned topics 	<ul style="list-style-type: none"> • Recognizes obvious cognates • Pronounces most English words correctly, reading slowly and in short phrases • Still relies on visual cues and peer or teacher assistance 	<ul style="list-style-type: none"> • Produces writing that consists of short, simple sentences loosely connected with limited use of cohesive devices • Uses undetailed descriptions with difficulty expressing abstract concepts 	<ul style="list-style-type: none"> • Uses simple sentence structure and simple tenses • Prefers to speak in present tense.
<p>A Bridging Level ELL</p> <ul style="list-style-type: none"> • May struggle with conditional structure of word problems • Participates in social conversations needing very little contextual support • Can mentor other ELs in collaborative activities. 	<ul style="list-style-type: none"> • Usually understands longer, more elaborated directions, conversations, and discussions on familiar and some unfamiliar topics • May struggle with pronoun usage 	<ul style="list-style-type: none"> • Reads with fluency, and is able to apply basic and higher-order comprehension skills when reading grade-appropriate text 	<ul style="list-style-type: none"> • Is able to engage in writing assignments in content area instruction with scaffolded support • Has a grasp of basic verbs, tenses, grammar features, and sentence patterns 	<ul style="list-style-type: none"> • Participates in most academic discussions on familiar topics, with some pauses to restate, repeat, or search for words and phrases to clarify meaning.

vii

Additionally, the lessons in the LDH contain English Language Development Leveled Activities, to allow students at the three levels to engage appropriately with the content. In the example below, students at the Entering/Emerging level will be Listening, Reading and Speaking. The Developing/Expanding level students will be doing the same but at a higher level (using sentence frames and the conditional sentence structure) and the students at the Bridging level will be writing in addition to engaging in the other three

domains. See the example below from the LDH for Geometry, page T36:

English Language Development Leveled Activities		
Beginning Level	Intermediate Level	Advanced Level
<p>Memory Device Help students recall the terms <i>hypotenuse</i> and <i>legs</i> by associating the <i>legs</i> of a triangle with body parts. Provide a triangle for students to use as a base to design a stick figure. Explain to students that the legs of the triangle should be used as the legs of their figure while the hypotenuse represents the ground. Ensure that they label each term. Finally, have students use art supplies to complete their illustration.</p>	<p>Exploring Language Structure The theorems in this lesson include the conditional sentence structure <i>If... then...</i> with a present tense verb in each clause. Explain that conditional sentences use the present tense when a condition <u>always</u> happens. Have students write their own sentences to practice <i>If... then...</i> structure and use present tense to describe facts and conditions that always occur.</p>	<p>Exploring Language Structure Complete the intermediate activity. Then, have students write sentences to practice the <i>If... then...</i> structure for events that are either likely or unlikely to happen. Use the future tense when a condition is likely to happen. Use the past tense when a condition is unlikely to happen. If this is students' first time working with the conditional tense, have them complete the intermediate activity only.</p>

3) The targeted language domains are systematically integrated throughout the materials.

The lessons are all detailed and interactive, with opportunities to engage in all four domains every time. During the “Launch the Lesson” section, students will typically be listening and possibly speaking. The students also have an opportunity to fill out a “What Will You Learn?” chart, seen below, so they can identify, by content topic, what they know already, what they have heard of, or what they don’t know:

What Will You Learn?

Place a check mark (✓) in each row that corresponds with how much you already know about each topic **before** starting this module.

KEY

 — I don't know.  — I've heard of it.  — I know it!

	Before			After		
						
make and analyze conjectures based on inductive reasoning						
disprove conjectures by using counterexamples						
determine truth values of statements, negations, conjunctions, and disjunctions						
write and analyze conditionals and biconditionals using logic						
distinguish correct logic or reasoning from that which is flawed using the Laws of Detachment and Syllogism						
construct viable arguments by writing paragraph proofs						
construct viable arguments by writing flow proofs						
prove statements about segments and angles by writing two-column proofs						
identify and use relationships between pairs of angles						
identify and use parallel and perpendicular lines using the slope criteria						
solve problems using distances and parallel and perpendicular lines						

Opportunities for speaking are also present throughout the materials. Several times during the lessons, there is a “Talk About It” feature where the students have a chance to process the information they are learning:

 **Talk About It!**

Do you think that the order of the given statements is important when applying the Law of Syllogism? Justify your argument.

