



# PRIME V2<sup>TM</sup>

Protocol for Review of  
Instructional Materials for ELLs V2

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**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](mailto: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

<b>Standards Framework Elements Included in the PRIME Inventory</b>
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): Florida Reveal Math

Publisher: McGraw-Hill

Materials/Program to be Reviewed: Florida Reveal Math Course 1, 2 & 3 (Middle School)

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

Intended Teacher Audiences: Middle School Level Math Teachers

Intended Student Audiences: Middle School Students (Grades 6, 7, & 8)

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: Materials are labeled as Copyright @2020, which is when they will be available to the public

In the space below explain the focus or intended use of the materials: *Florida Reveal Math* is a 6-12 math program designed to help reveal the mathematician in every student. Florida's high academic standards and rigorous courses are designed for each student to reach his or her full potential. This is why *Florida Reveal Math* has a strong focus on rigor-especially the development of conceptual understanding-an emphasis on student mindset, and ongoing formative assessment feedback loops.

# 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.

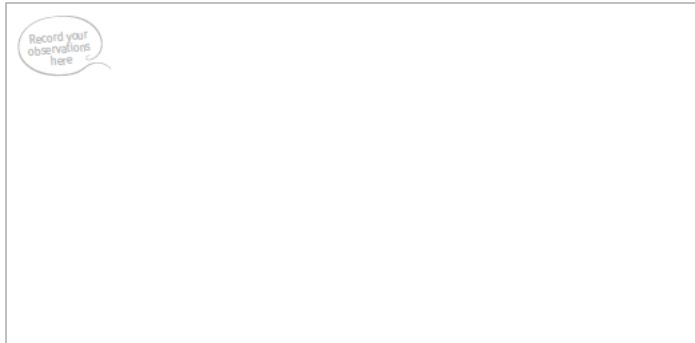
- 1) Are the student assets and contributions considered in the materials?** Yes No
  
- 2) Are the student assets and contributions systematically considered throughout the materials?** Yes No

*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 vi 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.” Additionally, despite this being a math program, there are opportunities for student reflection, as evidenced here on page 329 of the Course 2 Student Edition, Module 6:

## Pause and Reflect

When you first saw this Example, what was your reaction? Did you think you could solve the problem? Did what you already know help you solve the problem?



Lesson 6-5 • Write and Solve Two-Step Equations:  $p(x + q) = r$  329

- 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. Throughout the lessons, there are "Explore" activities, where students have opportunities to work with partners or in small groups to "explore a rich, real-world or mathematical problem related to the lesson content" (page iv, Course 1 Teacher Edition Front Matter). There are also specific resources for English Language Learners, often incorporating Spanish language materials and resources (the dominant L1 in Florida). An example can be seen here, from page xviii of the table of English/Spanish Cognates used in Course 2:

## English/Spanish Cognates used in Course 2

English	Spanish	VKV Page Number
absolute value	valor absoluto	VKV7
acute triangle	triángulo acutángulo	
additive inverse	inverso aditivo	VKV7
algebra	álgebra	
algebraic expression	expresión algebraica	
Associative Property	propiedad asociativa	
bar notation	notación de barra	VKV11
base	base	
center	centro	VKV25
circle	círculo	VKV25
circumference	circunferencia	VKV25
coefficient	coeficiente	VKV15
common denominator	común denominador	VKV11
Commutative Property	propiedad conmutativa	
complementary angles	ángulos complementarios	
complementary events	eventos complementarios	
composite figure	figura compuesto	VKV27
compound event/simple event	evento compuesto/evento simple	
cone	cono	VKV21
congruent	congruente	VKV21
constant	constante	
constant of proportionality	constante de proporcionalidad	
cylinder	cilindro	
define a variable	definir una variable	

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

The LDH also contains “Multicultural Teacher Tips” throughout, to help teachers better understand the particular needs, strengths, and differences that ELLs bring to the classroom.

See example below, taken from page xiii of the LDH for Grade 8:

### **Multicultural Teacher Tip**

These tips provide insight on academic and cultural differences you may encounter in your classroom. While math is the universal language, some ELLs may have been shown different methods to find the answer based on their native country, while cultural customs may influence learning styles and behavior in the classroom.

## 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?** Yes No

**2) Are the language features at the discourse dimension addressed systematically 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)** 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
<b>Elaborate and Ask Questions</b>	<ul style="list-style-type: none"> <li>Can you tell me more about it?</li> <li>Can you give me some details?</li> <li>Can you be more specific?</li> <li>What do you mean by...?</li> <li>How or why is it important?</li> </ul>	<ul style="list-style-type: none"> <li>I think it means that...</li> <li>In other words...</li> <li>It's important because...</li> <li>It's similar to when...</li> </ul>
<b>Support Ideas with Evidence</b>	<ul style="list-style-type: none"> <li>Can you give any examples from the text?</li> <li>What are some examples from other texts?</li> <li>What evidence do you see for that?</li> <li>How can you justify that idea?</li> <li>Can you show me where the text says that?</li> </ul>	<ul style="list-style-type: none"> <li>The text says that...</li> <li>An example from another text is...</li> <li>According to...</li> <li>Some evidence that supports that is...</li> </ul>
<b>Build On or Challenge Partner's Ideas</b>	<ul style="list-style-type: none"> <li>What do you think of the idea that...?</li> <li>Can we add to this idea?</li> <li>Do you agree?</li> <li>What are other ideas/ points of view?</li> <li>What else do we need to think about?</li> <li>How does that connect to the idea...?</li> </ul>	<ul style="list-style-type: none"> <li>I would add that...</li> <li>I want to follow up on your idea...</li> <li>Another way to look at it is...</li> <li>What you said made me think of...</li> </ul>
<b>Paraphrase</b>	<ul style="list-style-type: none"> <li>What do we know so far?</li> <li>To recap, I think that...</li> <li>I'm not sure that was clear.</li> <li>How can we relate what I said to the topic/ question?</li> </ul>	<ul style="list-style-type: none"> <li>So, you are saying that...</li> <li>Let me see if I understand you...</li> <li>Do you mean that...?</li> <li>In other words...</li> <li>It sounds like you are saying that...</li> </ul>
<b>Determine the Main Idea and Key Details</b>	<ul style="list-style-type: none"> <li>What have we discussed so far?</li> <li>How can we summarize what we have talked about?</li> <li>What can we agree upon?</li> <li>What are main points or ideas we can share?</li> <li>What relevant details support the main points or ideas?</li> <li>What key ideas can we take away?</li> </ul>	<ul style="list-style-type: none"> <li>We can say that...</li> <li>The main idea seems to be...</li> <li>As a result of this conversation, we think that we should...</li> <li>The evidence suggests that...</li> </ul>

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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:



### 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 about what they've just learned. Usually, there is also a prompt for students to think about something also before they discuss. An example can be seen below, taken from page 301 of the Student Edition, Course 2:

### Example 2 Solve Two-Step Equations

Solve  $-2y - 7 = 3$ . Check your solution.

$$\begin{array}{ll} -2y - 7 = 3 & \text{Write the equation.} \\ + 7 = + 7 & \text{Addition Property of Equality} \\ -2y = \square & \text{Simplify.} \\ \frac{-2y}{-2} = \frac{10}{-2} & \text{Division Property of Equality} \\ y = \square & \text{Simplify.} \end{array}$$

So, the solution of the equation is  $y = -5$ .

