### UNIT OF STUDY

**Title:** Getting Ready for Algebra Using the Language of Algebra  
**Subject/Course:** 9th Res. Math  
**Length:** 2 weeks  
**Grade:** 9th  
**Designer:** K. Henderson

### UNIT GOALS AND EXPECTATIONS

**IMPORTANT CONCEPTS/UNDERSTANDINGS:**

**simplify expressions**
- with integers (add, subtract, multiply, or divide)
- with rational numbers (fractions and decimals)
- square roots and cube roots

Apply the order of operations to evaluate expressions.

**writing & simplifying algebraic expressions**

**ESSENTIAL QUESTIONS:**

- What is an integer?
- What is an exponent?
- What is the base?
- What is a square root?
- What is a variable, algebraic expression, term, and coefficient?
- How do you classify a polynomial?
- How do you determine the degree of a polynomial?

### STUDENT LEARNING EXPECTATIONS:

- LA.1.AI.1 – Evaluate algebraic expression, including radicals, by applying the order of operations.
- LA.1.AI.2 – translate word phrases and sentences into expressions, equations, and inequalities, and vice versa.

### SPECIFIC DECLARATIVE KNOWLEDGE – What I know

Vocabulary words – integer, exponent, base, square root, order of operations, variable, algebraic expression, term, constant, radical sign, coefficient, monomial, binomial, trinomial, polynomial, degree.

### SPECIFIC PROCEDURAL KNOWLEDGE – What I need to do

- add, subtract, multiply and divide two or more integers.
- simplify expression involving fractions and decimals
- simplify square roots and cube roots.
- apply the order of operations to evaluate mathematical expressions.
- define algebraic vocabulary.
- identify the coefficient of a term.
- classify polynomials by the number of terms
- find the degree of a monomial
- find the degree of a polynomial

### UNIT ASSESSMENTS

(Include tasks related to Dimensions 3 and 4 and Bloom’s Taxonomy)

open response question
- requiring the student to use the order of operations (application)
- writing/simplifying expression (application)
### Traditional Assessments:
- independent practice worksheets
- Test

### Other Evidence of Learning:
- notes
- guided practice
- observation
- marker board review

### ACTIVITIES AND LEARNING EXPERIENCES

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<th>Activities</th>
<th>Resources</th>
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<tr>
<td>1. 4 step vocabulary to introduce key words from the unit.</td>
<td>4 step worksheet</td>
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| 2. Lessons 1.2 – 1.5 simplifying expressions and using the order of operations.  
  *demonstrate how to find answer for numbers with exponents using the expanded form.  
  *explain steps involved when baking a cake – do the directions make any difference on the outcome. | Algebra’s Cool DVD program Unit A |
| 3. Lesson 2.1 – writing and simplifying algebraic expressions  
  *Speaking a foreign language such as Spanish or French – if you don’t know the language, you don’t know what to do. The same applies with math. | Algebra’s Cool DVD program Unit A |
<p>| 4. marker board review – group review            | marker board &amp; eraser          |</p>
<table>
<thead>
<tr>
<th>Career Connections</th>
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<tbody>
<tr>
<td>construction, business industry, banking/accounting, cook / chef</td>
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