

Strategies to Support English Learners in Mathematics

Why do our students need to communicate when learning mathematics?

Strategies to support student sense-making and communication . . .

- **5 Practices for Orchestrating Productive Mathematics Discussions (see back side)**
Teachers design conversations and build connections between mathematical content.

 - **Collect & Display/Language Scoop**
 - *Teachers listen for, highlight, and extend student language about mathematics.*
 - *Teachers record language that is heard within student groups, teachers share out the language students used to describe their thinking and displays them for all students to see.*
 - *Students are able to see and make connections between the oral and written representation of their communication. A class conversation is held about other ways/words that can be used to express these ideas.*

 - **Talk Moves**
 - *Revoicing – So you’re saying . . .*
 - *Repeating – Can you repeat what she said in your own words?*
 - *Reasoning – Do you agree or disagree? Why does this make sense?*
 - *Adding On – Would someone like to add on to this?*
 - *Wait Time – Take your time . . .*
 - *Turn-and-Talk – Turn and talk to your neighbor . . .*
 - *Revise – Would you like to revise your thinking?*

 - **Notice/Wonder**
 - *What do you notice?*
 - *What do you wonder?*

 - **Read and Flip for Math Stories (3 Read Protocol for Word Problems)**
 - *3 read protocol – Teachers create a focus for each of the reads. See sample below.*
 - *1st Read – The class choral reads, students retell the story, and the teacher charts student ideas.*
 - *2nd Read – The teacher reads (models a fluency read), students clarify ideas and add to what they know about the problem. Students write an answer statement.*
 - *3rd Read – Students read independently and draw a quick sketch.*
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5 Practices for Orchestrating Productive Mathematics Discussions

Margaret S. Smith & Mary Kay Stein, NCTM & Corwin Press, 2011 (www.nctm.org)

0. Selecting the Task

- Choose a task that promotes the mathematics you intend for students to learn.
- The task should demand engagement with concepts and that stimulate students to make connections.

1. Anticipating

- Do the problem yourself.
- What are students likely to produce?
- Which problems will be most likely be most useful in addressing the mathematics?

2. Monitoring

- Listen, observe, and identify key strategies.
- Keep track of approaches.
- Pose questions to get students back on track or to think more deeply.

3. Selecting

- This step is critical: What is the mathematics that you want to highlight?
- Purposefully select student work that will advance mathematical ideas.

4. Sequencing

- In what order do you want to present the student work samples?
- Do you begin with the most common? The most accessible? The misconceptions?
- How will students share their work? Board? Document Camera?

5. Connecting

- Craft questions to make the mathematics visible.
- Compare and contrast 2 or 3 students' work – What are the mathematical relationships?
- What do parts of the students' work represent in the original problem? The solution? Other work done in the past?

Mathematical Language Routines

Principles for the Design of Mathematics Curricula: Promoting Language and Content Development

By Jeff Zwiers, Jack Dieckmann, Sara Rutherford-Quach, Vinci Daro,
Rena Skarin, Steven Weiss, James Malamut

Stronger and Clearer Each Time – Purpose: To provide a structured and interactive opportunity for students to revise and refine both their ideas and their verbal and written output (Zwiers, 2014). This routine provides a purpose for student conversation as well as fortifies output. The main idea is to have students think or write individually about a response, use a structured pairing strategy to have multiple opportunities to refine and clarify the response through conversation, and then finally revise their original written response. Throughout this process, students should be pressed for details, and encouraged to press each other for details. Subsequent drafts should show evidence of incorporating or addressing new ideas or language. They should also show evidence of refinement in precision, communication, expression, examples, and/or reasoning about mathematical concepts.

Collect and Display – Purpose: To capture students' oral words and phrases into a stable, collective reference. The intent of this routine is to stabilize the fleeting language that students use in order for their own output to be used as a reference in developing their mathematical language. The teacher listens for, and scribes, the language students use during partner, small group, or whole class discussions using written words, diagrams and pictures. This collected output can be organized, revoiced, or explicitly connected to other language in a display that all students can refer to, build on, or make connections with during future discussion or writing. Throughout the course of a unit, teachers can reference the displayed language as a model, update and revise the display as student language changes, and make bridges between student language and new disciplinary language. This routine provides feedback for students in a way that increases sense making while simultaneously supporting meta-awareness of language.