Check your solution by substituting  $-5$  for  $y$  in the equation.

$$\begin{array}{l} -2(-5) - 7 = 3 \\ 10 - 7 = 3 \quad \checkmark \end{array}$$

Since  $10 - 7 = 3$  is a true statement, the solution is correct.

#### Check

Solve  $5w - 8 = -3$ . \_\_\_\_\_



[Go Online](#) You can complete an Extra Example online.

#### Think About It!

What is the first step in solving this equation?

#### Talk About the Example

In the fourth line of the solution, why was each side of the equation divided by  $-2$  instead of  $2$ ?

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? **Yes** No
- 2) Are the language features at the sentence dimension appropriate for the identified proficiency levels? **Yes** No
- 3) Are the language features at the sentence dimension addressed systematically 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) 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, like comparatives and superlatives, used to describe mathematical concepts. This example comes from the LDH, Course 3, Lesson 4, page T10:

English Language Development Leveled Activities		
Entering/Emerging	Developing/Expanding	Bridging
<p><b>Listen and Identify</b></p> <p>List a few perfect and non-perfect squares. Point to each as you ask, <i>Perfect or not perfect?</i> Ask a volunteer to answer. Then say the answer: <i>perfect or not perfect.</i> Have students repeat chorally.</p> <p>Choose a non-perfect square and model estimating its square root by plotting it on a number line ranging between two perfect squares. Point to each end of the line as you ask, <i>Is the square root of _____ closer to _____ or _____?</i> Display the following sentence frame to help students answer: <b>Closer to _____.</b> Repeat with a non-perfect cube.</p>	<p><b>Show What You Know</b></p> <p>Display a Word Web with <i>-er</i> written in the center and another one with <i>-est</i>. Have students brainstorm examples of comparatives and superlatives that use each ending and record them. Pair students and assign the following: <math>\sqrt{35}</math> and <math>\sqrt[3]{62}</math> to each pair. Display the following sentence frames to help them share their answers: <b>The greatest perfect square/cube less than _____ is _____.</b> <b>The least perfect square/cube greater than _____ is _____.</b> <b>_____ is closer to _____, so the best estimate is _____.</b></p>	<p><b>Round the Table</b></p> <p>Write: The number of swings back and forth of a pendulum of length <math>L</math> in inches per minute is <math>\frac{375}{\sqrt{L}}</math>. About how many swings will a 40-inch pendulum make each minute? Divide students into groups of three, and assign one problem to each group. Have students work jointly on the problem by passing the paper around the table to complete each step. Direct each member of the group to write with a different color to ensure all students participate. Afterward, have groups share their answers, and have the students in each group describe the specific steps they completed.</p>

Additionally, students are provided with many types of graphic organizers throughout the materials to help provide understanding, including Cornell Notes. According to the description, on page xvi 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 10 of the LDH for Course 3, Lesson 4:

## Lesson 4 Notetaking

### *Estimate Irrational Roots*

Use Cornell notes to better understand the lesson's concepts. Complete each sentence by filling in the blanks with the correct word or phrase.

Questions	Notes
1. How do I estimate a square root?	First, I determine if the square root is a perfect <u>square</u> .  If not, then I use a <u>number line</u> to determine between which two perfect <u>squares</u> the square root falls between and estimate based on where the square root falls on the number line.
2. How do I estimate a cube root?	First, I determine if the cube root is a perfect <u>cube</u> .  If not, then I use a <u>number line</u> to determine between which two perfect <u>cubes</u> the cube root falls between and estimate based on where the cube root falls on the number line.
<p style="text-align: center;"><b>Summary</b></p> <p>How can I estimate the square root of a non-perfect square? <i>See students' work.</i></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	

10 Course 3 • Module 2 Real Numbers

- 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, the teachers are reminded to ask questions based on their student's level of English comprehension:

## Lesson 1 Powers and Exponents

### English Learner Instructional Strategy

#### Language Structure Support: Tiered Questions

Add *base* and *exponent* and their Spanish cognates, *base* and *exponente*, on a Word Wall with examples or drawings to support understanding. Provide an exponent and have students recall what they learned in previous grades.

During the lesson, be sure to ask questions according to each student's level of English comprehension. Ask emerging level students simple questions that elicit one-word answers or allow the student to respond with a gesture: *Which number is the power? Is this the base? or Do I use \_\_\_\_\_ as a factor \_\_\_\_\_ times or \_\_\_\_\_ times?* For expanding students, ask questions that elicit answers in the form of simple phrases or short sentences: *How do I know which number to multiply? What do I need to do first? or Which numbers are the exponents?* For bridging students, ask questions that require more complex answers: *Why is \_\_\_\_\_ used as a factor \_\_\_\_\_ times?*

#### English Language Development Leveled Activities

Entering/Emerging	Developing/Expanding	Bridging
<b>Academic Vocabulary</b> Guide students to create a classroom anchor chart with visual examples and labels for <i>power</i> , <i>base</i> , and <i>exponent</i> . As you provide an example for each word and identify it, have students chorally repeat the vocabulary word. Monitor correct pronunciation and repeat the modeling as needed. In particular, listen to how students are saying <i>power</i> , as the /ow/ sound is not used in Spanish and may give students difficulty.	<b>Act It Out</b> Divide students into small groups of three or four. Distribute a pair of number cubes to each group. Say, <i>Roll your number cubes to create a power. Use the greater number as the base and the lesser number as the exponent. Write the power and find its product.</i> Give students time to complete the task. Then have the students in each group take turns describing the power using the following sentence frames: <b>The base is _____. The exponent is _____. The power is _____. The product of the power is _____.</b>	<b>Developing Oral Language</b> Have students work in pairs to create a three-column graphic organizer for the words <i>power</i> , <i>base</i> , and <i>exponent</i> . The left column should list the words, the middle column should contain an everyday definition for each word, and the right column should contain the mathematical definition for each word from the glossary. Afterward, discuss as a group how the everyday definitions for each word relate to the mathematical definitions.

Teacher Notes:

T1 Course 3 • Module 1 Exponents and Scientific Notation

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 Lesson 4 of the LDH, Course 2, page T10, for using Tiered Questions:

## Lesson 4 Percent Error

### English Learner Instructional Strategy

#### Language Structure Support: Tiered Questions

Write *percent* and its Spanish cognate, *por ciento*, on the board or a cognate chart. Review that *percent* means “for every 100” or “out of 100.” Ask, *So, what is 20 percent?* If necessary, model and prompt students to say, **20 out of 100**. Repeat with several other examples.

Write *error*. Underline *err* and explain that the word means “to make a mistake.” Write a few simple words or math equations on the board, including a few with spelling or calculation errors in them. For example, *persent*, *add*, *subtract*, *multiply*, *devide*,  $3 + 3 = 9$ ,  $3 \cdot 3 = 9$ .

Ask questions according to students’ level of English acquisition, such as:

Entering/Emerging: **Point to the error. Does this equation/word have an error?**

Developin/Expanding: **Which words have a spelling error?**

Bridging: **Find the errors and tell what the mistake is.**

Add *percent* and *error* to the Math Word Wall. Include visual examples.

