Equation Vocabulary

Strand: Patterns, Functions, and Algebra

Topic: Solving one-step linear equations in one variable

Primary SOL: 6.13 The student will solve one-step linear equations in one variable, including practical problems that require the solution of a one-step linear equation in one variable.

Materials

- Equation Vocabulary Organizer (attached)
- Equation Vocabulary Example activity sheet (attached)
- Equation Vocabulary Example Key (attached)
- Equation Vocabulary activity sheet (attached)
- Equation Vocabulary Exit Ticket (attached)
- Equation Vocabulary Flashcards (attached)
- Sets of colored pencils or markers

Vocabulary

coefficient, equality, equation, expression, variable, term (6.13)

Student/Teacher Actions

1. Distribute the Equation Vocabulary Organizer and review the words with the class. Ask students for examples of each word in the context of equations and list them on the board. Make sure students understand the difference between the meanings of *term* and *expression,* which can be difficult to grasp.

2. Distribute colored pencils or markers and the Equation Vocabulary Example activity sheet. Have students use the vocabulary words to name the components of the equation, using a different color for each word. Also, have students write definitions of each vocabulary word without referring to the organizer. Then, create and display the Equation Vocabulary Example Key, and have students correct their handouts, as needed.

3. Distribute the Equation Vocabulary activity sheet, and have students work in pairs to complete it. When all student pairs are finished, review the sheet as a whole-class activity.

4. At the end of the class, have students complete the Equation Vocabulary Exit Ticket and hand it in for assessment.

Assessment

- **Questions**
  - What are three examples of equations?
  - What are three examples of expressions?
  - What are three examples of terms?
  - What is a one-term expression that has a coefficient?
  - What is an expression with four terms?
  - How do you know when a number is a coefficient in a term and when it is a term?

- **Journal/Writing Prompts**
    - Using the equation $2xy + 3w - 1 = y + 2$,
        - write as many sentences as you can, using the word *expression*
        - write as many sentences as you can, using the word *coefficient*
        - write as many sentences as you can, using the word *variable*
        - write a sentence using the words *term* and *product.*
    - Write a sentence, using the words *equations* and *expression.*
    - Write three different expressions, using the number 2.
    - Write an equation, using mathematical operators and 3, *x*, *y*, 9, and *b*.
    - Write a one-term expression, using any mathematical operator and 4, *a*, and *b*.
    - Write a two-term expression, using any mathematical operator and 4, *a*, and *b*.

- **Other Assessments**
    - Have students make their own set of flashcards for the equation vocabulary used in this lesson.
    - Display various equations and expressions, provide students with a vocabulary word, and have them go to an equation or expression to identify it.

Extensions and Connections

- Have students look up the vocabulary words and see how they are used in other contexts, such as Language Arts and Science.
- Have students create a pamphlet with each of the vocabulary terms with examples provided for each.