4. The Strands of Model Performance Indicators and the Standards Matrices

The Strands of Model Performance Indicators (MPIs) provide sample representations of how language is processed or produced within particular disciplines and learning contexts. WIDA has five language development standards representing language in the following areas: Social and Instructional Language, The Language of Language Arts, The Language of Mathematics, The Language of Science, The Language of Social Studies as well as complementary strands including The Language of Music and Performing Arts, The Language of Humanities, The Language of Visual Arts.

The Standards Matrices are organized by standard, grade level, and domain (Listening, Speaking, Reading, and Writing). The standards matrices make an explicit connection to state academic content standards and include an example for language use. Each MPI includes a uniform cognitive function (adopted from Bloom’s taxonomy) which represents how educators can maintain the cognitive demand of an activity while differentiating for language. Each MPI provides examples of what students can reasonably be expected to do with language using various supports.

A. Connection to State Content Standards and WIDA Language Development Standards

- | | | |
|---|-------------------|----|
| 1) Do the materials connect the language development standards to the state academic content standards? | <u>Yes</u> | No |
| 2) Are the academic content standards systematically represented throughout the materials? | <u>Yes</u> | No |
| 3) Are social and instructional language and one or more of the remaining WIDA Standards present in the materials? | <u>Yes</u> | No |

Justification: Provide examples from materials as evidence to support each “yes” response for this section. Provide descriptions, not just page numbers.

1) The materials connect the language development standards to the state academic content standards. The Language Development Handbook (LDH) for each Course (Grade Level) states on page v “McGraw-Hill Education is committed to providing English Learners appropriate support as they simultaneously learn content and language.” Each Lesson in the LDH

connects the Language of Mathematics to the content topic of the lesson. An example is seen here, taken from Algebra 2, Module 1, page 5. The example uses a word bank and concept web to support understanding of the lesson on graphing linear functions and inequalities:

Vocabulary
Graphing Linear Functions and Inequalities

Use the concept web to identify and define the different parts of a *linear inequality*. Use the words from the word bank.

Word Bank			
boundary	constraint	half-plane	test point
open half-plane			closed half-plane

boundary: a line that separates a graph into two half-planes

constraint: all solutions of an inequality must meet this

half-plane: shaded region on a graph made of inequality solutions

linear inequalities

open half-plane: boundary line is dashed, $<$ or $>$

closed half-plane: boundary line is solid, \leq or \geq

test points: x - and y -values used to check which side of a boundary is shaded

Reveal Algebra 2 5

2) The academic content standards are systematically represented throughout the materials. Each level of the program’s front matter contains a table which shows the alignment of the program with the Standards for Mathematical Content, from the Common Core State Standards for Mathematics. See an example here from Geometry:

Standards for Mathematical Content, Geometry

This correlation shows the alignment of *Reveal Geometry* to the Standards for Mathematical Content, Geometry, from the Common Core State Standards for Mathematics. Lessons in which the standard is the primary focus are indicated in **bold**.

Additional mathematics that students should learn in order to take advanced mathematical courses is indicated by (+).

Standard		Lesson(s)
Geometry		
Congruence G-CO		
G.CO.1	Experiment with transformations in the plane. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.	1-2, 1-3, 1-4, 2-1, 2-2, 3-7, 10-1
G.CO.2	Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).	2-4, 8-1
G.CO.3	Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.	4-6
G.CO.4	Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.	4-1, 4-2, 4-3, 4-5, 4-6
G.CO.5	Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.	4-1, 4-2, 4-3, 4-4, 4-5, 4-6
G.CO.6	Understand congruence in terms of rigid motions. Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.	4-1, 4-2, 4-3, 4-4, 4-6
G.CO.7	Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.	5-2
G.CO.8	Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.	5-3, 5-4
G.CO.9	Prove geometric theorems. Prove theorems about lines and angles.	3-5, 3-6, 3-7, 3-9, 6-1, 6-2
G.CO.10	Prove theorems about triangles.	5-1, 5-4, 5-5, 5-6, 5-7, 6-1, 6-2, 6-3, 6-4, 6-5, 6-6, 6-7, 8-5
G.CO.11	Prove theorems about parallelograms.	7-2, 7-3, 7-4, 7-5
G.CO.12	Make geometric constructions. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.).	1-3, 1-7, 2-1, 2-2, 3-5, 3-9, 3-10, 4-1, 5-3, 5-4, 5-6, 6-1, 6-2, 6-3, 7-3, 7-4, 7-5, 8-5, 10-3, 10-5
G.CO.13	Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.	10-3, 10-5
Similarity, Right Triangles, and Trigonometry G-SRT		
G.SRT.1	Understand similarity in terms of similarity transformations. Verify experimentally the properties of dilations given by a center and a scale factor: a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged. b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.	8-1 8-1

In the Teacher Editions, at the beginning of each Module, the teacher is given an overview of the Standards that are being addressed through the “Focus” section. See an example below from Algebra 2, Module 10, page 509a:

Focus

Domain: Statistics and Probability

Standards for Mathematical Content:

S.IC.4 Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.