#### English Language Development Leveled Activities

### C. Word/Phrase Dimension (multiple meanings of words, general, specific, and technical language<sup>1</sup>)

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

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<sup>2</sup>General 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.

**systematically presented 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 address the language features of the word/phrase dimension in a consistent manner for all three identified proficiency levels. There is a relatively strong 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 Course 3, Module 1, Lesson 1:

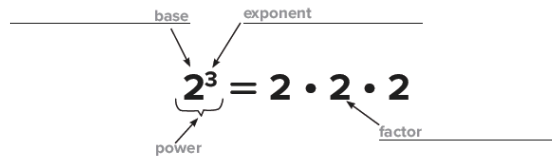


NAME \_\_\_\_\_ DATE \_\_\_\_\_ PERIOD \_\_\_\_\_

**Lesson 1 Vocabulary*****Powers and Exponents***

Use the word bank to identify the parts of the expression. Draw an arrow from the word to the part of the expression it describes. Then use the three column chart to organize the vocabulary. Write the word in Spanish. Then write the definition of each word. Sample answers are given.

Word Bank			
power	base	exponent	factor



English	Spanish	Definition
<b>power</b>	potencia	producto de factores repetidos con un exponente y una base
<b>base</b>	base	en una potencia, el número que es el factor común
<b>exponent</b>	exponente	en una potencia, el número de veces que la base se usa como factor

Another example of a graphic organizer for vocabulary development gives the students opportunities to connect the vocabulary words to the same word in Spanish, the predominant language of the population of ELL students the materials are targeting. These activities also give students the opportunity to recognize cognates that may be familiar to them:

## Lesson 2 Vocabulary

### Roots

Use the three column chart to organize the vocabulary in this lesson. Write the word in Spanish. Then write the definition of each word. Sample answers are given.

English	Spanish	Definition
<b>square root</b>	raíz cuadrada	the factors multiplied to form perfect squares
<b>perfect square</b>	cuadrados perfectos	a rational number whose square root is a whole number
<b>radical sign</b>	signo radical	the symbol used to indicate a non-negative square root, $\sqrt{\quad}$
<b>cube root</b>	raíz cúbica	one of three equal factors of a number
<b>perfect cube</b>	cubo perfectos	rational number whose cube root is a whole number

- 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 it is targeted to. Often, as in the example below from Course 1, Module 8, the students will check off the vocabulary they may already know before beginning the Module:

## What Vocabulary Will You Learn?

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

base

parallelogram

congruent

regular polygon


height

trapezoid

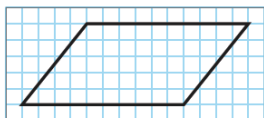
The students then proceed with the lesson and encounter the words in context:

### Learn Area of Parallelograms

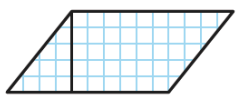
A **parallelogram** is a quadrilateral with opposite sides parallel and opposite sides the same length.

 **Go Online** Watch the video to learn how to find the area of a parallelogram.

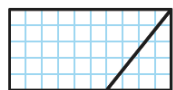
The video states that a rectangle can be used to find the area of a parallelogram.



A parallelogram is shown on grid paper. Cut out the parallelogram.



Cut along the line that forms the third side of the right triangle on the left side of the figure.



Move the triangle to the right side of the figure to form a rectangle.

**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 Course 3, Module 1, Lesson 4, the students are learning about zero and negative exponents. At the Entering/Emerging level, students are using a word recognition strategy by having index cards with basic vocabulary such as *add*, *subtract* and *multiply* on them. The students use these cards to work through the problems with the teacher. At the Developing/Expanding level, students will engage in a think-pair-share activity with sentence frames and

oral practice using the more specific vocabulary of the subject area, such as *equivalent*. At the Bridging level, students will be reporting back about how they completed the task using a more sophisticated sentence frame:

Entering/Emerging	Developing/Expanding	Bridging
<p><b>Word Recognition</b></p> <p>Before the lesson, create a set of index cards with <i>add</i>, <i>subtract</i>, <i>multiply</i>, and <i>divide</i> written on them. Randomly distribute the cards so each student has one. As you work through problems from the lesson, have students guide you by prompting them with either/or questions for each step, such as <i>Do I add or subtract these numbers?</i> or <i>Do I multiply the exponents or add them?</i> Have students with the correct cards hold them up, and then choose one of these students to come forward and complete that step with you.</p>	<p><b>Think-Pair-Share</b></p> <p>Before the lesson, use index cards to create matching pairs of expressions with positive and negative exponents, such as <math>10^3 \cdot 10^{-6}</math> and <math>\frac{1}{10^3}</math> or <math>y^{-2} \cdot y^3</math> and <math>\frac{1}{y^5}</math>. Distribute one card to each student. Say, <i>Find the student with a card showing an equivalent expression</i>. Give students time to find their partners. Then say, <i>Explain why the expressions are equivalent</i>. Display the following sentence frame for students to use when sharing their explanations: _____ and _____ are equivalent because _____.</p>	<p><b>Report Back</b></p> <p>Assign a problem to each student. Say, <i>Rewrite the problem using multiplication or division, and then simplify the expression</i>. Give students time to complete the task. Then display the following sentence frames for students to use in reporting back on how they arrived at an answer: <b>I rewrote _____ as _____. I [added/ subtracted] the exponents. I simplified _____ to _____. Have students evaluate each others' work and make suggestions when an incorrect answer is shared.</b></p>

- 4) The general, specific, and technical language is systematically presented throughout the materials. 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 may already know. In this example, from Course 2, Module 9, page 456, the students are presented with a list of vocabulary related to measuring figures:

## What Vocabulary Will You Learn?

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

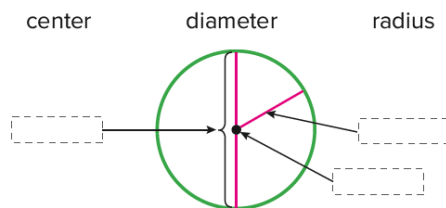
- |                                           |                                       |                                          |
|-------------------------------------------|---------------------------------------|------------------------------------------|
| <input type="checkbox"/> area             | <input type="checkbox"/> face         | <input type="checkbox"/> regular pyramid |
| <input type="checkbox"/> center           | <input type="checkbox"/> lateral face | <input type="checkbox"/> semicircle      |
| <input type="checkbox"/> circle           | <input type="checkbox"/> pi           | <input type="checkbox"/> slant height    |
| <input type="checkbox"/> circumference    | <input type="checkbox"/> prism        | <input type="checkbox"/> surface area    |
| <input type="checkbox"/> composite figure | <input type="checkbox"/> pyramid      | <input type="checkbox"/> volume          |
| <input type="checkbox"/> diameter         | <input type="checkbox"/> radius       |                                          |

Following this are explicit definitions, accompanied by graphic support and activities to help understand and apply the meaning of the vocabulary:

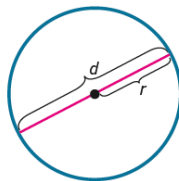
### Learn Radius and Diameter

A **circle** is the set of all points in a plane that are the same distance from a point, called the **center**. The **diameter** is the distance across a circle through its center. The **radius** is the distance from the center to any point on the circle.

Label the parts of the circle with the correct terms.