Critique, Correct, and Clarify – Purpose: To give students a piece of mathematical writing that is not their own to analyze, reflect on, and develop. The intent is to prompt student reflection with an incorrect, incomplete, or ambiguous written argument or explanation, and for students to improve upon the written work by correcting errors and clarifying meaning. Teachers can model how to effectively and respectfully critique the work of others with meta-think-alouds and press for details when necessary. This routine fortifies output and engages students in meta-awareness.

http://ell.stanford.edu/sites/default/files/u6232/ULSCALE_ToA_Principles_MLRs_Final_v2.0_030217.pdf

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Stronger & Clearer Each Time

The purpose of this activity is to help you and others strengthen and clarify your academic ideas. Each time you talk to a partner, you build from and borrow the ideas and language of previous partners. Make your response *stronger each time* with better evidence, examples, and explanations. Make your response *clearer each time* by using a topic sentence, logical ways to organize and link sentences, and precise words. You can also ask each partner to elaborate, clarify, explain, and/or provide more evidence. If notes or visuals are used, their use is reduced from the first exchange to the last one.

First Draft - Written Response: Before talking with anyone, write your initial response in paragraph form on the top half of the back of this paper.

First Draft – Written Response	Write your response to the prompt provided. Include key ideas and evidence.
Share #1	Use ideas, evidence, and language from this person to help make your response stronger and clearer.
Share #2	Use ideas, evidence, and language from this person to help make your response stronger and clearer.
Share #3	Use ideas, evidence, and language from this person to help make your response stronger and clearer.

Student Self-Assessment

During the activity, my response became *stronger*. I borrowed and built on ideas from my partners to strengthen my ideas (e.g., better or more evidence). How?

During the activity my response became *clearer*. I borrowed and used language from my partners (and/or texts) to make my ideas *clearer*. For example...

Final Draft - Written Response: Turn the paper over and fold your pre-activity paragraph underneath so you can't see it. Then write your final strongest and clearest thinking in a paragraph. You can use your notes from this side to write it. After you finish, compare your two responses and notice if and how the second paragraph became stronger (more evidence and detail) and clearer (better language).

(2015 Zwiers)

Comparing Numbers and Place Value Relationships, Grade 4 Integrated ELD and Mathematics Instruction Vignette

Background

Mrs. Verners' 30 fourth graders have been learning about place value during the first few weeks since school began. They are currently toward the end of their place value unit. Students have been engaged in lessons and math routines focused on their grade level standards for Number and Operations in Base Ten that are focused on place value. This will be one of their first experiences with a larger task focused on the same concepts. Students will work independently and collaboratively with their table groups during the task.

The students at the school are predominately hispanic and over half of the students are English Learners. Almost 90% of the students receive free and reduced lunch. Mrs. Verners has 11 ELs with 4 at the Emerging level, 5 at the Expanding level, and 2 at the Bridging level. Students with disabilities are included in all mathematics instruction. The fourth grade team of teachers at this school meet weekly to discuss and plan their math lessons, discussing instructional strategies and resources that they are using.

Lesson Context

During the place value unit, students have explored place value through daily math lessons and routines. Students are able to identify the place value of given digits, and can write numbers in standard, word, and expanded form. Students compare numbers using their understanding of place value and inequality symbols. They have had some experiences describing these comparisons orally and through writing. Mrs. Verners is working to develop student understanding of how the places within the place value system are related through multiplying and dividing by ten. Students have analyzed the relationship between the value of a digit in two locations within a number. For instance, they understand that in the number 5,500, the 5 in the thousands place is ten times greater than the 5 in the hundreds place. In this task, they will explore the relationship between values of a common digit in as they compare several different numbers.