S.IC.6 Evaluate reports based on data.

Also addresses S.IC.1, S.IC.2, S.IC.3, S.IC.5, and S.ID.4

Standards for Mathematical Practice:

All Standards for Mathematical Practice will be addressed in this module.

Furthermore, the teachers have a Suggested Pacing guide and a “Coherence” section which shows a vertical alignment with what Standard(s) the students studied previously, what they are going to study now and what comes next. Examples of these are seen here, from Algebra 2, Module 10, page 509a:

Suggested Pacing

Lessons	Standards	45-min classes	90-min classes
Module Pretest and Launch the Module Video		1	0.5
10-1 Random Sampling	S.IC.1, S.IC.3	2	1
10-2 Using Statistical Experiments	S.IC.2, S.IC.5	2	1
10-3 Analyzing Population Data	S.IC.4	1	0.5
10-4 Normal Distributions	S.ID.4, S.IC.6	2	1
10-5 Estimating Population Parameters	S.IC.4, S.IC.6	1	0.5
Module Review		1	0.5
Module Assessment		1	0.5
Total Days		11	5.5

Coherence

Vertical Alignment

Previous

Students represented data using numerical statistics and graphical methods, analyzed the shapes of distributions, and interpreted categorical data. **S.ID.1, S.ID.2, S.ID.3**

Now

Students determine populations and samples and run simulations to determine the probabilities of outcomes. Students analyze the distributions of data sets. **S.IC.1, S.IC.6, S.ID.4**

Next

Students will evaluate and graph trigonometric functions. **F.IF.7e, F.TF.5**

3) Although not explicitly identified as the WIDA Social and Instructional Language Standard and the Language of Mathematics Standard, both of these language standards are represented in the materials. Oftentimes, the math problems are integrated with the social and instructional language of everyday activities, as seen in the examples below from Geometry, Lesson 3-1, page 155:

Example 4 Make Conjectures from Data

GAS PRICES The table shows the average price of gasoline in the United States for the years 2010 through 2018. Make a conjecture about the price of gas in 2019. Explain how this conjecture is supported by the data given.

Year	Price (dollars per gallon)
2010	2.84
2011	3.58
2012	3.68
2013	3.58
2014	3.44
2015	2.43
2016	2.14
2017	2.42
2018	2.84

Look for patterns in the data.

The price of gasoline increased from 2010 to 2012. From 2012 to 2016, the price of gas decreased, at first at a steady rate, and then more dramatically. Beginning in 2017, the price of gas began to increase at a steady rate.

The data shows that the price of gas follows an oscillating pattern, increasing in price for several years before decreasing in price for several years.

Conjecture: In 2019, the price of gas will continue to increase.

Check

HEARING LOSS Almost 50% of young adults between the ages of 12 and 35 years old are exposed to damaging levels of sound from the use of personal electronic devices. The intensity of a sound and the time spent listening to a sound highly affects the amount of damage that can be done to someone's hearing. The intensity of a sound to the human ear is measured in A-weighted decibels, or dBA. For every 3 decibels over 85 decibels, the exposure time it takes to cause hearing damage is cut in half. How long does it take to cause hearing damage at 106 decibels? Write your answer as a decimal.

Decibel Level (dBA)	Exposure Time (hours)
85	8
88	4
91	2
94	1
97	$\frac{1}{2}$
100	$\frac{1}{4}$

_____ minutes

There is also a strong language focus throughout the materials. This example, from the LDH for Algebra 1, page 12, demonstrates how the materials integrate the language of math and everyday social and instructional language by using a four-square chart to define proportion

in a variety of ways, including math and everyday use:

Vocabulary

Solving Proportions

Complete the four-square chart to review the vocabulary term. Then answer the question below.