Since the radius of a circle is the distance from the center to any point on the circle, the length of the diameter is always twice the radius. It also means that the radius is half the diameter.



### 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

- |                                                                                                                                         |                   |    |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|
| <b>1) Do the materials differentiate between the language proficiency levels?</b>                                                       | <b><u>Yes</u></b> | No |
| <b>2) Is differentiation of language proficiency developmentally and linguistically appropriate for the designated language levels?</b> | <b><u>Yes</u></b> | No |
| <b>3) Is differentiation of language systematically addressed throughout the materials?</b>                                             | <b><u>Yes</u></b> | 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 differentiate between the identified language proficiency levels. The Language Development Handbook (LDH) provides differentiated instructional support and guidance for teachers, beginning with an understanding of what skills a student at each level may look like:

**An Entering/Emerging Level ELL**

- 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

**A Developing/Expanding Level ELL**


- 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.

**A Bridging Level ELL**

- May struggle with conditional structure of word problems
- Participates in social conversations needing very little contextual support
- Can mentor other ELLs 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 Course 1 Teacher Edition, page 3a:

## DIFFERENTIATE

 View reports of student progress of the **Checks** after each example to differentiate instruction.

Resources	AL	OL	BL	ELL
Remediation	●			●
Arrive <b>MATH</b> Take Another Look	●			●
Extension		●	●	●
Collaboration Strategies	●	●	●	●

### ELL Support

**ELL** A variety of resources are available to support your ELL students.

- Access activities designed to visualize concepts through the use of graphic organizers, vocabulary support, and multicultural tips in the *English Language Learner Guide*.
- Access discussion questions designed to cultivate meaning of vocabulary terms in the *What Vocabulary Will You Learn?* resource in each lesson.

2) The differentiation of language proficiency is developmentally and linguistically appropriate for the middle school target age of the materials. On page x of the LDH for each grade level, there is a page outlining strategies for classroom discussion. This is a helpful resource for helping 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.” This chart, seen below, contains specific activities to support the lesson, divided up by proficiency level:

## English Language Development Leveled Activities

Use the following problem with these leveled activities: *Evaluate each expression. Express the result in scientific notation.*  $(3.9 \times 10^2)(2.3 \times 10^6) = \underline{\hspace{2cm}}$

Entering/Emerging	Developing/Expanding	Bridging
<p><b>Word Knowledge</b></p> <p>Invite four students forward and assign them as <i>first</i>, <i>second</i>, <i>third</i>, and <i>fourth</i>. Write the problem on the board and then, to the right, write <i>First</i>. Say, <i>First we need to multiply the decimal numbers</i>. Say, <i>first</i> again, have students repeat chorally. Then have the student assigned as <i>first</i> perform the task. Then write <i>Second</i> and repeat the activity for the next step. Continue in this manner for steps three and four. Choose a new problem and repeat the activity with four new students.</p>	<p><b>Building Oral Language</b></p> <p>Divide students into several small groups to solve the problem. Display the following sentence frames: <b>First</b> _____. <b>Next</b> _____. <b>Then</b> _____. <b>Last</b> _____. Say, <i>Use the sentence frames to record each step as you solve</i>. Give groups time to solve the problem. Then ask a volunteer from each group to read the steps they took to solve the problem.</p>	<p><b>Exploring Language Structures</b></p> <p>As you model solving the problem, write out each step using complete sentences, such as <i>1. I rewrite _____ as _____</i>. <i>2. I multiply _____ and _____</i> and so on. Afterward, write another nearly identical problem for students to solve on their own. Then say, <i>Use the sentences I've written to describe how you solved the problem, but use the past-tense</i>. Listen for correct usage of the past tense and remodel as necessary.</p>

The 6-8 Florida 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:

Targeted Instruction

*Florida Reveal Math empowers teachers with impactful resources to deliver the right math, at the right time, for the right student. With powerful adaptive technology and differentiation resources, teachers have the tools they need to reach all learners.*

**Questions for Mathematical Discourse**

**AL** Why do we place the 1 above the 8 of the dividend, 5,287? 340 cannot divide 5 or 52, but it can divide 528, so the 1 goes above the 8.

**CL** How do you know when you are done dividing? When the final remainder is zero, there is no other division to take place.

**EL** Find  $5,287 \div 170$ . What do you notice about this divisor compared to 340? What do you notice about this quotient compared to the quotient of  $5,287 \div 340$ ? 311. Sample answer: 170 is half of 340, and the quotient 311 is twice the quotient 155.

**Common Misconception**

Some students may jump into using the Pythagorean Theorem, and using it incorrectly, without paying attention to the information asked for in a problem. In Exercise 3, students may incorrectly set up the equation  $22^2 + 27^2 = x^2$ , solve the equation, and claim that  $x$  is about 35 inches. Remind them that they should study the given information or given diagram to discern whether or not they need to find a missing leg or the missing hypotenuse. They can also check their solution for reasonableness by knowing that  $x$  cannot be greater than 27 inches, because the hypotenuse is the longest side of a right triangle.

**Offer Opportunities for Discourse and Differentiation**

**Scaffolding Questions and Differentiation** tips in the Teacher Edition provide point-of-use strategies for:

**AL** Approaching Level

**CL** On Level

**EL** Beyond Level

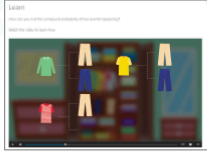
**Uncover Misconceptions to Improve Understanding**

**Common Misconception** tips in the Teacher Edition allow teachers to pinpoint and correct errors in students' thinking. By using mistakes as an opportunity to understand, students learn that the process is just as important as the end result.

### Digital Lessons to Support Differentiated Instruction

*Arrive Math Take Another Look™* digital lessons align with lesson objectives and supplement core instruction, helping teachers provide targeted skill support and extra practice. *Florida Reveal Math* includes about 100 Take Another Looks per course to provide additional differentiation opportunities for students. These lessons allow for fun and assignable skill support, accessed at point-of-use.

Each 15-minute student-driven, digital lesson contains three parts:



Part 1: Model Concept



Part 2: Interactive Practice



Part 3: Data Check

*Arrive MATH Booster*, the new K–8 supplemental intervention program from McGraw-Hill Education, provides access to all 1,160 Take Another Looks, plus games and hands-on resources. Contact your MHE Sales Representative for more information about purchasing *Arrive MATH Booster* to complement *Florida Reveal Math!*

## B. Representation of Language Domains


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

- |                                                                                                           |                   |    |
|-----------------------------------------------------------------------------------------------------------|-------------------|----|
| <b>1) Are the language domains (listening, speaking, reading, and writing) targeted in the materials?</b> | <b><u>Yes</u></b> | No |
| <b>2) Are the targeted language domains presented within the context of language proficiency levels?</b>  | <b><u>Yes</u></b> | No |
| <b>3) Are the targeted language domains systematically integrated throughout the materials?</b>           | <b><u>Yes</u></b> | 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. Each lesson provides opportunities for students to engage in all four language domains. 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. There are also inquiry-based items, and reflection activities, where the student needs to explain something related to the topic and also reflect on what they have learned or how it can be applied elsewhere. The example below, from Course 1, Module 8, page 455 shows an example:

## Explore Area of Parallelograms

 **INQUIRY** How is finding the area of a parallelogram like finding the area of a rectangle? How is it different?

Record your observations here

### Pause and Reflect

What have you learned in an earlier grade that can help you with today's lesson?