Lesson Excerpts

Mrs. Verners' lesson provides students the opportunity to apply what they have learned about the relationships within the base ten place value system and comparing numbers within the context of a real-world situation. Students will engage independently and collaboratively with their small group to deepen their understanding of the relationship between the value of a digit located in different places within numbers. Students will have developed a foundation for their work on this task through previous class lessons focused on place value concepts. **Mrs. Verners and her grade level team had identified during their collaborative planning that students would need an opportunity to develop background knowledge regarding the places described within the task before beginning the math portion. They decided to add a map and introductory activity during Social Studies to discuss and identify the location within the task on the map.** The learning target and clusters of CA CCSS for Mathematics and CS ELD Standards in focus for today's lesson are the following:

Learning Target: The students will organize 4th grade population data for different locations across the United States in order to compare and describe the relationships between the values of digits within the number.

CCSS for Mathematics:

4.NBT.1 - Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that $700/70 = 10$ by applying concepts of place value and division; 4.NBT.2 - Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers bas

on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons; SMP 1 - Make sense of problems and persevere in solving them; SMP 7 - Look for and make use of structure.

CA ELD Standards (Expanding): ELD.PI.4.1 - Exchanging information and ideas with others through oral collaborative discussions on a range of social and academic topics ELD.PI.4.10 - Writing literary and informational texts to present, describe, and explain ideas and information

Task

There are almost 40 thousand fourth graders in Mississippi and almost 400 thousand fourth graders in Texas. There are almost 4 million fourth graders in the United States. We write 4 million as 4,000,000. There are about 4 thousand fourth graders in Washington, D.C. Use the approximate populations given to solve.

- a) How many times more fourth graders are there in Texas than in Mississippi?
- b) How many times more fourth graders are there in the United States than in Texas?
- c) How many times more fourth graders are there in the United States than in Washington, D.C.?

Source: Adapted from "Thousands and Millions of Fourth Graders," Illustrative Mathematics, <https://www.illustrativemathematics.org/content-standards/tasks/1808>

Day 1

During social studies, Mrs. Verners introduces the math task to her students saying that tomorrow they will be exploring populations in different locations in the United State. She gives students the task handout with a map of the United States on the top. She begins the conversation with her class by asking students what state they live in. She refers to a copy of the map under the document camera to serve as a visual. Students discuss with their small groups and share their ideas with the whole class. She asks students to shade California yellow. Next, she asks them to discuss what city they live in and where they think it is located in California. Mrs. Verners models how to place a dot to represent their city in its approximate location in California. The teacher points to the section labeled "key" on their handout. Mrs. Verners states that key is a multiple meaning word and asks students what they know of another way this word is used. Students respond that keys are used to unlock things. Mrs. Verners makes a connection between a key, like a house key, and the key on their map, which is used to help you understand the symbols and colors used on the map. The conversation continues as she helps students to identify the United States, Texas, Mississippi, and Washington D. C. on the map and represent them on the key. Mrs. Verners tells her students that they will use this map tomorrow during math as they explore populations of 4th graders in the different locations they identified.

Day 2

The next day, Mrs. Verners launches the math lesson by revisiting the map and telling students that they will be talking about approximate populations of 4th graders in these different locations. She asks the students to write other words that mean the same thing as estimate or approximate on their whiteboards. After showing their whiteboards, Mrs. Verners asks students to share with their partners the words they wrote down. She lists several of the words that she saw students write on the whiteboard for the class to see. Mrs. Verners says that these words (pointing to her list on the whiteboard) are synonyms that mean about or close to. She explains that when we use numbers that are not exact, we sometimes use the words almost or about to say that these numbers are estimates or approximations. She says that the word approximate in English is aproximado in Spanish and that these words mean the same thing.

Next, she asks the students to estimate the number of fourth grade students at their school. Students make individual estimates and records them on their whiteboards. Students share their estimates with a partner and justify how they decided on their particular estimate. She lists several estimates on the whiteboard and asks students to discuss the estimates with their small groups to determine if all the estimates are reasonable (make sense) or not and why. Mrs. Verners asks two groups to share their thinking with the class. The two groups share similar explanations stating that 300 is an unreasonable estimate because they have three classes of 4th graders and each class has about 30 students, not 100 students to make 300. She tells the class that they just estimated the population of 4th graders at their school and that today they will be using the approximate populations of 4th graders of the locations they marked on their map the previous day.

She asks the class to discuss with their partners what they think population means. She circulates to listen to student conversations and then asks several students to share.

Mrs. Verners: As I listened to you talk with your partners, I heard different ideas about what a population is. Who would like to share what you and your partner discussed? Alex.

