

Title: Integers**Brief Overview:**

This unit will allow students the opportunity to explore and develop an understanding of integers and absolute value and how to add and subtract with integers. They will order integers on vertical and horizontal number lines. Eventually leading to setting up the “x” and “y” axis on the coordinate grid. Students will also explore the operations of addition and subtraction using manipulatives and or a number line. The students will identify patterns during their explorations of the two operations that will eventually lead the students to the rule for the operations with integers. Students will need to communicate the rules for addition and subtraction of integers in written and verbal formats.

NCTM Content Standard/National Science Education Standard:

- Standard 1: Knowledge of Algebra, Patterns, or Functions;
 - Identify and extend patterns and create numerical patterns
 - Write and evaluate expressions
 - Locate points on a number line and in a coordinate grid
 - Identify, write, solve, and apply equations and inequalities
- Standard 6: Knowledge of number Relationships or Computation
 - Analyze number relations and compute
 - Apply knowledge of rational numbers and place value
- Standard 7: Processes of Mathematics
 - Problem solving
 - Communication
 - Connections
 - Reasoning

Grade/Level:

Sixth through seventh grades

Duration/Length:

Six 45-minute lessons or three 90-minute lessons

Student Outcomes:

- The learner will be able to define integers and absolute.
- The learner will be able to order integers on a number line.
- The learner will be able to identify integers as less than or greater than another integer.