Record your observations here

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

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Additionally, the lessons themselves 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 and the students at the Bridging level will be writing in addition to engaging in the other three domains:

## English Language Development Leveled Activities

Use the following problem with these leveled activities: *Andrew earns \$18 per hour for mowing lawns. Is the amount of money he earns proportional to the number of hours he spends mowing?*

Entering/Emerging	Developing/Expanding	Bridging
<p><b>Look, Listen, and Identify</b></p> <p>Write the ratios for the problem on the board and say, <i>This is a ratio. Each ratio compares the amount of money earned to the hours Andrew works.</i> Point to each ratio and say, for example, <i>The ratio is eighteen to one.</i> Have students repeat each ratio chorally, using this sentence frame: <b>The ratio is _____.</b> Ask, <i>Are all of these ratios equivalent, or equal?</i> <b>yes</b> Then circle all the ratios and say, <i>All of these ratios are equivalent. So, the relationship between the amount of money Andrew earns to the hours he works is proportional.</i> Have students repeat chorally.</p>	<p><b>Academic Word Knowledge</b></p> <p>Repeat the Emerging Level activity. Say The relationship between the cost of boxes of cards and the number of boxes purchased are shown by following ratios. Write <math>\frac{\\$15}{1}</math>, <math>\frac{\\$25}{2}</math>, <math>\frac{\\$35}{3}</math>, and <math>\frac{\\$45}{4}</math> on the board. Ask, <i>Are all the ratios equivalent?</i> <b>no</b> Say, <i>The ratios are not equivalent, so the relationship between the cost and the number of boxes of cards is nonproportional.</i> Have students repeat chorally.</p>	<p><b>Show What You Know</b></p> <p>Divide students into pairs, and give each pair an index card. Ask students to describe a relationship that is proportional and write three ratios that represent the relationship. Then have them repeat the process for a nonproportional relationship. Ask partners to present both sets to the class, explaining why each is proportional or nonproportional.</p>

LDH, Course 2, Module 1, page T3.







- 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 checkmark (✓) 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		
						
finding circumferences of circles						
using circumferences of circles to find missing dimensions						
finding areas of circles						
using circumferences of circles to find area						
finding areas of composite figures						
finding volumes of prisms and pyramids						
using volumes of prisms and pyramids to find missing dimensions						
finding surface areas of prisms and pyramids						
finding volumes and surface areas of composite figures						

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

### Talk About the Example

In the fourth line of the solution, why was the equals sign (=) changed to an approximately equal to ( $\approx$ ) symbol?

Course 2, Student Edition, page 459



## 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

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

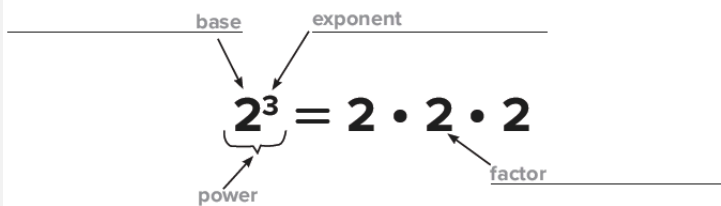
(Grade Level) is representative of this idea when it states on page vi “McGraw-Hill Education is committed to providing English Learners appropriate support as they simultaneously learn content and language.” Each Lesson in the LDH connects the Language of Mathematics to the content topic of the lesson. An example is seen here, taken from Course 3, Module 1, page 1. The example looks at the vocabulary needed for the lesson on powers and exponents:

### Lesson 1 Vocabulary

#### *Powers and Exponents*

Use the word bank to identify the parts of the expression. Draw an arrow from the word to the part of the expression it describes. Then use the three column chart to organize the vocabulary. Write the word in Spanish. Then write the definition of each word. Sample answers are given.

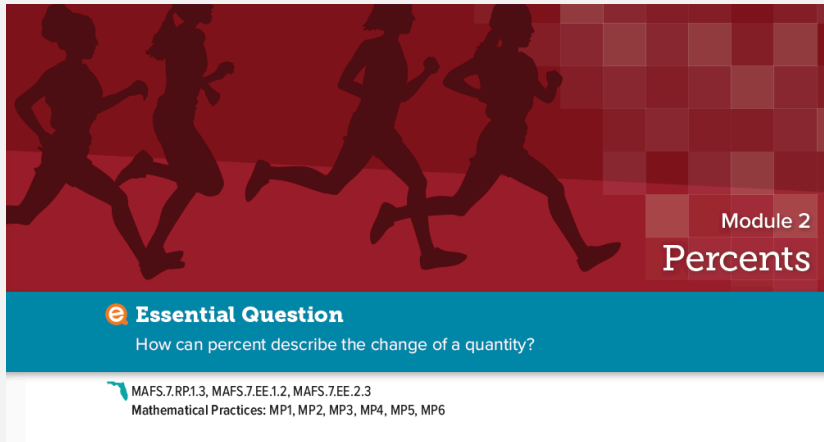
Word Bank			
power	base	exponent	factor



English	Spanish	Definition
<b>power</b>	potencia	producto de factores repetidos con un exponente y una base
<b>base</b>	base	en una potencia, el número que es el factor común
<b>exponent</b>	exponente	en una potencia, el número de veces que la base se usa como factor

2) The academic content standards are systematically represented throughout the materials. The Mathematics Florida Standards (MAFS) are identified at the beginning of each Module in the Student Edition, as seen in the example below,

from the Course 2, Module 2 Students Edition:



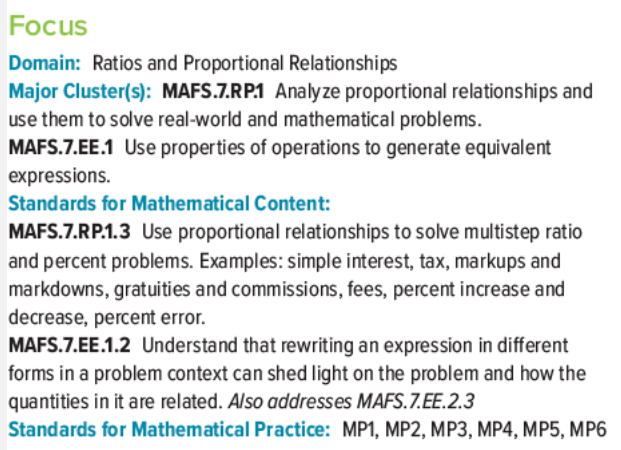
The cover page for Module 2 Percents features silhouettes of four runners in a red-to-white gradient background. The text 'Module 2 Percents' is in the top right. Below is a blue bar with 'Essential Question' and the question 'How can percent describe the change of a quantity?'. At the bottom, it lists standards: MAFS.7.RP.1.3, MAFS.7.EE.1.2, MAFS.7.EE.2.3 and Mathematical Practices: MP1, MP2, MP3, MP4, MP5, MP6.

Throughout the Module, the Lessons themselves note what “Today’s Standards” are that the student will be working on:



The lesson header for Lesson 2-2, 'The Percent Equation', is in a teal bar. Below is a white box with 'I Can...' and a blank line for a student response. To the right, a teal box lists 'Today's Standards' as MAFS.7.RP.1.3, also addressing MAFS.7.EE.2.3, with Mathematical Practices MP1, MP2, and MP6.

