

Label (Developers, Concept / Topic to Teach):

Catherine Van Winkle, Sarah Landsiedel, Combining Like Terms

Standards / Anchors Addressed:

- 2.1.8.B Simplify numerical expressions involving exponents, scientific notation and using order of operations.
- 2.4.8.B Combine numeric relationships to arrive at a conclusion.
- 2.8.8.D Use concrete objects to model algebraic concepts.

- M11.A.3.1.1 Simplify/evaluate expressions using the order of operations to solve problems (any rational numbers may be used).
- M11.D.2. Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.
- M11.D.2.2.1 Add, subtract and/or multiply polynomial expressions (express answers in simplest form – nothing larger than a binomial multiplied by a trinomial).

Specific Objectives:

Students will be able to define, recognize and combine like terms in an algebraic expression.

Essential Question/Content:

How do you combine like terms to simplify an algebraic expression?

Required Materials and Technology:

- Index cards
- Vocabulary flip cards transparency
- Dice
- Paper
- Pencil
- Calculators
- Rock, Paper, Scissors Game Instructions
- Algebra Tiles – Student Sets and Overhead Set for Modeling
- Whiteboards
- Dry Erase Markers
- Erasers
- Combining Like Terms Worksheets #1 and #2
- Combining Like Terms Exit Ticket

Set (readiness and motivation):

- Begin lesson with real numbers game, Rock, Paper, Scissors, to review adding positive and negative numbers.

Step-by-Step Procedures (knowledge acquisition and practice):

- Identify vocabulary using the vocabulary flip cards transparency. Have students create flip cards on index cards while introducing vocabulary.
 - **Term** – the parts of a variable expression that are separated by addition or subtraction signs.
 - **Coefficient** – the numerical factor of a term.