Math Use	Use in a Sentence
Everyday Use	Example from this Lesson

B. Cognitive Challenge for All Learners at All Levels of Language Proficiency

- | | | |
|--|------------|----|
| 1) Do materials present an opportunity for language learners to engage in various cognitive functions (higher order thinking skills from Bloom's taxonomy) regardless of their language level? | <u>Yes</u> | No |
| 2) Are opportunities for engaging in higher order thinking systematically addressed in the materials? | <u>Yes</u> | No |

Justification: Provide examples from materials as evidence to support each “yes” response for this section. Provide descriptions, not just page numbers.

- 1)** The materials present an opportunity for language learners to engage in various cognitive functions and higher order thinking skills. The LDH provides guidance for facilitating classroom discussions and offers multiple strategies for each level of proficiency that is identified. Teachers are given sentence frames to use with students to, among other things, talk about their level of understanding, justify their reasoning, and agree or disagree with some else’s reasoning. Page x of each LDH provides this guidance:

Talk about Level of Understanding

- ENTERING/EMERGING**
- I understand. / I got it.
 - I don't understand this word / sentence.

- DEVELOPING/EXPANDING**
- Could you tell me what ____ means?
 - ____ is another way of saying ____.

- BRIDGING**
- I think I understand most of it.
 - I'm not sure I understand this completely.

Justify Your Reasoning

- ENTERING/BEGINNING**
- I think ____.

- DEVELOPING/EXPANDING**
- My reasons are ____.

- BRIDGING/REACHING**
- I think ____ because ____.

Agreeing with Someone's Reasoning

- ENTERING/BEGINNING**
- I agree with your reasons or point.

- DEVELOPING/EXPANDING**
- I agree that ____.

- BRIDGING/REACHING**
- I have the same reasons as ____, I think that ____.

Disagreeing with Someone's Reasoning

- ENTERING/BEGINNING**
- I don't agree with your reasons.

- DEVELOPING/EXPANDING**
- I don't agree that ____.

- BRIDGING/REACHING**
- I can see your point. However, I think that ____.

x

- 2) Opportunities for engaging in higher order thinking skills are systematically addressed throughout the materials. In each lesson, there are multiple opportunities for students to engage with the material in different ways. Oftentimes, they will be asked to think further about an answer to apply it in another situation or to also talk about or justify their reasoning. The examples below come from the Algebra 2 Student Edition:

Part B Analyze the extrema.

Which function has the greater relative maximum?

$f(x)$ has a relative maximum at approximately $y = 6$, and $g(x)$ has a relative maximum between $y = 2$ and $y = 3$. So, _____ has the greater relative maximum.

Part C Analyze the key features.

Compare the zeros, x - and y -intercepts, and end behavior of $f(x)$ and $g(x)$.

zeros:

$f(x)$: _____, _____, _____

$g(x)$: The graph appears to intersect the x -axis at _____, _____, _____,

intercepts:

$f(x)$: x -intercepts: _____, _____, _____; y -intercept: 0

$g(x)$: x -intercepts: _____, _____, _____; y -intercept: 2

end behavior:

$f(x)$: As $x \rightarrow -\infty$, $f(x) \rightarrow$ _____, and as $x \rightarrow \infty$, $f(x) \rightarrow$ _____.

$g(x)$: As $x \rightarrow -\infty$, $g(x) \rightarrow$ _____, and as $x \rightarrow \infty$, $g(x) \rightarrow$ _____.



Think About It!
Interpret the domain and range given the context of the situation.



Think About It!
Describe a method you could use to check your answer.

The Practice areas, designed as homework for the students, will contain higher-order thinking problems, as seen here, from Algebra 1, page 34:

Higher-Order Thinking Skills

49. PERSEVERE Write two equations showing the Transitive Property of Equality. Justify your reasoning.

50. ANALYZE Determine whether the following statement is *sometimes*, *always*, or *never* true. Justify your argument. The Commutative Property holds for subtraction.

51. ANALYZE Provide examples to show that there is no Commutative Property or Associative Property for division. What is the relationship between the results when the order of division of two numbers is switched?

C. Supports for Various Levels of Language Proficiency

- | | | |
|--|-------------------|----|
| 1) Do the materials provide scaffolding supports for students to advance within a proficiency level? | <u>Yes</u> | No |
| 2) Do the materials provide scaffolding supports for students to progress from one proficiency level to the next? | <u>Yes</u> | No |
| 3) Are scaffolding supports presented systematically | <u>Yes</u> | No |

throughout the materials?

Justification: Provide examples from materials as evidence to support each “yes” response for this section. Provide descriptions, not just page numbers.