In the Teacher Editions, at the beginning of each Module, the teacher is given an overview of the Standards that are being addresses through the “Focus” section:



The 'Focus' section is in a white box with green text. It defines the domain as Ratios and Proportional Relationships, lists the major cluster as MAFS.7.RP.1, and describes the standard MAFS.7.EE.1. It also lists standards for mathematical content: MAFS.7.RP.1.3 and MAFS.7.EE.1.2, and standards for mathematical practice: MP1, MP2, MP3, MP4, MP5, and MP6.

Course 2, Module 2, page 59a

Furthermore, the teachers have a Suggested Pacing guide and a “Coherence”

section which shows a vertical alignment with what Standard the students studied previously, what they are going to study now and what comes next. Examples of these are seen here, from Course 2, Module 2, page 59a:

### Suggested Pacing

Lesson		Standards	45-min classes	90-min classes
Module Pretest and Launch the Module Video			1	0.5
2-1	The Percent Proportion	MAFS.7.RP.1.3, <i>Also addresses MAFS.7.EE.2.3</i>	1	0.5
2-2	The Percent Equation	MAFS.7.RP.1.3, <i>Also addresses MAFS.7.EE.2.3</i>	1	0.5
Put It All Together 1: Lessons 2-1 and 2-2			0.5	0.25
2-3	Percent of Change	MAFS.7.RP.1.3, <i>Also addresses MAFS.7.EE.2.3</i>	2	1
2-4	Percent Error	MAFS.7.RP.1.3, <i>Also addresses MAFS.7.EE.2.3</i>	2	1
2-5	Commission and Fees	MAFS.7.RP.1.3, <i>Also addresses MAFS.7.EE.2.3</i>	1	0.5
2-6	Tax	MAFS.7.RP.1.3, MAFS.7.EE.1.2, <i>Also addresses MAFS.7.EE.2.3</i>	2	1
2-7	Tips and Markups	MAFS.7.RP.1.3, MAFS.7.EE.1.2, <i>Also addresses MAFS.7.EE.2.3</i>	1	0.5
2-8	Discounts	MAFS.7.RP.1.3, MAFS.7.EE.1.2, <i>Also addresses MAFS.7.EE.2.3</i>	1	0.5
2-9	Interest	MAFS.7.RP.1.3, <i>Also addresses MAFS.7.EE.2.3</i>	2	1
Put It All Together 2: Lessons 2-5 through 2-9			0.5	0.25
Module Review			1	0.5
Module Assessment			1	0.5
<b>Total Days</b>			<b>17</b>	<b>8.5</b>

Module 2 • Percents 59a

### Coherence

#### Vertical Alignment

##### Previous

Students used ratio and rate reasoning to solve problems involving percents.

**MAFS.6.RP.1.4**

##### Now

Students solve multi-step percent problems.

**MAFS.7.RP.1.3**

##### Next

Students will use percents to find the probability of an event occurring.

**MAFS.7.SP.3.7**

Finally, in the Teacher Edition Front Matter, which provides an overview of the entire course, there are several pages of a table that shows all the MAFS, the topic they cover and the Lesson the Standard(s) corresponds to:



Primary references are bold. Supporting references are italicized.

Mathematics Florida Standards (MAFS)		Lesson(s)
<b>MAFS.7.RP Ratios and Proportional Relationships</b>		
<b>MAFS.7.RP.1 Analyze proportional relationships and use them to solve real-world and mathematical problems.</b>		
<b>MAFS.7.RP.1.1</b>	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. <i>For example, if a person walks <math>\frac{1}{2}</math> mile in each <math>\frac{1}{4}</math> hour, compute the unit rate as the complex fraction <math>\frac{\frac{1}{2}}{\frac{1}{4}}</math> miles per hour, equivalently 2 miles per hour.</i>	1-1, 4-6
<b>MAFS.7.RP.1.2</b>	Recognize and represent proportional relationships between quantities.	1-3, 1-4, 1-5, 1-6, 8-4, 11-2, 11-3
<b>MAFS.7.RP.1.2.a</b>	Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.	1-3, 1-4
<b>MAFS.7.RP.1.2.b</b>	Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	1-3, 1-4, 1-6, 8-4
<b>MAFS.7.RP.1.2.c</b>	Represent proportional relationships by equations. <i>For example, if total cost <math>t</math> is proportional to the number <math>n</math> of items purchased at a constant price <math>p</math>, the relationship between the total cost and the number of items can be expressed as <math>t = pn</math>.</i>	1-6
<b>MAFS.7.RP.1.2.d</b>	Explain what a point $(x, y)$ on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where $r$ is the unit rate.	1-4
<b>MAFS.7.RP.1.3</b>	Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	1-2, 1-5, 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 8-4

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, such as these examples of multi-step problems, from Course 2, Module 2, page 76:

### Multi-Step Problems

12. The sub sandwich sale for the soccer team’s fundraiser is shown in the table. This year, the selling price of a sub sandwich is 5% greater than last year’s price. If the team earns 38% of the sales each year, in which year did they earn more money? How much more did they earn?

	Price (\$)	Number of Subs Sold
Last Year	?	800
This Year	5.25	760

13. The table shows the results of a school survey about students’ favorite type of take-out food. Based on the data, predict out of 1,800 students how many more would favor pizza than chicken and sandwiches combined.

Favorite Take-Out Food	
Type of Food	Percent
Burritos	32
Chicken	16
Pizza	40
Sandwiches	12

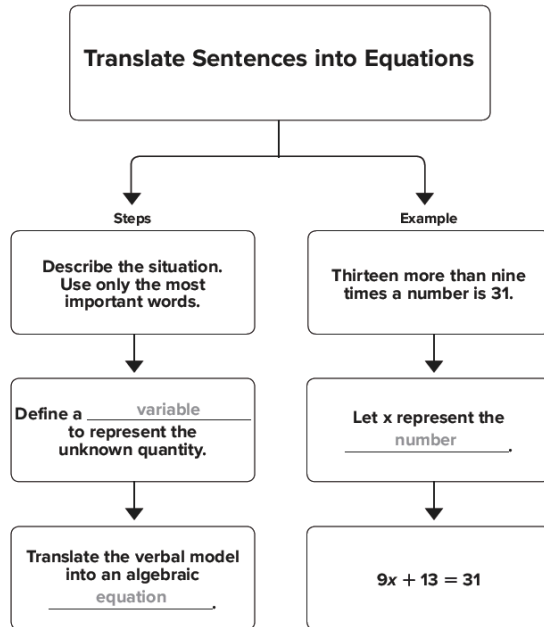
There is also a strong language focus throughout the materials. This example, from

Course 3, Lesson 4, page 15 demonstrates how the materials integrate the language of math and everyday social and instructional language by using a flow chart to write and solve multi-step equations:

### Lesson 4 Vocabulary

#### Write and Solve Multi-Step Equations

Use the flow chart to review the process for writing multi-step equations. Then answer the questions at the bottom.



