Lesson #1

Objective: The student will be able to simplify and evaluate algebraic expressions.

Materials: Worksheet "Daffynition Decoder" (pg 196)
Answers are provided at the end of this lesson.

Activity: Complete the worksheet that involves simplifying and evaluating algebraic expressions.

Remember to simplify algebraic expressions means to combine like terms, such as 3x + 4x + 5x = 12x; each term has an x, which is called the variable, the numbers are the constants. In simplified form, all like terms should be combined.

When evaluating, an actual numeric value is given for the variable, so the answer should be a number.

For example, evaluate 4x + 5y when x = 3 and y = 6
So substitute in: 4(3) + 5(6)
12 + 30
42, notice the final answer is a number.

Evaluation:

Q: Verbally explain the difference in evaluating and simplifying expressions:

A: Evaluating is actually finding a numeric value given the value of the variables, simplifying is combining all like terms and writing the expression in the most simplest form.

Q: Evaluate $2b^2 + b$ when b = -6

A: $2(-6)^2+(-6) = 2(36) - 6$
$72 - 6$
66

Q: Solve the following application problem:

A rectangular solid has the following dimensions: length = 5 cm, width = 3 cm, height = 4 cm. Find the volume given the formula V = lwh

A: V = (5)(3)(4)
60 cm^3

Helpful Hints: Remember units in volume are always raised to the third power. Also, encourage students to write out each step. Errors often occur when students do too much work in their minds.

Worksheet Answers: Meatloafer; Playbuoy; Stalkbroker