# Cornwall-Lebanon School District Curriculum Overview
## 8th Grade Math Academic

<table>
<thead>
<tr>
<th>Unit</th>
<th>length of time in weeks</th>
<th>Concepts &amp; Competencies</th>
<th>Common Assessments</th>
<th>Academic Standards (PA Core if applicable)</th>
</tr>
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<tbody>
<tr>
<td>Unit 1</td>
<td>3</td>
<td><strong>Integer/Rational Numbers</strong>&lt;br&gt;Adding, subtracting, multiplying and dividing integers&lt;br&gt;Square/Cube Roots&lt;br&gt;Order of Operations&lt;br&gt;Real World Application</td>
<td>➢ Rational Numbers Unit Test&lt;br&gt;➢ MP1 Exam</td>
<td>CC.2.1.7.E.1, M07.A-N.1.1.1, M07.A-N.1.1.3, CC.2.2.8.B.1, M08.B-E.1.1.2, CC.2.1.8.E.1, M08.A-N.1.1.1, M08.A-N.1.1.2</td>
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<tr>
<td>Unit 2</td>
<td>3</td>
<td><strong>Exponential Properties</strong>&lt;br&gt;Multiplication Properties&lt;br&gt;Division Properties&lt;br&gt;Power to a Power Properties&lt;br&gt;Negative and Zero Properties&lt;br&gt;Scientific Notation&lt;br&gt;  - Convert Scientific Notation to Standard Form&lt;br&gt;  - Convert Standard Form to Scientific Notation&lt;br&gt;  - Multiply and Divide Scientific Notation&lt;br&gt;Real World Applications</td>
<td>➢ Exponential Properties Unit Test&lt;br&gt;➢ MP1 Exam</td>
<td>CC.2.2.8.B.1, M08.B-E.1.1.1, M08.B-E.1.1.3, M08.B-E.1.1.4</td>
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<td>Unit 3</td>
<td>2</td>
<td><strong>Irrational Numbers</strong>&lt;br&gt;Estimating square roots and cube roots&lt;br&gt;Number Line&lt;br&gt;Operations with roots&lt;br&gt;Square/Cube Root equations</td>
<td>➢ Irrational Numbers Unit Test&lt;br&gt;➢ MP2 Exam</td>
<td>CC.2.1.8.E.4, M08.A-N.1.1.3, M08.A-N.1.1.4, M08.A-N.1.1.5</td>
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<tr>
<td>Unit 4</td>
<td>3</td>
<td><strong>Basic Algebra</strong>&lt;br&gt;Solving one step equations&lt;br&gt;Solving two step equations&lt;br&gt;Solving multi-step equations&lt;br&gt;One Solution, No Solutions, Infinite Solutions&lt;br&gt;Real World Applications</td>
<td>➢ Basic Algebra Unit Test&lt;br&gt;➢ MP2 Exam</td>
<td>CC.2.2.7.B.3, M07.B-E.2.2.1, CC.2.2.8.B.3, M08.B-E.3.1.1, M08.B-E.3.1.2,</td>
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</table>
| Unit 5 | 2 | **Pythagorean Theorem** | ➢ Pythagorean Theorem Unit Test  
➢ MP2 Exam | CC.2.3.8.A.3, M08.C-G.2.1.1, M08.C-G.2.1.2, M08.C-G.2.1.3 |
|-------|---|-------------------------|-----------------------------------|----------------------------------|
|       |   | Parts of a Right Triangle  
Prove Right Triangle  
Solve missing side  
Distance  
Complex figures using Right Triangle  
3D Shapes  
Real World Applications | | |
| Unit 6 | 5 | **Functions** | ➢ Functions Unit Test  
|       |   | Function or Not a Function  
X-Y Function Tables  
Functions to a Graph  
Rate of Change  
Slope  
Writing the Function Rule  
Graphing Lines  
Comparing Slope/Rate of Change  
Real World Applications | | |
| Unit 7 | 3 | **Systems** | ➢ Systems Unit Test  
|       |   | Slope Intercept Form  
Slope and y-intercept  
Graphing Lines from equation  
Write equation using graph  
Rewriting equations into Slope Intercept form  
Solving systems by graphing  
Solve systems by substitution  
Real World Applications | | |
| Unit 8 | 2 | **Statistics** | ➢ Statistics Unit Test  
➢ MP3 Exam | CC.2.4.8.B.1, M08.D-S.1.1.1, M08.D-S.1.1.2, M08.D-S.1.1.3, CC.2.4.8.B.2, M08.D-S.1.2.1 |
|       |   | Linear vs NonLinear  
Scatter Plots  
Linear Regression  
Two Way Tables  
Relative Frequency | | |
| Unit 9 | 2 | **Volume** | ➢ Volume Unit Test  
➢ MP3 Exam | CC.2.3.8.A.1, M08.C-G.3.1.1 |
|       |   | Find Volume of Cube, Rectangular Prism, Cone, Cylinders, and Sphere | | |
| Unit 10 | Volume of Compound Shapes  
Real World Application | Transformations  
- Slope of the reflection line  
Translations  
Rotations  
Dilations | ➢ Transformations Unit Test  
➢ MP4 Exam | CC.2.3.8.A.2,  
M08.C-G.1.1.1,  
M08.C-G.1.1.2,  
M08.C-G.1.1.3,  
M08.C-G.1.1.4 |
| Unit 11 | Inequalities  
Graph inequalities  
Graph compound inequalities  
Solve linear inequalities  
Graph linear inequalities | ➢ Inequalities Unit Test  
➢ MP4 Exam | CC.2.2.7.B.3, M07.B-E.2.2.1,  
CC.2.2.8.B.3, M08.B-E.3.1.1,  
M08.B-E.3.1.2 |