Alex: I think population is like the amount of people in a state.

Sara: I think it could be a city too.

Mrs. Verners: Would anyone like to add on to what Alex or Sara said? Yes, Maria.

Maria: So, the population is the amount of people in a city or state.

Mrs. Verners: Yes, for this task we are going to think about the population as the number of people in a given location such as a city, state, or country.

Mrs. Verners tells the students that they will be looking at the population of fourth grade students in the different locations, the places they identified on their maps. She tells the students that she is going to read the task aloud and wants the students to listen carefully and point to each location on the map when she reads it in the task. Students are asked to reread the task silently, underlining and circling important ideas in the task to help them make sense of what they are reading. Students then take turns sharing something that they underlined or circled with their small group.

Next, students are asked to individually complete the data table by writing the 4th grade population of each location in standard form in order to organize the population data that they were given in the task. Mrs. Verners explains that table is a multiple meaning word. She explains that there are different types of tables. In math, tables are used to record information and organize data. She shows students the t-table on their task handout and says that this is an example of a table that is used in math. After asking her students to begin working independently, Mrs. Verners asks for several of her students to meet her at her small group table. Here, she works with her Emerging ELs to collaboratively complete the t-table. She facilitates the conversation using the following types of questions:

- Where can you find the population of each location in the text? How is the population written?
- How can we rewrite the populations from word form to standard form?
- What are the digits in this number? What digits do we use in our base ten number system?
- What do you notice about the location of the digit 4 in the numbers in your table?
- What does the location of the digit 4 tell you about its value?

After working together to discuss and create their data tables, the teacher excuses her small group to return to their groups. Mrs. Verners brings the class back together and describes how they will work with their small group during the next portion of the task to answer several questions

comparing the population of fourth graders in the different locations and explaining these comparisons in writing. She shows the class two sentence frames that she has written on the board, reads them to the class, and tells them that they may use these frames as they are writing or they may create sentences on their own. Her sentence frames are:

- The number of 4th graders in _____ is _____ times as many as the 4th graders as in _____.
- There are _____ times as many 4th graders in _____ than _____.

Students are asked to complete a and b collaboratively with their group, saving c to complete on their own so that Mrs. Verners can use this information to check the level of student understanding.

The teacher circulates as students are working in small groups and asks questions to support and extend student thinking. She poses the following types of questions:

- What do you notice about the numbers/populations listed in your table?
- Do you see a relationship between these numbers?
- Do you notice a pattern in the place value of the digit 4?
- What tools might help you as you're trying to represent the place value of the 4 in each of these numbers? (base ten blocks, place value chart, etc.)
- How would you describe the relationship between the digit 4 in these numbers?
- You noticed that each place value is $\times 10$ from the place before it. How might you group them to find the relationship between 4,000 and 4,000,000?

Mrs. Verners selects 2 - 3 groups that will share their explanation from question a. Within each group, she selects one student to represent the group and present to the whole class. She considers students that have recently presented and intentionally selects students who have not had an opportunity to present their thinking to the whole class recently. She also considers the ability level of her students in her continued efforts to support their class norm that all students have good math ideas and selects students that represent a range of ability levels. Mrs. Verners asks the students who have been selected to practice what they will say to their table groups before presenting in front of the whole class. After the students share their group's explanation, Mrs. Verners asks questions to deepen student understanding and make connections between the different explanations that were presented. Next, she asks all students to reread their explanations in part a and provides them time to add on to their explanation to make it stronger or to revise their thinking. Students are given time to add and/or revise.

Mrs. Verners asks the students to think about the explanations they have heard and practice with their partner. She asks them to use what they have learned from their work on parts a and b of the task to complete part c independently. She tells the students that she is interested in looking at their work and reading their writing in part c so that she can learn about what students understand about comparing numbers. Students write their explanations independently.

