Mathematics **Brunswick School Department**

Transitional Mathematics
Unit 5: Pre-Algebra

Essential Understandings	▪ Algebra is a universal language. ▪ Algebra utilizes systematic methods for problem solving. ▪ Algebra allows for the use of variable to represent numbers.
Essential Questions	▪ How do you solve equations? ▪ What are the steps for order of operations? ▪ What is a variable? ▪ What does it mean to evaluate an expression? ▪ What are the symbols of inclusion? ▪ What do exponents mean? ▪ How do you use the distributive property? ▪ What are like terms? ▪ How do you combine like terms?
Essential Knowledge	▪ The steps for are order of operations can be remembered using the pneumonic device; “PEMDAS”. ▪ A variable is a place holder for a given numeric value. ▪ Parentheses and brackets are symbols of inclusion. ▪ An exponent (x) requires multiplying the base number ”x” times. ▪ The distributive property combines multiplication with either addition or subtraction. ▪ Like terms are expressions with the same variable to the same power.
Vocabulary	▪ <u>Terms</u>: o variable, expression, evaluate, quotient, product, quantity, substitution, parenthesis, brackets, inclusion, exponents, distribute, and simplify.
Essential Skills	▪ Evaluate expressions using order of operations. ▪ Evaluate expressions given variable values. ▪ Simplify expressions by combining like terms. ▪ Simplify exponential expressions. ▪ Use the distributive property.
Related Maine Learning Results	<u>Mathematics</u> D. Algebra Symbols and Expressions D1. Students understand and use polynomials and expressions with rational exponents. a. Simplify expressions including those with rational numbers. b. Add, subtract, and multiply polynomials. c. Factor the common term out of polynomial expressions. d. Divide polynomials by (ax+b).
Sample Lessons And Activities	▪ Students will unscramble words to illustrate the concept of order. Further students will build Lego cars according to step by step directions to further emphasize the concept of order. Finally students will apply this concept of order algebraically with the order of operations; using “PEMDAS”.

Sample Classroom Assessment Methods	▪ Students will demonstrate proficiency through quizzes and tests.
Sample Resources	▪ Publications: o Saxon-Algebra 1/2