- 1) The materials provide scaffolding supports for students to advance within a proficiency level. The LDH is the primary resource for these supports, explaining detailed strategies and activities to use for each lesson and each proficiency level. Oftentimes vocabulary is the focus, as in the example below, where students use the word “cards” to define a vocabulary term in both English and Spanish, then write a sentence using the word. In this example, from the LDH for Algebra 2, page 16, students are exploring vocabulary (and cognates) in a lesson on solving absolute value equations and inequalities by graphing:

Vocabulary
Solving Absolute Value Equations and Inequalities by Graphing

Use the word cards to define each vocabulary word or phrase and give an example.

Word Card	
isolate	aislar
Definition To cause (a person or thing) to be alone or apart from others.	Definición Para causar (una persona o cosa) estar solo o aparte de los demás.
Example Sentence Isolate the absolute value expression.	

Copyright © McGraw-Hill Education

Word Card	
confirm	confirmar
Definition To check for correctness; to prove that an answer is true.	Definición Para verificar la corrección; Para demostrar que la respuesta es verdadera.
Example Sentence Confirm the solution algebraically or graphically.	

Copyright © McGraw-Hill Education

2) The materials provide scaffolding supports for students to progress from one proficiency level to the next. Each lesson in the LDH gives teachers a three-column chart which have activities targeted at each of the identified language proficiency levels. When a student is ready to move to the next proficiency level, this chart will provide helpful supports and resources for the teacher to use. See the example of the Algebra 2, Special Functions English Language Development Leveled Activities chart:

English Language Development Leveled Activities		
Beginning Level	Intermediate Level	Advanced Level
<p>Act It Out Have students model various piecewise-defined functions as a series of matching steps. Have them say the function name and the domain as they demonstrate each move. For example, have students model values from $x = -4$ to $x = -2$ by taking 3 steps forward (-4, -3, -2). Then have students model values from $x = -2$ to $x = 1$ by taking 4 steps to the left.</p>	<p>Sentence Frames Create a set of domain and graph cards. Provide students with sentence frames to practice writing piecewise-defined functions in words. Example sentence frame: <i>f of x equals x squared _____ 2 if x is _____ or _____. [minus, greater than one, less than five]</i></p>	<p>Round the Table Create a set of domain and expression cards written in words. (Example: <i>x squared minus 2 for x is greater than 1 but less than 5.</i>) Have students take turns reading their cards aloud and graphing their combinations into one piecewise-defined function. Shuffle cards into new combinations, and create a poster for the classroom of the results.</p>

3) Scaffolding supports are presented systematically throughout the materials. On page xi of the LDH, there is a section called “How to Use the Teacher Edition.” This section explains that “the suggested strategies, activities, and tips provide additional language and concept support to accelerate English learners’ acquisition of academic English.” The categories of support are listed here:

English Learner Instructional Strategy

Each lesson, Inquiry Lab, and Problem-Solving Investigation references an English Learner Instructional Strategy that can be utilized before or during regular class instruction.

Categories of the scaffolded support are:

- Vocabulary Support
- Language Structure Support
- Sensory Support
- Graphic Support
- Collaborative Support

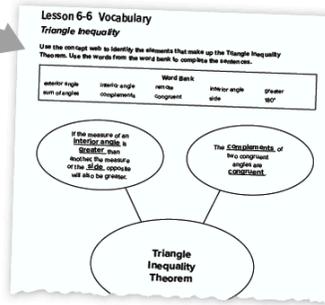
The goal of the scaffolding strategies is to make each individual lesson more comprehensible for ELLs by providing visual, contextual and linguistic support to foster students' understanding of basic communication in an academic context.

In addition to peer and teacher support, other scaffolding supports include word cards, vocabulary squares, three-column charts, definition maps, concept webs and Cornell notes. An example and description of the last two can be found on page xv of the LDH:

How to Use the Student Edition *continued*

Concept Web

Concept webs are designed to show relationships between concepts and to make connections. Encourage students to find examples or words they can use in the web.



Lesson 6-2 Note-Taking

Angle Bisectors

Complete the notes. Then write a summary of the relationship between the circumcenter and the incentre.

<p>Questions</p> <p>1. How many angle bisectors are there in a triangle?</p>	<p>Notes</p> <p>There are <u>three</u> angle bisectors because all triangles have <u>three</u> angles.</p>
<p>2. How are angle bisectors different from perpendicular bisectors?</p>	<p>An angle bisector divides an angle into two <u>congruent angles</u>.</p> <p>A perpendicular bisector passes through the <u>midpoint</u> of a segment and is <u>perpendicular</u> to that segment.</p>

Cornell Notes

Cornell notes provide students with a method to take notes thereby helping them with language structure. Scaffolded sentence frames are provided for students to fill in important math vocabulary by identifying the correct word or phrase according to context.