1. What are some key words that tell you to add? *sum, total, more*
2. What are some key words that tell you subtract? *difference, less, decreased by*
3. What are some key words that tell you to multiply? *times, twice, area*
4. What are some key words that tell you to divide? *quotient, divided, half*

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

- |                                                                                                                                                                                                              |                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| <p><b>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?</b></p> | <p><b><u>Yes</u></b>    No</p> |
| <p><b>2) Are opportunities for engaging in higher order thinking systematically addressed in the</b></p>                                                                                                     | <p><b><u>Yes</u></b>    No</p> |

## 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 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 xi of all three LDHs provide 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/EMERGING**
- I think \_\_\_\_.
- DEVELOPING/EXPANDING**
- My reasons are \_\_\_\_.
- BRIDGING**
- I think \_\_\_\_ because \_\_\_\_.



#### Agreeing with Someone's Reasoning

- ENTERING/EMERGING**
- I agree with your reasons or point.
- DEVELOPING/EXPANDING**
- I agree that \_\_\_\_.
- BRIDGING**
- I have the same reasons as \_\_\_\_ . I think that \_\_\_\_.



#### Disagreeing with Someone's Reasoning

- ENTERING/EMERGING**
- I don't agree with your reasons.
- DEVELOPING/EXPANDING**
- I don't agree that \_\_\_\_.
- BRIDGING**
- I can see your point. However, I think that \_\_\_\_.

xi

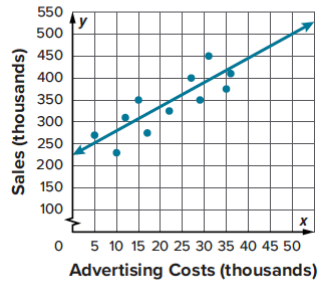
2) Opportunities for engaging in higher order thinking skills are systematically addressed throughout the materials. In each lesson, there are multiple opportunities for students to engage with the material in different ways. Oftentimes, they will be asked to think further about an answer to how to apply it in another situation or to also talk about or justify their reasoning. The example below comes from page 605 of the Course 3 Student Edition:



**Example 2** Make Conjectures Using Equations for Lines of Best Fit

The scatter plot shows the amount of money a company spends on advertising and the amount of money they make in sales over several months.

Write an equation for the line of best fit. Then use it to make a conjecture about the amount of money the company will make in sales if they spend \$60,000 on advertising.



**Think About It!**

Will the sales be greater than \$500,000? Justify your response.

**Part B** Use the equation for the line of best fit to make a conjecture.

To make a conjecture about the amount of money made in sales if \$60,000 is spent on advertising, replace  $x$  with 60.

$y = 5.56x + 225$       Equation for line of best fit

$y = 5.56(\square) + 225$       Replace  $x$  with 60.

$y = \square$       Simplify.

So, the amount of money that the company will make is about \$558,600 if they spend \$60,000 on advertising.

**Talk About the Example**

In Part B, why is the answer \$558,600, and not \$558.60?

Some of the Practice areas, designed as homework for the students, will contain higher-order thinking problems, as seen here:

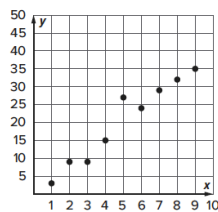
**Higher-Order Thinking Problems**

5. **MP Find the Error** The table shows the daily high temperature and the number of cups of lemonade sold at a concession stand that day. Lucas determined that a scatter plot of the data shows that as the temperature increases, the number of cups sold decreases. Find his mistake and correct it.

Temperature (°F)	Cups Sold	Temperature (°F)	Cups Sold
80	12	98	40
72	7	77	18
89	26	67	5
93	37	82	19
74	7	86	16

6. **MP Justify Conclusions** Determine if the following statement is true or false. Explain your reasoning. *In a scatter plot, if the y-values decrease as the x-values decrease, the scatter plot represents a negative association.*

7. **Create** Describe a situation that the scatter plot shown might represent. Then interpret the scatter plot.



Course 3, Module 11, page 592

**C. Supports for Various Levels of Language Proficiency**

- |                                                                                                                          |                      |
|--------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>1) Do the materials provide scaffolding supports for students to advance within a proficiency level?</b>              | <b><u>Yes</u></b> No |
| <b>2) Do the materials provide scaffolding supports for students to progress from one proficiency level to the next?</b> | <b><u>Yes</u></b> No |
| <b>3) Are scaffolding supports presented systematically throughout the materials?</b>                                    | <b><u>Yes</u></b> 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 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, where the teachers provide a word wall or word bank and the accompanying activities to promote understanding. In this

example, from the LDH Course 3, page 1, students have a word bank and an equation to label, then they fill in a chart with the English word, the Spanish translation of it and the definition:

Word Bank

power	base	exponent	factor
-------	------	----------	--------

English	Spanish	Definition
<b>power</b>	potencia	producto de factores repetidos con un exponente y una base
<b>base</b>	base	en una potencia, el número que es el factor común
<b>exponent</b>	exponente	en una potencia, el número de veces que la base se usa como factor

Course 3 • Module 1 Exponents and Scientific Notation 1

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 for each of the three identified language proficiency levels. When a students 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 Course 2, Lesson 4 English Language Development Levelled Activities chart:

English Language Development Leveled Activities

Entering/Emerging	Developing/Expanding	Bridging										
<p><b>Word Knowledge</b>            Draw a coordinate plane. Then write: (1, 2). Point to the numbers and say, <i>This is an ordered pair.</i> Have students repeat chorally. Explain that an ordered pair always appears inside parentheses. Point to the parentheses. Have students repeat chorally. Then explain how the order in which the numbers appear is important. Say, <i>The first number coordinates with the x-axis.</i> Point to the x-axis. Then say, <i>The second number coordinates with the y-axis.</i> Point to the y-axis. Show students how to use the ordered pair to plot a point on the coordinate plane.</p>	<p><b>Show What You Know</b>            Write the chart below on the board.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Number of Books</th> <th>Number of Students</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>2</td> <td>1</td> </tr> <tr> <td>4</td> <td>2</td> </tr> <tr> <td>6</td> <td>3</td> </tr> </tbody> </table> <p>Draw the first quadrant of a coordinate plane. Label the x-axis "Books" and the y-axis "Students." Invite volunteers to write ordered pairs based on the numbers in the chart and then plot them on the coordinate plane. Ask, <i>Is the number of books proportional to the number of students?</i> Have students respond using this sentence frame: <b>The number of books [is/is not] proportional to the number of students.</b></p>	Number of Books	Number of Students	0	0	2	1	4	2	6	3	<p><b>Number Game</b>            Draw two first quadrant coordinate planes. Label the axes with increments of 5. Divide students into two teams. Have both teams face away from the board as you write these ordered pairs: (0, 0), (1, 7), (2, 14), (3, 21). Then tell students they will do a relay race: First, one student from each team plots the point described in the first ordered pair. Then that student passes the marker to a team member, to plot the point described by the next ordered pair. Students continue this way until all points are plotted. The final student correctly identifies the points' relationship by writing <i>proportional</i> or <i>nonproportional</i>. <b>proportional</b> The first team to finish wins!</p>
Number of Books	Number of Students											
0	0											
2	1											
4	2											
6	3											

Teacher Notes:

3) Scaffolding supports are presented systematically throughout the materials. On page xii 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 English Learner Instructional Strategy can be utilized before or during regular class instruction.

Categories of the scaffolded support are:

- Vocabulary Support
- Language StructurewSupport
- 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.

