



Algebraic Expressions

Parts, Writing & Evaluating

CCSS 6.EE.A.2 (a , b , c)

DOODLE-STYLE INTERACTIVE NOTEBOOK

WHAT'S INSIDE

6 two-page INB spreads (12 student pages) covering 6.EE.A.2 a , b , c
 Vocabulary foldable + Frayer models for 7 key terms
 Pre-assessment, mid-unit quiz, post-unit test + answer keys
 Tab dividers, word wall cards, anchor charts, exit tickets
 Self-assessment rubric, parent letter, teacher setup guide
 Doodle-prompt visuals: coloring, sketching, margin annotations



Sketch your favorite variable here!

Color the symbols when you finish!



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This mega unit covers all three sub-standards of CCSS 6.EE.A.2 through six doodle-style interactive notebook spreads plus a complete vocabulary program, three assessments, and rich supplementary materials.

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SUBSTITUTE



Vocabulary Foldable • CCSS 6.EE.A.2

DEFINITION (in your own words)

To substitute means to replace a variable with a specific value. Substitution is the first step of evaluating an expression. We substitute by replacing every place we see the variable with the given number, often in parentheses to keep the signs clear. Substituting 4 for x in $3x + 7$ gives $3(4) + 7$.

EXAMPLES



- Substitute 4 for x in $3x + 7 \rightarrow 3(4) + 7$
- Substitute 2 for s in $s^3 \rightarrow (2)^3$
- Substitute -3 for y in $2y - 5 \rightarrow 2(-3) - 5$

NON-EXAMPLES



- Simplify $3x + 7x \rightarrow 10x$ (combining, not substituting)
- Add $3 + 7 = 10$ (no substitution happening)
- Solve for x (solving, not substituting)

CHARACTERISTICS

- Replace a variable with a number
- Use parentheses to preserve signs
- Substitute the same value for every occurrence
- First step in evaluating expressions

Sketch an arrow pointing from x to its substituted number!

Sketch or doodle here!

CUT along the outside border. FOLD along the dotted center line. GLUE into notebook as a pocket.

SPREAD 1 • WRITING EXPRESSIONS FROM WORDS

CCSS 6.EE.A.2a

KEY IDEA (color this box!) ★

Words like "sum," "difference," "product," and "quotient" tell us which operation to use. "Less than" is tricky — it reverses the order of the words.

EXAMPLES (color the answers as you read) ★

Phrase:

the sum of n and 8

$n + 8$

Phrase:

5 less than twice a number

$2n - 5$

Phrase:

the product of 4 and a number

$4n$

Phrase:

a number divided by 6

$n \div 6$ or $n/6$

Phrase:

9 more than a number

$n + 9$

DOODLE & SKETCH ZONE

Sketch today's main idea

Color the shapes you understand



I CAN...

I can translate word phrases into algebraic expressions using variables, numbers, and operations.

Margin notes: Write a question you have about today's topic, or a connection to something you already know.

SPREAD 3 • EVALUATING EXPRESSIONS

CCSS 6.EE.A.2c

KEY IDEA (color this box!) ★

Evaluating = substituting + computing. Always substitute first (use parentheses to keep signs clear!), then follow the order of operations (GEMDAS).

EXAMPLES (color the answers as you read) ★**Phrase:**Evaluate $3x + 7$ for $x = 4$

$$3(4) + 7 = 12 + 7 = 19$$

Phrase:Evaluate $2n - 5$ for $n = 6$

$$2(6) - 5 = 12 - 5 = 7$$

Phrase:Evaluate $y^2 + 3$ for $y = 5$

$$5^2 + 3 = 25 + 3 = 28$$

Phrase:Evaluate $4(a + 2)$ for $a = 3$

$$4(3 + 2) = 4(5) = 20$$

Phrase:Evaluate $10 - 2x$ for $x = 4$

$$10 - 2(4) = 10 - 8 = 2$$

DOODLE & SKETCH ZONE ✎

Sketch today's main idea

Color the shapes you understand

**I CAN...**

I can substitute values for variables in an expression and evaluate the result, following the order of operations.

Margin notes: Write a question you have about today's topic, or a connection to something you already know.

Mid-Unit Quiz

Covers Spreads 1–3 • CCSS 6.EE.A.2a, b, c

This quiz covers Spreads 1–3: writing expressions from words, identifying parts of an expression, and evaluating expressions. Take your time, show all your work, and check each answer before turning in your paper. You've got this!