Copyright © McGraw-Hill Education.

xv

D. Accessibility to Grade Level Content

- | | | |
|--|------------|----|
| 1) Is linguistically and developmentally appropriate grade-level content present in the materials? | Yes | No |
| 2) Is grade-level content accessible for the targeted levels of language proficiency? | Yes | No |
| 3) Is the grade-level content systematically presented throughout the materials? | Yes | No |

Justification: Provide examples from materials as evidence to support each “yes” response for this section. Provide descriptions, not just page numbers.

1) Linguistically and developmentally appropriate grade-level content is present in the materials. *Reveal Math* is a high school program and the courses (*Reveal Algebra 1*, *Reveal Geometry* and *Reveal Algebra 2*) correspond to high school grade level content. The lessons all identify the grade level appropriate content standards from the Standards for Mathematical Content (Common Core State Standards). There is a nice self-assessment at the beginning of each module that allows the students to see the topics that will be covered and assess whether they know it, have heard of it, or don’t know it. See an example here from Algebra 2, Module 4:

What Will You Learn?

Place a check mark (✓) in each row that corresponds with how much you already know about each topic **before** starting this module.

KEY
 — I don't know.
  — I've heard of it.
  — I know it!

	Before			After		
						
graph power functions						
graph polynomial functions						
use the location principle to find zeros of a function						
identify extrema of graphs of functions						
add and subtract polynomials						
multiply polynomials						
divide polynomials using long division						
divide polynomials using synthetic division						
expand powers of binomials						

Linguistically, there are a variety of differentiated/leveled activities provided in the LDH to help students comprehend the language they are using in the lesson. This language is appropriate for the grade level content being taught. Students are also given a list of vocabulary words they will learn in the module and again, asked to identify what they already know. See an example from the same Algebra 2 Model in the example above:

What Vocabulary Will You Learn?

Check the box next to each vocabulary term that you may already know.

- | | | |
|---|---|--|
| <input type="checkbox"/> binomial | <input type="checkbox"/> monomial function | <input type="checkbox"/> quintic function |
| <input type="checkbox"/> closed | <input type="checkbox"/> Pascal's triangle | <input type="checkbox"/> standard form of a polynomial |
| <input type="checkbox"/> degree | <input type="checkbox"/> polynomial in one variable | <input type="checkbox"/> synthetic division |
| <input type="checkbox"/> degree of a polynomial | <input type="checkbox"/> polynomial function | <input type="checkbox"/> trinomial |
| <input type="checkbox"/> FOIL method | <input type="checkbox"/> power function | |
| <input type="checkbox"/> leading coefficient | <input type="checkbox"/> quartic function | |

- 2) Grade level content is accessible for the targeted levels of language proficiency. The LDH provides ways for teachers to help students access the content by using strategies and supports appropriate for their language proficiency level. The main resource is the English Language Development Leveled Activities chart found at the beginning of each Lesson in the LDH, such as this one from Algebra 1, page T22:

English Language Development Leveled Activities

Beginning Level	Intermediate Level	Advanced Level
<p>Word Knowledge</p> <p>Ensure that students comprehend the meaning of the term <i>linear</i>. Distribute pieces of yarn to students, and ask them to manipulate the string to represent a linear relationship. Use words such as <i>steep</i>, <i>flat</i>, or <i>gradual</i> to prepare them for descriptions of the slope of the line. Have students draw their depictions and write the words in their notebooks.</p>	<p>Sentence Frames</p> <p>Ask students to write this sentence frame in their journals: When the slopes of two linear equations are the same, I think the lines will be _____ because _____.</p> <p>Circulate while students think through this, and offer suggestions if students seem stuck. Then, as a class, discuss how to complete the sentence.</p>	<p>Making Connections</p> <p>Write ten equations on index cards, some in slope-intercept form and some not. Ask small groups of students to sort the cards into those categories. Then, direct students to select the stack of equations that are not in slope-intercept form and rewrite them so that they are.</p>

Students have multiple opportunities within each lesson to engage with the content in a variety of ways. They can talk about the problems, pause and reflect on their work, think about different ways to solve a problem and go online to find extra examples for further support.

