

Toano Middle School 8<sup>th</sup> Grade Algebra – **Adding and Subtracting Polynomials**  
Lesson 2 of 6

**Objective(s):**

- The student will use Algeblocks in order to model/represent polynomial expressions
- The student will use Algeblocks as a model for adding and subtracting polynomials of degree no greater than 2.
- Each student will complete a classroom notes worksheet with the teacher and demonstrate how to add and subtract polynomials algebraically.
- Students will practice adding and subtracting polynomials without the support of pictures/models

**SOL Strand: Expressions and Operations**

- SOL A.2** The student will perform operations on polynomials, including
- a) applying the laws of exponents to perform operations on expressions;
  - b) **adding, subtracting**, multiplying, and dividing polynomials; and
  - c) factoring completely first- and second-degree binomials and trinomials in one or two variables. Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.

**Materials/Resources:**

- Highlighters
- Algeblocks (one kit each per two students)
- “Algeblocks – What are they?” worksheet
- “Adding and subtracting polynomials using Algeblocks” activity sheet
- “Adding and subtracting polynomials” notes worksheet
- “8-5 Adding and subtracting polynomials” skill practice worksheet
- “8-5 Adding and subtracting polynomials” practice worksheet (homework)

**Appropriate time required:** 80 min

**Content and instructional strategies:**

**Before class:** Display the warm up activity, daily agenda, and homework on the screen. It should look similar to this:

Warm Up:

- 1) Rewrite the polynomial so that the powers of x are in ascending order (increasing), then arrange them in descending order
  - a.  $7x^3 + 3x^2 - 5$
  - b.  $2xy^3 + 3y^2 + 4x^3 - 3x^2y$