

Grade 5 Math Unit: Patterns and Algebra Unit

Unit Description:

Patterns and algebra are often used in our daily life to solve problems without thought. In this unit, students will begin to connect these problems with their matching Algebraic equation along with the knowhow to solve these equations.

Central Idea:

Daily life is full of variables or things that change. Sometimes there are ways to make sense of and predict change through identifying and extending patterns.

Essential Questions:

1. Are mathematical expressions a language? How? How not?
2. What is a pattern? How do you identify a pattern? How are patterns helpful? How can you express a pattern?
3. What are qualities and components of an equation? How does change within the equation affect the other components?
4. What are symbols? Why would you use a symbol?

Course Topics and Objectives:

- Patterns and Functions
 - Extend, describe, and create numeric patterns
 - Describe rules for patterns and use them to solve problems
- Pan-Balance Problems
 - Introduce a pan-balance approach for solving simple equations.
- Line Graphs
 - Write rules for functions involving the four basic arithmetic operations
 - Represent functions using words, symbols, tables, and graphs and use those representations to solve problems.
- Algebraic Expressions
 - Introduce the use of algebraic expressions to represent situations and describe rules.
- Rules, Tables, Graphs
 - Develop representational forms for rates.
- Reading Linear Graphs
 - Provide experiences with interpreting line graphs

Assessment:

Daily assignments will be given with this unit consisting of 5-6 problems along with review from previous units. Students will be completing mid-unit quizzes to check for understanding along with a final, summative assessment.