Name: _____ Date: _____ Score: _____ / 10

1. Translate into an expression: "5 less than twice a number."

2. Translate: "the product of 4 and the sum of a number and 7."

3. In $3x + 7$, name the coefficient and the constant.

4. In $4(2x + 3) - 7y$, name the two terms.

5. In the term $-7y$, what is the coefficient? What is the variable?

6. View $4(2x + 3)$ as a single entity. What kind of entity is it?

7. Evaluate $3x + 7$ for $x = 4$.

8. Evaluate $2n - 5$ for $n = 6$.

9. Evaluate $a^2 + 1$ for $a = 4$.

10. True or false: "5 less than n " translates to $5 - n$.

Bonus:



Real-World Answer Key • Worked Solutions

TEACHER COPY • Step-by-step solutions for all 8 real-world problems

Each solution shows the expression, substitution with order of operations, and the final answer with units. **Teaching tip:** have students circle the value they substitute and rewrite it in parentheses before computing — this single habit prevents most substitution errors.

1. Cell Phone Plan

Expression: $20 + 0.10t$ (fixed \$20 + variable \$0.10 per text)

Substitute $t = 50$: $20 + 0.10(50) = 20 + 5 = \$25$

Answer: \$25 for 50 texts.

2. Garden Perimeter

Expression: $P = 2L + 2(8) = 2L + 16$ (perimeter = $2 \times \text{length} + 2 \times \text{width}$)

Substitute $L = 12$: $2(12) + 16 = 24 + 16 = 40$

Answer: 40 feet.

3. Saving for a Bike

Expression: $50 + 15w$ (starting \$50 + \$15 each week)

Substitute $w = 8$: $50 + 15(8) = 50 + 120 = 170$

Answer: \$170 after 8 weeks.

4. Cube Storage Box

Formula: $V = s^3 = s \times s \times s$

Substitute $s = 2.5$: $(2.5)^3 = 2.5 \times 2.5 \times 2.5 = 6.25 \times 2.5 = 15.625$

Answer: 15.625 cubic feet.

5. Painting a Cube

Formula: $A = 6s^2$ (6 faces, each of area s^2)

Substitute $s = 1/2$: $6(1/2)^2 = 6 \times 1/4 = 6 \times 0.25 = 1.5$ sq ft per cube

For 10 cubes: $10 \times 1.5 = 15$

Answer: 1.5 sq ft per cube; 15 sq ft for 10 cubes.

6. Free Fall on the Moon

Formula: $d = 2.6t^2$

Substitute $t = 3$: $2.6(3)^2 = 2.6(9) = 23.4$ (exponent first, then multiply)

Answer: 23.4 feet in 3 seconds.

7. Baking Brownies

Expression: $2b$ (2 eggs per batch)

Substitute $b = 5$: $2(5) = 10$

Answer: 10 eggs for 5 batches.

8. Order of Operations: Pizza Bill

Expression: $(12p + 3) \div 4$ (total cost $\div$ 4 friends)

Substitute $p = 3$: $(12(3) + 3) \div 4 = (36 + 3) \div 4 = 39 \div 4 = 9.75$

Answer: \$9.75 each.



What's Inside the Full Resource

Algebraic Expressions Interactive Notebook • Grade 6 • CCSS 6.EE.A.2 (a, b, c)

100-page classroom resource • Approx. 2–3 weeks • 10–12 class periods (45–50 min)

100

PAGES

6

INB SPREADS

7

VOCAB TERMS

3

ASSESSMENTS + KEYS

SIX INB SPREADS • CCSS COVERAGE

SPREAD 1	Writing Expressions from Words	6.EE.A.2a
SPREAD 2	Parts of an Expression	6.EE.A.2b
SPREAD 3	Evaluating Expressions	6.EE.A.2c
SPREAD 4	Formulas with Exponents	6.EE.A.2c
SPREAD 5	Order of Operations without Parentheses	6.EE.A.2c
SPREAD 6	Mixed Review with Self-Assessment	6.EE.A.2a–c

EVERYTHING INCLUDED

- **Vocabulary Program**
7 vocabulary foldables + Frayer models • matching game • practice page
- **Assessments**
Pre-assessment • mid-unit quiz • post-unit assessment • answer keys
- **Reference & Display**
Quick Reference Sheet • 2 anchor charts • 7-term word wall cards
- **Real-World Application**
Algebra in Life • 2-page application set • worked-solution key
- **Teacher Supports**
Setup guide • pacing • standards checklist • misconceptions • differentiation
- **Student Tools**
“I Can” statements • self-assessment rubric • reflection page • math journal prompts
- **Home Connection**
Parent Communication Letter • Review Request Page

A complete Grade 6 algebraic-expressions INB resource

UMPrintables.com

Student-facing notebook pages, teacher guidance, practice, assessments, answer keys, visuals, and supporting materials.