## GRADE and SUBJECT 11th and 12th Grade Trade Math (Quarter 1 and 2) / Agriculture Math (Quarter 3 and 4)

Time/Month	Standard(s)	Content	Skills
September (week 1) - September (week 3) 11 days	N - RN.3 F - IF.3 F - BF.2 Mathematical Practices 1, 2, 3	Unit 1: Digits and Numbers	<ul> <li>Define different types of real numbers</li> <li>Identify prime numbers</li> <li>Classify a number as a natural, whole, integer, rational, or irrational number</li> <li>Identify the least common multiple of a set of numbers</li> <li>Identify the greatest common factor of a set of numbers</li> <li>Identify the difference between an arithmetic and a geometric sequence</li> <li>Classify a set of numbers as an arithmetic or geometric sequence</li> <li>Compute the first five terms of a sequence</li> </ul>
September (week 4) - October (week 2) 13 days	N - Q.3 7.NS.1 7.NS.2 Mathematical Practices 1, 5, 6	Unit 2: Whole Numbers and Decimals	<ul> <li>Compute basic arithmetical operations without using a calculator</li> <li>Multiply and divide decimals without using a calculator (including by powers of 10)</li> <li>Determine the number of significant figures in a given number</li> <li>Compute the sum, difference, product, and quotient of two or more measurement numbers</li> <li>Round a given number to the appropriate place value</li> <li>Convert decimals to fractions</li> </ul>
October (week 2) - October (week3) 5 days	7.NS.1 7.NS.2 7.EE.1 Mathematical Practices 1, 7	Unit 3: Signed Numbers	<ul> <li>Add, subtract, multiply, and divide signed numbers without a calculator</li> <li>Apply order of operations to evaluate expressions</li> </ul>
October (week 4) - November (week 2) 15 days	7.NS.1 7.NS.2 A - SSE.3 Mathematical Practices 1, 4, 5, 7	Unit 4: Ruler Fractions and Mixed Numbers	<ul> <li>Identify and write fractions</li> <li>Rewrite improper fractions as mixed numbers and vice versa</li> <li>Reduce fractions to lowest terms</li> <li>Create common denominators</li> <li>Increase and reduce fractions to designated denominators</li> <li>Add and subtract fractions with common denominators</li> <li>Add and subtract fractions with unlike denominators</li> <li>Subtract fractions with common and unlike denominators when borrowing is necessary</li> <li>Add and subtract feet, inches and fractions of inches</li> </ul>

			<ul> <li>Multiply and divide fractions and mixed numbers</li> <li>Multiply and divide feet, inches and fractions of inches</li> </ul>
November (week 3) - November (week 4) 6 days	7.RP.2 7.RP.3 A - REI.1 Mathematical Practices 1, 2, 4	Unit 5: Ratios and Proportions	<ul> <li>Write a ratio</li> <li>Simplify ratios in context of a real world situation</li> <li>Solve a direct proportion</li> <li>Determine if two ratios are equivalent</li> <li>Set up a proportion to solve a real world problem</li> <li>Solve inverse proportion problems</li> </ul>
November (week 4) - December (week 1 10 days	A - CED.1 7.NS.2d Mathematical Practices 1, 4, 6, 7	Unit 6: Percents	<ul> <li>Convert between percents, decimals, and fractions</li> <li>Use the percent proportion to solve for the unknown percent, part, or whole</li> <li>Define terms associated with real-world applications of percents (gratuity, discount, markup, commission, sales tax, sale price, total cost, interest, interest rate, principle)</li> <li>Apply concepts of percents and the percent proportion to solve real-world problems</li> </ul>
December (week 2) - December (week 3 10 days	N - Q.1 N - Q.2 Mathematical Practices 1, 4, 6, 7	Unit 7: Dimensional Analysis	<ul> <li>Convert between different units of the Engligh Measurement System</li> <li>Convert between different units of the Metric Measurement System</li> <li>Convert units between the English and Metric Systems</li> <li>Apply unit conversions to solve real-world problems</li> </ul>
January (week 2) - January (week 3) 8 days	G - SRT.8 G - GMD.3 G - MG.1 G - MG.3 Mathematical Practices 1, 4, 5, 6	Unit 8: Geometry Review and Graphic Mathematics	<ul> <li>Define terms associated with points, lines, and angles</li> <li>Add and subtract angles measures, specific to the second</li> <li>Determine the missing angle of a given diagram</li> <li>Use the Pythagorean Theorem to solve for the missing side of any right triangle</li> <li>Calculate the perimeter, circumference, and area of a given 2-dimensional diagram</li> <li>Calculate the volume of a given 3-dimensional figure</li> <li>Apply concepts of geometry to solve real-world problems</li> </ul>