3) Grade level content is systematically presented throughout the materials. The Teacher’s Editions outline the Standards for Mathematical Content that are addressed for each Course (grade level). The Teacher Edition also has a “Focus” section that outlines the Domain (topic), Major Cluster(s), Standards for Mathematical Content, and Standards for Mathematical Practice. An example of this is seen here, from Algebra 2, Lesson 10-2, page 519a:

Focus
Domain: Statistics and Probability
Standards for Mathematical Content:
S.IC.2 Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation.
S.IC.5 Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.
Standards for Mathematical Practice:
3 Construct viable arguments and critique the reasoning of others.
8 Look for and express regularity in repeated reasoning.

E. Strands of Model Performance Indicators

- | | | |
|--|-------------------|----|
| 1) Do materials include a range of language functions? | <u>Yes</u> | No |
| 2) Are the language functions incorporated into a communicative goal or activity? | <u>Yes</u> | No |
| 3) Do the language functions support the progression of language development? | <u>Yes</u> | No |

Justification: Provide examples from materials as evidence to support each “yes” response for this section. Provide descriptions, not just page numbers.

1) The materials include a range of language functions within each Lesson. Oftentimes the language functions are embedded into the content area standard(s) being addressed. In the LDH, the English Language Development Leveled Activities table provides teachers

ideas for differentiating instruction that include a range of language functions. In the example below, from the LDH, Algebra 1, page T18, students, depending on their proficiency level, will be defining words, making connections, and interpreting:

Beginning Level	Intermediate Level	Advanced Level
<p>Interacting Via English Language</p> <p>Have students create a three-column anchor chart for the classroom using the following words: <i>symmetry, line symmetry, extrema, maximum, minimum, end behavior, positive extremes, negative extremes, increasing, and decreasing</i>. Have students define each word on the chart using the student glossary or notes. Beginning students can fill out the first two columns of the chart, the word and the definition.</p>	<p>Exchanging Ideas</p> <p>Have students review the words used in the anchor chart created by the beginning students. Then have students draw a concept web to connect the words that help define the four new vocabulary words, <i>line symmetry, extrema, end behavior, and increasing</i>. Have students add this concept web to the anchor chart.</p>	<p>Connecting Ideas</p> <p>Have students interpret a graph using the words on the anchor chart. Have each student attempt to use all of the words on the chart to explain to the others how to interpret the graph. You may also wish to have intermediate students interpret the graph using some of the vocabulary.</p>

Additionally, there is a Collaborative Conversations chart on page viii of the LDH that provides a framework for students to engage in these conversations during each lesson. The “Core Skills” column are language functions the students can use, along with supporting prompts and response frames:

Collaborative Conversations

Students engage in whole-class, small-group, and partner discussions during every lesson. The chart below provides prompt frames and response frames that will help students at different language proficiency levels interact with each other in meaningful ways.

You may wish to post these frames in the classroom for student reference.

Core Skills	Prompt Frames	Response Frames
Elaborate and Ask Questions	Can you tell me more about it? Can you give me some details? Can you be more specific? What do you mean by...? How or why is it important?	I think it means that... In other words... It's important because... It's similar to when...
Support Ideas with Evidence	Can you give any examples from the text? What are some examples from other texts? What evidence do you see for that? How can you justify that idea? Can you show me where the text says that?	The text says that... An example from another text is... According to... Some evidence that supports that is...
Build On or Challenge Partner's Ideas	What do you think of the idea that...? Can we add to this idea? Do you agree? What are other ideas/ points of view? What else do we need to think about? How does that connect to the idea...?	I would add that... I want to follow up on your idea... Another way to look at it is... What you said made me think of...
Paraphrase	What do we know so far? To recap, I think that... I'm not sure that was clear. How can we relate what I said to the topic/ question?	So, you are saying that... Let me see if I understand you... Do you mean that...? In other words... It sounds like you are saying that...
Determine the Main Idea and Key Details	What have we discussed so far? How can we summarize what we have talked about? What can we agree upon? What are main points or ideas we can share? What relevant details support the main points or ideas? What key ideas can we take away?	We can say that... The main idea seems to be... As a result of this conversation, we think that we should... The evidence suggests that...

viii

- 2) The language functions are incorporated into a communicative goal and/or activity throughout each lesson. As stated above, the students will be engaged in whole-class, small-group, and partner discussions for each lesson. The chart above provides support for all students to participate in these conversations as they are linguistically able. Although this is a math curriculum and many times the students will be writing and solving problems, the materials incorporate communicative activities throughout so students can build their language skills and utilize various language functions. An example

is below, from Algebra 1, Module 2, page 66 where the students must write an equation, then determine if there is only one equation that represents the situation and then justify their argument. In this, they are reinforcing the mathematical concept and building language proficiency at the same time:

Example 2 Write an Equation

LIFE ONLINE Of 799 teens surveyed about what they do online, some use a social network. Of those on a social network, 430 say people their age are "mostly kind" online and the remaining 193 do not. Write an equation to find the number of teens surveyed who are not on a social network.