Strategies for Differentiation

- Review or preteach essential vocabulary to certain students before the lesson is introduced.
- Print the Equation Vocabulary Example Key in color for students, as needed.
- Provide examples for the equation vocabulary handout, as needed.
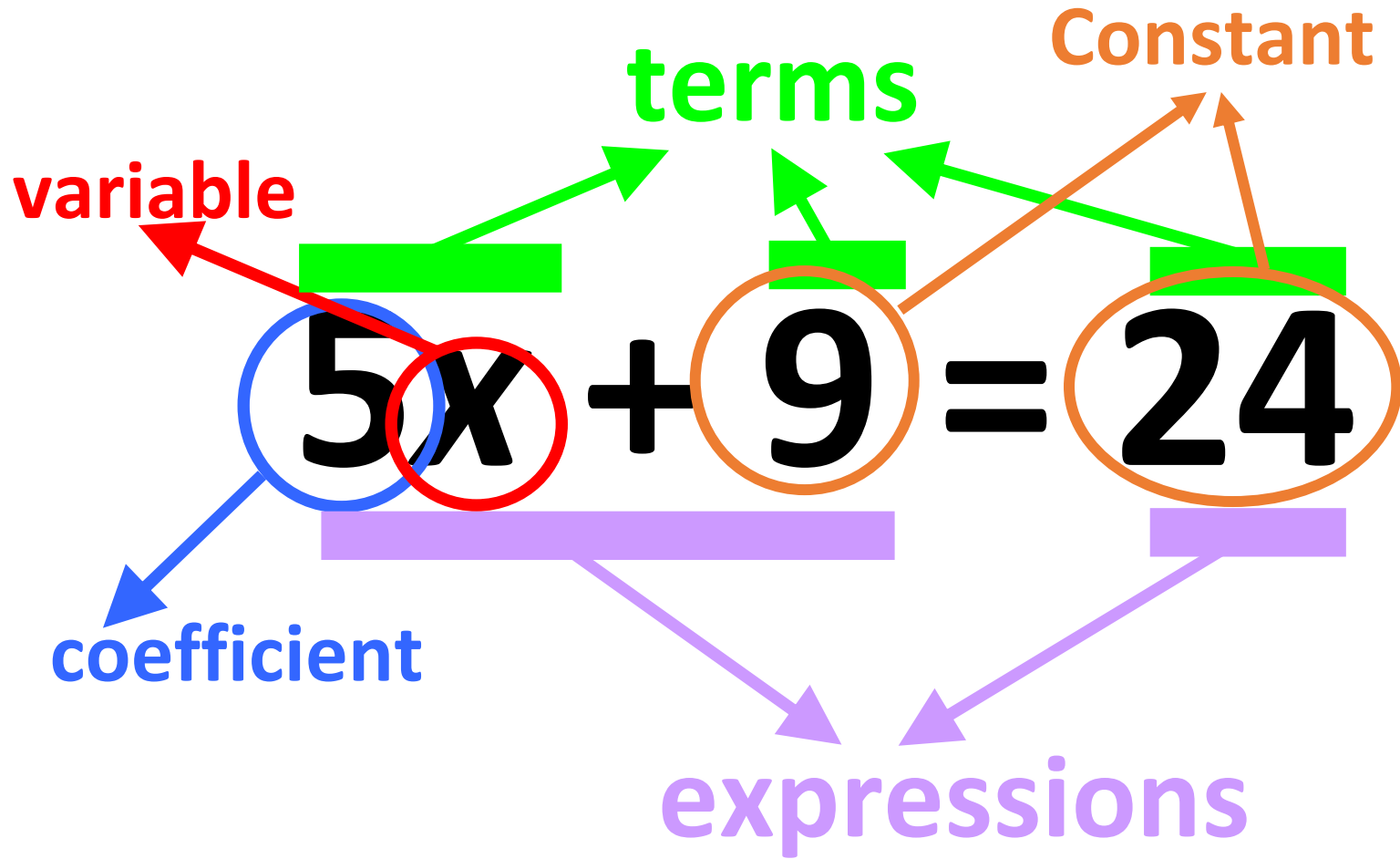
Equation Vocabulary Organizer

Word	Definition
Variable	A symbol for an unknown value. Usually a letter, such as *a, x,* or *y*, is the symbol used for a variable.
Coefficient	A number that is multiplied by a variable Example: 8*y* means 8 times *y*; 8 is the coefficient, and *y* is the variable.
Constant	A number on its own.
Operator	A symbol (+, ×, −, or ÷) representing a mathematical operation.
Term	Either a single number, a variable, or numbers and/or variables multiplied together. Examples: 4 45 *x* *abc* 5*w* 20*mn*
Expression	A term or a combination of terms and operators. Examples: 2 2*x* 2*x* + 7 *y* *y* − 3 7*w* + 3 8*ab* + 9 5*xyz*
Equation	A mathematical sentence stating that two expressions are equal.

Equation Vocabulary Example

Name _____ **Date** _____

$$5x + 9 = 24$$

Equation Vocabulary Example Key

$$5x + 9 = 24$$

variable · coefficient · terms · Constant · expressions

Equation Vocabulary

Name _____   **Date** _____

In 3x + 7 = 32, **7 is a/an _____.**	**In 3x + 7 = 32,** **3 is a/an _____.**
In 3x + 7 = 32, **x is a/an _____.**	**In 3x +7 = 32,** **32 is a/an _____.**
In 3x + 7 = 32, **3x is a/an _____.**	**In 3x + 7 = 32,** **3x + 7 is a/an _____.**
In 12ab – 6z = 99a + 4, **list all of the coefficients.**	**In 12ab – 6z = 99a + 4,** **list all of the terms.**
In 12ab – 6z = 99a + 4, **list all of the expressions.**	**In 12ab – 6z = 99a + 4,** **list all of the variables.**

Equation Vocabulary Exit Ticket

Name _____ **Date** _____

For the number sentence shown below, match the terms in the second column to the items in the first column.	
Number sentence: **$6x - 3y = 18$**	
$6x - 3y$	coefficient
-3	equation
$6x$	expression
$6x - 3y = 18$	term
y	variable
What equation vocabulary would be used to name 18 in this number sentence?	

Equation Vocabulary Flashcards

Cut out on the dotted line and fold on the solid line to create cards.

A number that is multiplied by a variable	**coefficient**
A term or a combination of terms and operators	**expression**
Either a single number, a variable, or numbers and/or variables multiplied together	**term**
A mathematical sentence stating that two expressions are equal	**equation**
A symbol for an unknown value	**variable**
A symbol (+, ×, −, or ÷) representing a mathematical operation	**operator**