



Explicit instruction of math vocabulary is critical for students as they build their understanding of concepts and skills. Unique learners often struggle with comprehension, making it even more important to incorporate vocabulary into math instruction.

Math Vocabulary Resources •

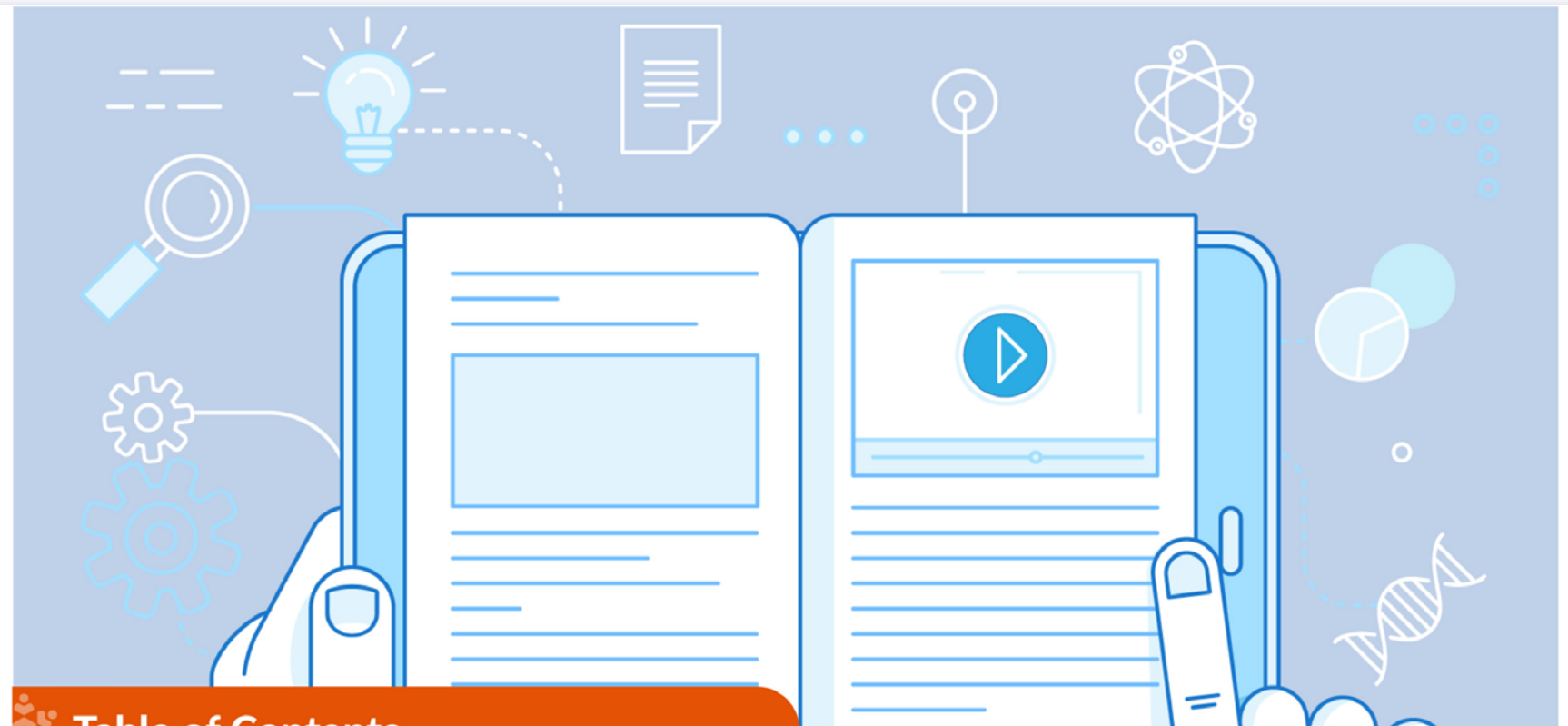


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When deciding what math vocabulary to teach, choose **age- and grade-appropriate words** that target the lesson's objective and skill while providing opportunities for students to build comprehension and communication skills on math topics.

Lesson	Vocabulary Words
Preschool 17	count, less, more, number
Elementary 19a	add, altogether, answer, compare, count, digit, equal sign, less, more, number, numeral, plus sign, same, solve, total
Intermediate 16a	compare, count, digit, equal sign, equal to, greater than, less, less than, more, number, numeral, place value, round, same, value
Middle School 19a	add, altogether, answer, carry/regroup, count, denominator, digit, equal, fraction, numeral, numerator, plus, solve, whole
High School 19a	add, altogether, answer, carry/regroup, count, digit, numeral, plus, solve

Math Vocabulary Resources

Materials

Math Vocabulary Resources

Lesson



Learning Goal

I can remember the meaning of a new math word.