Teacher Reflection and Next Steps

Mrs. Verners collects the student work and reviews their independent work and explanation from part c. As she reads, she analyzes whether or not students were able to generalize their place value understanding to describe the relationship between the digit 4 in the population of fourth graders in Washington D.C. and the United States. Students have had experience describing the relationship between a digit in a given place value and the place to its right or left; however, this question asks them to describe the relationship of a digit three places to the left. As Mrs. Verners analyzes the student work, she discovers that while the majority of her students understand and are able to describe these place value relationships, a small group of students are struggling to express their thoughts in writing. This small group contains 2 Emerging ELs, 1 Expanding EL, 1 student with a disability, and 2 other students that she has noticed are struggling with place value concepts. She decides that she will work with these students in small groups the following day to determine if they are having trouble with the concept or if they are having difficulty using writing to explain their thinking. Mrs. Verners sees that students were able to deepen their understanding of place value relationships through the use of this

task and decides that she would like to give the students the opportunity to engage in another task to further develop these concepts before the end of the place value unit.

Sources

Task: “Thousands and Millions of Fourth Graders,” **Illustrative Mathematics**,
<https://www.illustrativemathematics.org/content-standards/tasks/1808>

Resources created by Dinuba Unified School District 4th Grade Teachers for “Thousands and Millions of Fourth Graders”

Resources

Chapin, Suzanne H., O'Connor, Catherine, & Canavan Anderson, Nancy. (2013). *Classroom Discussions in Math: A Teacher's Guide for using talk moves to support the Common Core and more, Third Edition*. Sausalito, California: Math Solutions.

Kazemi, Elham & Hintz, Allison. (2014). *Intentional Talk: How to Structure and Lead Productive Mathematical Discussions*. Portland, Maine: Stenhouse Publishers.

Smith, Margaret S., & Stein, Mary Kay. (2011). *5 Practices for Orchestrating Productive Mathematics Discussions*. Reston, Virginia: The National Council of Teachers of Mathematics, Inc.

Van de Walle, John A., and Sandra Folk. *Elementary and Middle School Mathematics: Teaching Developmentally*. Toronto: Pearson Education Canada, 2005.

William, Dylan. (2011). *Embedded Formative Assessment*. Bloomington, Indiana: Solution Tree Press.

Companion Documents

DUSD Launch - Explore - Summarize Lesson Plan for “Thousands and Millions of Fourth Graders” created by Dinuba Unified School District 4th Grade Teachers

DUSD Student Handout for “Thousands and Millions of Fourth Graders” created by Dinuba Unified School District 4th Grade Teachers

Additional Information

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English Language Development Standards for Grade 3

Section 1: Goal, Critical Principles, and Overview	
<p>Goal: English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and also to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.</p> <p>Critical Principles for Developing Language and Cognition in Academic Contexts: While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.</p>	<p>Corresponding Common Core State Standards for English Language Arts*</p> <ul style="list-style-type: none"> ● SL.3.1.6; L.3.1.3,6 ● W.3.6; L.3.1.3,6 ● SL.3.1.6; L.3.1.3,6 ● W.3.4-5; SL.3.1.6; L.3.1.3,6
Part I: Interacting in Meaningful Ways	
<p>A. Collaborative</p> <ol style="list-style-type: none"> 1. Exchanging information and ideas with others through oral collaborative discussions on a range of social and academic topics 2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia) 3. Offering and supporting opinions and negotiating with others in communicative exchanges 4. Adapting language choices to various contexts (based on task, purpose, audience, and text type) 	<ul style="list-style-type: none"> ● SL.3.1-3; L.3.3 ● RL.3.1-7,9-10; RI.3.1-7,9-10; SL.3.2-3; L.3.3,4,6 ● RL.3.3-4,6; RI.3.2,6,8; SL.3.3; L.3.3-6 ● RL.3.4-5; RI.3.4-5; SL.3.3; L.3.3-6
<p>B. Interpretive</p> <ol style="list-style-type: none"> 5. Listening actively to spoken English in a range of social and academic contexts 6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language 7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text type, purpose, audience, topic, and content area 8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area 	<ul style="list-style-type: none"> ● SL.3.4-6; L.3.1,3,6 ● W.3.1-8,10; L.3.1-3,6 ● W.3.1,4,10; SL.3.4,6; L.3.1-3,6 ● W.3.4-5; SL.3.4,6; L.3.1,3,5-6
<p>C. Productive</p> <ol style="list-style-type: none"> 9. Expressing information and ideas in formal oral presentations on academic topics 10. Writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology 11. Supporting own opinions and evaluating others' opinions in speaking and writing 12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas 	<ul style="list-style-type: none"> ● SL.3.4-6; L.3.1,3,6 ● W.3.1-8,10; L.3.1-3,6 ● W.3.1,4,10; SL.3.4,6; L.3.1-3,6 ● W.3.4-5; SL.3.4,6; L.3.1,3,5-6