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January (week 3) - January (week 4) 4 days		Trade Math Final Exam Review	
January (week 4) 3 days		Trade Math Final Exam	
January (week 5) - February (week 1) 10 days	7.RP.2 7.RP.3 A - REI.1 Mathematical Practices 1, 2, 4, 5	Agriculture Math Unit 1: Ratios and Proportions Review	<ul> <li>Define ratio and proportion</li> <li>Apply ratios and proportions to solve real-world problems in agriculture</li> </ul>
February (week 2) - February (week 4) 10 days	A - CED.1 7.NS.2d Mathematical Practices 1, 2, 3, 4, 5	Unit 2: Percents and Applications	<ul> <li>Review percent proportion</li> <li>Apply percents to real world problems in agriculture</li> </ul>
March (week 1) - March (week 2) 10 days	A - CED.1 A - CED.2 A - CED.3 N - Q.1 N - Q.2 Mathematical Practices 1, 2, 3, 4, 5	Unit 3: Measurement	<ul> <li>Convert between units of measurement review</li> <li>Identify what units to use when measuring different items</li> <li>Use multiple tools to measure different items</li> </ul>
March (week 3) - April (week 1) 15 days	G - CO.12 G - CO.13 G - SRT.5 G - GMD.3 G - MG.1 G - MG.2	Unit 4: Geometry	<ul> <li>Apply the Pythagorean theorem to real world problems</li> <li>Calculate the perimeter, circumference, and area of a given 2- dimensional diagram</li> <li>Calculate the volume of a given 3-dimensional figure</li> <li>Apply concepts of geometry to solve real-world problems in agriculture</li> </ul>

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	G - MG.3 Mathematical Practices 1, 2, 3, 4, 5		<ul> <li>Design a structure that will be utilized in the field of agriculture of your choice</li> <li>Build an actual or a scale structure using the design</li> </ul>
April (week 3) - April (week 5) 10 days	F - IF.1 F - IF.2 F - IF.4 F - IF.5 F - IF.6 F - IF.7 F - IF.9 F - BF. 1 F - LE.1 Mathematical Practices 1, 2, 3, 4, 5	Unit 5: Functions	<ul> <li>Define and identify a function</li> <li>Explain function notation</li> <li>Build a function that models a relationship between two quantitites</li> <li>Represent functions using graphs, charts, tables, and equations</li> <li>Apply functions to real world problems in agriculture</li> </ul>
April (week 5) - May (week 5) 20 days	S - ID.1 through S - ID.9 S - IC.1 S - IC.5 S - IC.6 Mathematical Practices 1, 2, 3, 4, 5	Unit 6: Statistics	<ul> <li>Interpret information from tables, graphs, and charts</li> <li>Analyze trends in agriculture and discuss effects on today and the future</li> <li>Develop and implement an experiment in the field of your choice</li> <li>Use statistical measures to analyze the results of experiments</li> </ul>
June (week 1) - June (week 2) 7 days		Ag Math Final Exam Review	
June (week 2) - June (week 3) 5 days		Ag Math Final Exam	-