Hook

Point to a math word wall or write a math vocabulary word on the board.

“ Say: We use many special words when talking about math. What is a special math word you know?

Discuss students' responses.

“ Say: Math words help us understand and do math.

Introduce the Learning Goal

“ Say: Today, you will remember the meaning of a new math word.

Incorporating research-based strategies like the Frayer Model helps students of all ability levels to organize and comprehend new words visually.

Definition	Picture
Word count	
What is it?	What is it not?

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Instructional Tools
Math Vocabulary Resources

Instructional Routine

I DO (Teacher Model)

Think aloud as you model.

Display a Math Word Card and a Math Word Map.

- 1. Read the word aloud.** Ask students to say or point to the word and write the word on the Math Word Map. Draw awareness to any important features of the word (prefixes, roots, suffixes).
“ Say: This word is _____. What word is this? ”
- 2. State the definition.** Ask students to repeat the definition as you write the definition on the Math Word Map. For concepts that are referred to by multiple terms, choose the term that best meets the needs of students and the context in or skill(s) on which they are working. Always be sure to discuss and emphasize the correct mathematical term if alternate words are used (e.g., carrying vs. regrouping).
“ Say: This word means _____. What does this word mean? ”
- 3. Build understanding of the meaning.** Guide students to make connections between the word and their existing knowledge by:
 - Modeling meaningful contexts, such as stories, math problems and examples that illustrate how the word is used.
“ Say: This word reminds me of _____ . ”
 - Modeling how to pair familiar language with technical language, while ensuring that students are exposed to accurate and precise mathematical language and ideas.
“ Say: This word is like another word I know, _____ . ”
 - Modeling real-life examples.
“ Say: I can use this word when _____ . ”
- 4. Provide an illustration.** Draw or add a picture to the Math Word Map to pair the concept with a meaningful representation. Incorporate symbols, gestures, and real-life objects to anchor instruction and enhance understanding.
“ Say: I can show the meaning of this word by adding a picture of _____ . ”
- 5. Model examples and non-examples.** Add examples and non-examples to the Math Word Map. Model how to think aloud about examples of what the word is and what the word isn't.
“ Say: An example of what this word is, is _____. I could show this example by _____. This word does not mean _____ . ”

CONTINUED →

<p>count</p>	<p>to say numbers in order or to find the total amount of something</p>	
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To be effective, explicit vocabulary instruction should be **purposeful and deliberate**. Teacher modeling is a great way for students to hear and see examples of how to do the lesson's objective.

WE DO (Teacher/Student)

When introducing this instructional routine, complete the We Do section with the same vocabulary word that was used in the I Do section. As students develop proficiency with this routine, systemically fade support and combine the I Do and We Do sections and model completing the Math Word Map with students.

1. Provide students with a Math Word Map and a Math Vocabulary Word Card. Work with students to complete the word map.
66 Say: Let's use what we know about this word to complete a Math Word Map together.
2. Prompt students to add to the word map by asking guiding questions. Encourage students to draw or create visual representations of the word, or use manipulatives to reinforce concepts.
66 Say: How can you show this word? What does this word mean to you? Do you know any similar words? When else do you use this word? Is this word used the same way or a different way than it's used in our other lessons?

YOU DO (Student Practice)

Have students identify the meaning of a new math word by completing the Math Word Map, as independently as possible.

LEVEL 3

✓ Can the student identify the meaning of a new math word?

LEVEL 2

✓ Can the student identify the meaning of a new math word, with supports?

LEVEL 1

✓ Can the student select the meaning of a new math word from a narrowed field or errorless choice(s)?

Using the gradual release of responsibility approach—or “I do, We do, You do”—gives students the opportunity to gain explicit teacher feedback as they move toward independence.

Provide opportunities to generalize the new vocabulary words in review and extension activities. This allows students to get creative, think analytically, and develop as mathematicians.

Review/Extend

Offer frequent opportunities for students to revisit words and build understanding gradually over time. Provide regular review sessions to reinforce previously taught vocabulary words.

Opportunities for review include:

- **Display Math Vocabulary Cards:** Display cards in the classroom and point out when using words in lessons and conversations. Have students locate and review the meaning of the words in various lessons.
- **Vocabulary Journal:** Have students use a binder or notebook to make a word journal to keep and organize all their Math Word Maps.
- **Word Games and Activities:** Have students participate in word games and activities. These can include word matching games, T-charts, sorting games, vocabulary bingo, or vocabulary charades.

See the [Vocabulary Guide](#) in the Teacher Reference Materials for additional ideas to review and reinforce Math Vocabulary.