English Language Development Standards for Grade 3

Part II: Learning About How English Works	Corresponding Common Core State Standards for English Language Arts*
A. Structuring Cohesive Texts	
1. Understanding text structure	●RL.3.5; RI.3.5; W.3.1-5; SL.3.4
2. Understanding cohesion	●RL.3.5; RI.3.5; W.3.1-4; SL.3.4; L.3.1,3
B. Expanding and Enriching Ideas	
3. Using verbs and verb phrases	●W.3.5; SL.3.6; L.3.1,3,6
4. Using nouns and noun phrases	●W.3.5; SL.3.6; L.3.1,3,6
5. Modifying to add details	●W.3.5; SL.3.4,6; L.3.1,3,6
C. Connecting and Condensing Ideas	
6. Connecting ideas	●W.3.1-3,5; SL.3.4,6; L.3.1,3,6
7. Condensing ideas	●W.3.1-3,5; SL.3.4,6; L.3.1,3,6
Part III: Using Foundational Literacy Skills	
	●RF.K-3.1-4 (as appropriate)

* The California English Language Development Standards correspond to California’s Common Core State Standards for English Language Arts (ELA). English learners should have full access to and opportunities to learn ELA, mathematics, science, history/social studies, and other content at the same time they are progressing toward full proficiency in English.

Note: **Examples** provided in specific standards *are offered only as illustrative possibilities* and should not be misinterpreted as the only objectives of instruction or as the only types of language English learners might or should be able to understand or produce.

English Language Development Standards for Grade 4

Section 1: Goal, Critical Principles, and Overview

Goal: English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and also to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.

Critical Principles for Developing Language and Cognition in Academic Contexts: While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.

Part I: Interacting in Meaningful Ways

Corresponding Common Core State Standards for English Language Arts*

A. Collaborative

1. Exchanging information and ideas with others through oral collaborative discussions on a range of social and academic topics
2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia)
3. Offering and supporting opinions and negotiating with others in communicative exchanges
4. Adapting language choices to various contexts (based on task, purpose, audience, and text type)

B. Interpretive

5. Listening actively to spoken English in a range of social and academic contexts
6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language
7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text type, purpose, audience, topic, and content area
8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area

C. Productive

9. Expressing information and ideas in formal oral presentations on academic topics
10. Writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology
11. Supporting own opinions and evaluating others' opinions in speaking and writing
12. Selecting and applying varied and precise vocabulary and other language resources to effectively convey ideas

English Language Development Standards for Grade 4

Part II: Learning About How English Works	Corresponding Common Core State Standards for English Language Arts*
A. Structuring Cohesive Texts	
1. Understanding text structure	<ul style="list-style-type: none"> ● RL.4.5; RI.4.5; W.4.1-5; SL.4.4 ● RL.4.5; RI.4.5; W.4.1-4; SL.4.4; L.4.1,3
B. Expanding and Enriching Ideas	
3. Using verbs and verb phrases	<ul style="list-style-type: none"> ● W.4.5; SL.4.6; L.4.1,3,6
4. Using nouns and noun phrases	<ul style="list-style-type: none"> ● W.4.5; SL.4.6; L.4.1,3,6
5. Modifying to add details	<ul style="list-style-type: none"> ● W.4.5; SL.4.4,6; L.4.1,3,6
C. Connecting and Condensing Ideas	
6. Connecting ideas	<ul style="list-style-type: none"> ● W.4.1-3,5; SL.4.4,6; L.4.1,3,6
7. Condensing ideas	<ul style="list-style-type: none"> ● W.4.1-3,5; SL.4.4,6; L.4.1,3,6
Part III: Using Foundational Literacy Skills	
	<ul style="list-style-type: none"> ● RF.K-1.1-4; RF.2-4.3-4 (as appropriate)

* The California English Language Development Standards correspond to California's Common Core State Standards for English Language Arts (ELA). English learners should have full access to and opportunities to learn ELA, mathematics, science, history/social studies, and other content at the same time they are progressing toward full proficiency in English.

