Mathematics
Unit 1: Algebra Concepts

Essential Understandings	▪ Patterns can be found in many forms.
Essential Questions	▪ How does one describe a pattern? ▪ How can a pattern be used to make a prediction? ▪ How does one extend a pattern? ▪ How can finding patterns help with counting? ▪ How can one use skip counting to count by 2s, 3s, 5s, 20s, 25s, 50s, and 100s? ▪ How does one solve for unknowns?
Essential Knowledge	▪ Patterns can be used to make predictions. ▪ There are patterns in numbers. ▪ Patterns can be used to skip count. ▪ Patterns can be used to solve addition and subtraction problems. ▪ Number patterns and relationships can be represented using variables.
Vocabulary	▪ Terms: ○ variable, incomplete number sentence, rule, equation, simple and complex patterns, sequence, input/output tables
Essential Skills	▪ Identify, reproduce, create, extend, and compare increasingly complex patterns (i.e., aabaaabaaaab). (R, A) ▪ Identify and extend patterns of numbers when skip counting by 2s, 3s, 5s, 20s, 25s, 50s, and 100s. (I, R, A) ▪ Identify and write the missing addend and/or subtrahend with sums to 100 and the related subtraction fact. (I, R, A)
Related Maine Learning Results	A. Number Whole Number A2.Students understand and use procedures to add and subtract whole numbers with one and two digits. a. Use an operation appropriate to a given situation. D. Algebra Equations and Inequalities D2.Students understand that the equal sign means, "is the same as." a. Identify true and false number sentences. b. Find solutions for unknowns in simple open number sentences such as 12 = 4 + [ ]. Functions and Relations D3.Students understand how to create, identify, describe, and extend patterns given a pattern or a rule. a. Describe, extend and create repeating patterns. b. Describe, extend, and create growing patterns.