Step 1 Identify each unknown and assign a variable to it.

Let n = the number of teens surveyed who _____ on a social network.

Step 2 Identify the givens and their relationship.

The givens are:

- _____ teens were surveyed.
- Some number of the teens use a social network.
- _____ of those on a social network say people their age are "mostly kind" online. The other _____ do not.

The 430 and 193 make up the group on a social network. The rest of the 799 surveyed are not on a social network.

Step 3 Write the sentence as an equation.

The sum of the teens on a social network and those not on a social network is 799.

Social Teens Mostly Kind Online

Think About It!

Is there only one equation that represents the situation? Justify your argument.

3) The language functions support the progression of language development. There is an emphasis not only on math comprehension, but also on language development as it relates to math. In the LDH there are two pages of resources under the heading "Strategies for Classroom Discussion." These pages provide some overarching language functions (justify, elaborate, ask), along with strategies and leveled sentence frames/prompts for the teacher to use. This framework allows for the progression of language development as the teacher can move from one level to the next seamlessly as s/he recognizes that the students are ready. These two pages, ix and x, are shown below:

Strategies for Classroom Discussion

Providing multiple opportunities to speak in the classroom and welcoming all levels of participation will motivate English learners to take part in class discussions and build oral proficiency. These basic teaching strategies will encourage whole class and small group discussions for all language proficiency levels of English learners.

✓ Wait time/Different Response

- Be sure to give students enough time to answer the question. They may need more time to process their ideas.
- Let them know that they can respond in different ways depending on their levels of proficiency. Students can:
 - Answer in their native language; then you can rephrase in English
 - Ask a more proficient ELL speaker to repeat the answer in English
 - Answer with nonverbal cues.

✓ Elaborate

- If students give a one-word answer or a nonverbal clue, elaborate on the answer to model fluent speaking and grammatical patterns.
- Provide more examples or repeat the answer using proper academic language.

✓ Elicit

- Prompt students to give a more comprehensive response by asking additional questions or guiding them to get an answer, such as can you tell me more?
- This strategy is very effective when students are asked to justify or explain their reasoning.

✓ Asking about Meaning

- Repeating an answer offers an opportunity to clarify the meaning of a response.
- Repeating an answer allows you to model the proper form for a response. You can model how to answer in full sentences and use academic language.
- When you repeat the answer, correct any grammar or pronunciation errors.

ENTERING/EMERGING

- What is _____?
- What does _____ mean?
- _____ is _____.
- _____ means _____.

DEVELOPING/EXPANDING

- Could you tell me what _____ means?
- _____ is similar to _____.
- _____ is another way of saying _____.

BRIDGING

- Could you give me a definition of _____?
- Can you point to the evidence from the text?
- What is the best answer? Why?

✓ Talk about Level of Understanding

- ENTERING/EMERGING**
- I understand. / I got it.
 - I don't understand this word / sentence.
- DEVELOPING/EXPANDING**
- Could you tell me what _____ means?
 - _____ is another way of saying _____.
- BRIDGING**
- I think I understand most of it.
 - I'm not sure I understand this completely.

✓ Justify Your Reasoning

- ENTERING/BEGINNING**
- I think _____.
- DEVELOPING/EXPANDING**
- My reasons are _____.
- BRIDGING/REACHING**
- I think _____ because _____.

✓ Agreeing with Someone's Reasoning

- ENTERING/BEGINNING**
- I agree with your reasons or point.
- DEVELOPING/EXPANDING**
- I agree that _____.
- BRIDGING/REACHING**
- I have the same reasons as _____. I think that _____.

✓ Disagreeing with Someone's Reasoning

- ENTERING/BEGINNING**
- I don't agree with your reasons.
- DEVELOPING/EXPANDING**
- I don't agree that _____.
- BRIDGING/REACHING**
- I can see your point. However, I think that _____.

ix x