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English Language Development Standards for Grade 5

Section 1: Goal, Critical Principles, and Overview	
<p>Goal: English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and also to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.</p> <p>Critical Principles for Developing Language and Cognition in Academic Contexts: While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.</p>	<p>Corresponding Common Core State Standards for English Language Arts*</p> <ul style="list-style-type: none"> • SL.5.1.6; L.5.1.3,6 • W.5.6; L.5.1.3,6 • SL.5.1.6; L.5.1.3,6 • W.5.4-5; SL.5.1.6; L.5.1.3,6
Part I: Interacting in Meaningful Ways	
<p>A. Collaborative</p> <ol style="list-style-type: none"> 1. Exchanging information and ideas with others through oral collaborative discussions on a range of social and academic topics 2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia) 3. Offering and supporting opinions and negotiating with others in communicative exchanges 4. Adapting language choices to various contexts (based on task, purpose, audience, and text type) 	<ul style="list-style-type: none"> • SL.5.1-3; L.5.3 • RL.5.1-7,9-10; RI.5.1-7,9-10; SL.5.2-3; L.5.3,4,6 • RL.5.3-4,6; RI.5.2,6,8; SL.5.3; L.5.3-6 • RL.5.4-5; RI.5.4-5; SL.5.3; L.5.3-6
<p>B. Interpretive</p> <ol style="list-style-type: none"> 5. Listening actively to spoken English in a range of social and academic contexts 6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language 7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text type, purpose, audience, topic, and content area 8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area 	<ul style="list-style-type: none"> • SL.5.4-6; L.5.1,3,6 • W.5.1-10; L.5.1-3,6 • W.5.1,4,9-10; SL.5.4,6; L.5.1-3,6 • W.5.4-5; SL.5.4,6; L.5.1,3,5-6
<p>C. Productive</p> <ol style="list-style-type: none"> 9. Expressing information and ideas in formal oral presentations on academic topics 10. Writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology 11. Supporting own opinions and evaluating others' opinions in speaking and writing 12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas 	<ul style="list-style-type: none"> • SL.5.4-6; L.5.1,3,6 • W.5.1-10; L.5.1-3,6 • W.5.1,4,9-10; SL.5.4,6; L.5.1-3,6 • W.5.4-5; SL.5.4,6; L.5.1,3,5-6

English Language Development Standards for Grade 5

Part II: Learning About How English Works	Corresponding Common Core State Standards for English Language Arts*
A. Structuring Cohesive Texts	
1. Understanding text structure	<ul style="list-style-type: none"> ● RL.5.5; RI.5.5; W.5.1-5; SL.5.4
2. Understanding cohesion	<ul style="list-style-type: none"> ● RL.5.5; RI.5.5; W.5.1-4; SL.5.4; L.5.1,3
B. Expanding and Enriching Ideas	
3. Using verbs and verb phrases	<ul style="list-style-type: none"> ● W.5.5; SL.5.6; L.5.1,3,6
4. Using nouns and noun phrase	<ul style="list-style-type: none"> ● W.5.5; SL.5.6; L.5.1,3,6
5. Modifying to add details	<ul style="list-style-type: none"> ● W.5.5; SL.5.4,6; L.5.1,3,6
C. Connecting and Condensing Ideas	
6. Connecting ideas	<ul style="list-style-type: none"> ● W.5.1-3,5; SL.5.4,6; L.5.1,3,6
7. Condensing ideas	<ul style="list-style-type: none"> ● W.5.1-3,5; SL.5.4,6; L.5.1,3,6
Part III: Using Foundational Literacy Skills	
<ul style="list-style-type: none"> ● RF.K-1.1-4; RF.2-5.3-4 (as appropriate) 	
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Lesson Title:

Chapter/Unit:

Mathematics Content	Mathematical Practices	ELD Standards

Language & Learning Objective:

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Consider the opportunities and structures for students to read, write, listen, and speak about mathematics throughout your lesson. Indicate these (r, w, l, s) in your plan.

Launch

--

Explore

--

Summarize

--