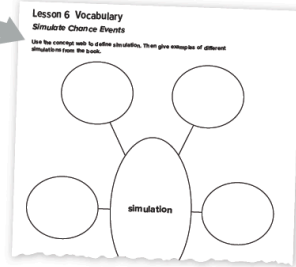
In addition to peer and teacher support, other scaffolding supports include word cards, vocabulary squares, three-column charts, definition maps, concept webs and Cornell notes. An example and description of the last two can be found on

page xvi 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 Vocabulary**

**Simulate Chance Events**  
Use the concept web to define simulation. Then give examples of different simulations from the book.

**Lesson 3 Notetaking**

**Subtract Linear Expressions**  
Use Cornell notes to help understand the lesson's concepts. Complete each sentence by filling in the blank with the correct word or phrase.

Questions	Notes
1. How do I subtract linear expressions?	I subtract _____ from _____. I use _____ pairs if needed.
2. What is the additive inverse of a linear expression?	The additive inverse of a linear expression is an expression with terms that are _____ The sum of a linear expression and its additive inverse is _____.

**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.

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**D. Accessibility to Grade Level Content**

- |                                                                                                           |                   |    |
|-----------------------------------------------------------------------------------------------------------|-------------------|----|
| <b>1) Is linguistically and developmentally appropriate grade-level content present in the materials?</b> | <b><u>Yes</u></b> | No |
| <b>2) Is grade-level content accessible for the targeted levels of language proficiency?</b>              | <b><u>Yes</u></b> | No |
| <b>3) Is the grade-level content systematically presented throughout the materials?</b>                   | <b><u>Yes</u></b> | 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. It is a middle school program and the courses (1, 2, 3) correspond to the middle school grade levels (6, 7, 8). The lessons all identify the MAFS grade level appropriate content standards. There is a nice self-assessment at the beginning of each lesson 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:

**What Will You Learn?**

Place a checkmark (✓) 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		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
constructing scatter plots						
interpreting scatter plots						
drawing lines of best fit						
making conjectures using lines of best fit						
writing equations for lines of best fit						
constructing two-way tables						
finding and interpreting relative frequencies						
finding relative frequencies to determine associations						

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 lesson and again, asked to identify what they already know:

**What Vocabulary Will You Learn?**

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

<input type="checkbox"/> bivariate data	<input type="checkbox"/> relative frequency
<input type="checkbox"/> cluster	<input type="checkbox"/> scatter plot
<input type="checkbox"/> line of best fit	<input type="checkbox"/> two-way table
<input type="checkbox"/> outlier	

Course 3, page 580

- 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 Course 3, Module 2, page T8:

English Language Development Leveled Activities		
Entering/Emerging	Developing/Expanding	Bridging
<p><b>Multiple Word Meanings</b>            Draw a 5-by-5 array. Say, <i>This shows five times five or 25. What is the shape?</i> Give students a chance to answer, <b>square</b>. Then say, Yes. <i>It is a square. Five rows and five columns make 25. Write <math>5 \cdot 5 = 25</math> and <math>\sqrt{25} = 5</math>. Say, Five squared is 25. So, five is the square root of 25. Say, square root again as you point to the the square root symbol and have students repeat chorally.</i></p>	<p><b>Frontload Academic Vocabulary</b>            Divide students into five groups and assign each group one of the lesson vocabulary words: <i>square root, perfect square, cube root, perfect cube, and radical sign</i>. Have students list on an index card one or two everyday definitions for the individual words that make up each compound (<i>square, root, sign, and so on</i>). Have students flip the card over and write the math definition for each vocabulary word. Then have groups present both the math and non-math definitions and discuss how they are related.</p>	<p><b>Developing Oral Language</b>            Divide students into small groups and assign each group one of the following perfect squares: 9, 16, 25, 49, 64, 81. Say, <i>Write a real-world story problem that uses your assigned number and its square root</i>. If students need help getting started, you might suggest problems involving area or square arrays of seating, plantings, and so on. Give groups time to complete the task, and then have them present their story problems to the other students.</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. Both the Teacher and Student Editions contain the Florida Math Standards that will be addressed in each lesson. 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 Course 1, Lesson 5-5, page 325a:

**Focus**

**Domain:** Expressions and Equations

**Major Cluster(s):** In this lesson, students address major cluster **MAFS.6.EE.1** and the supporting cluster **MAFS.6.NS.2** by using the Distributive Property.

**Standards for Mathematical Content:** **MAFS.6.NS.2.4, MAFS.6.EE.1.3,**  
*Also addresses MAFS.6.EE.1.2.b*

**Standards for Mathematical Practice:** **MP1, MP2, MP3, MP4, MP5, MP6, MP7**

## E. Strands of Model Performance Indicators

- |                                                                                          |                      |
|------------------------------------------------------------------------------------------|----------------------|
| <b>1) Do materials include a range of language functions?</b>                            | <b><u>Yes</u></b> No |
| <b>2) Are the language functions incorporated into a communicative goal or activity?</b> | <b><u>Yes</u></b> No |
| <b>3) Do the language functions support the progression of language development?</b>     | <b><u>Yes</u></b> 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 standards (MAFS). An example, seen below, will have the students applying, evaluating and reasoning.

**Major Cluster(s):**

**MAFS.6.EE.1** Apply and extend previous understandings of arithmetic to algebraic expressions.

**MAFS.6.EE.2** Reason about and solve one-variable equations and inequalities.

**Standards for Mathematical Content:**

**MAFS.6.EE.1.1** Write and evaluate numerical expressions involving whole-number exponents.

**MAFS.6.EE.1.2** Write, read, and evaluate expressions in which letters stand for numbers.

Course 1, Module 5, page 289a

Additionally, there is a Collaborative Conversations chart on page ix 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 prompt 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
<b>Elaborate and Ask Questions</b>	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...
<b>Support Ideas with Evidence</b>	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...
<b>Build On or Challenge Partner's Ideas</b>	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...
<b>Paraphrase</b>	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...
<b>Determine the Main Idea and Key Details</b>	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...

ix

- 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 Course 1, Module 5, page 299 where the students must explain why multiplication and division must be performed in order from left to right, thus reinforcing the mathematical concept and

building language proficiency at the same time:



**Talk About It!**

Use the expression  $12 \div 3 \times 4$  to explain why multiplication and division must be performed in order from left to right.

- 3)** The language functions support the progression of language development. There is an emphasis not only on math comprehension, but also 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 recognized the student is ready. These two pages, x and xi, 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/EMERGING**
- I think \_\_\_\_\_.
- DEVELOPING/EXPANDING**
- My reasons are \_\_\_\_\_.
- BRIDGING**
- I think \_\_\_\_\_ because \_\_\_\_\_.

### ✓ Agreeing with Someone's Reasoning

- ENTERING/EMERGING**
- I agree with your reasons or point.
- DEVELOPING/EXPANDING**
- I agree that \_\_\_\_\_.
- BRIDGING**
- I have the same reasons as \_\_\_\_\_. I think that \_\_\_\_\_.

### ✓ Disagreeing with Someone's Reasoning

- ENTERING/EMERGING**
- I don't agree with your reasons.
- DEVELOPING/EXPANDING**
- I don't agree that \_\_\_\_\_.
- BRIDGING**
- I can see your point. However, I think that \_\_\_\_\_.

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