



Unit Title	Established Goals	Standards	Enduring Understanding Essential Questions	Evidence and Assessment
Algebraic Skills	Foundational Algebraic Skills Fluency	A.SSE.1 N.RN.3 A.CED.1 A.CED.4 A.REI.1-3 N.Q.1-3	How can I solve any Equation for a variable? How do I solve inequalities? How do I translate words into expressions? How do I graph an Equation?	Test and Quizzes Space Battleship Lab Real World Word Problems variable Analysis
Systems of Equations	System of Equation Solving and Graphing	A.REI 5-7 A.REI 10-12 F.BF 1-4 F.LE 1-5	What do multiple equations mean? How can I use 1-2-1 to solve a SOE? How do I interpret “solutions” to SOE What do SOE solutions mean in inequalities?	Test and Quizzes Business model Lab/Project Real World SOE Analysis
Exponents and Quadratics	Simplification and Transformation of Quadratics Equations and Graphs	N.RN.1 N.RN.2 A.SSE.1-3 A.APR.1 F.IF.4 F.IF.7 F.IF.8 F.FB.1-4 F.LE.2 F.LE.5 N.Q. 3 A.REI. 2, 4, 7, 10,	How do I use factoring to find ‘zero’? How is Factoring like the reverse of the Dist. Property? How do I solve quadratics? What does ‘0’ mean in Quadratics?	Test and Quizzes Simple Target Plotting Lab Mortar/Trebuchet Lab

<p>Rationals, Radicals, and Probability</p>	<p>Simplification of Rats/Rads and Analysis of compound events</p>	<p>A.SSE.1 & 3 A.CED. 1-4 A.APR. 3 F.IF. 4-9 F.BF. 1 & 3 F.LE. 1-3 & II S.ID. 6 A.APR. 6 & 7 A.CED 1 & 2 A.REI. 2 F.IF. 4 & 5 N.VM. 6 N.Q. 1 & 2 S.IC. 3 S.ID. 1-3, 5 S.CP. 1-8</p>	<p>How do I interpret risk? How do I calculate Distance? What is compound probability and how do I find it? How do I express odds as a pie chart?</p>	<p>Test and Quizzes Distance Calculation Lab Dice+Chip+Cards Probability Lab</p>
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Integers and Equations	Laws and Theorems Proof constructions Foundational Math	G.CO.A.1 G.CO.C.9 G.CO.C.10 G.CO.D.12 G.MG.A.3 G.GBPE.4-7	How can I use established Theorms to create a Proof? What are the basic rules of congruency of lines and angles? What are the basic relationships of lines and angles? How do I solve problems using foundational math?	Test and quizzes Lawyer Book Proofs Street planning with Transversal Analysis
Congruence	Algebra applied as Geometry	G.CO.C.9-13 G.SRT.B.5 G.C.A.3 G.GPE.B.4 G.GPE.B.7	How can I decode a Geometric problem into an Algebraic one? How does scaling triangles affect angle/line relationships? How do I apply ASA SSS in a proof?	Test and quizzes Congruence Proofs Equidistance Park Attractions Analysis
Triangles	Trigonometric Rules	G.CO.A.2-5 G.CO.B.6-8 G.CO.D.12 G.SRT.A.1-9 G.SRT.A.II	How can I solve for unknown dimensions? What is SOH CAH TOA? How do I use pythag to find the distance formula?	Test and quizzes SOH CAH TOA in the real world Lab SOH CAH TOH Theme Park Project
Circles and Probability	Apply Algebraic Geometry Calculate Geometric Probabilities	G.CO.A.2-5 G.CO.B.6-8 G.CO.D.12 G.SRT.A.1-9 G.SRT.A.II	How can I Algebraically quantify a Circle? (Circle Formula, Beyond Area and Radius) How do I calculate odds? How are area and probability related?	Test and quizzes Compound Probability Lab



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Expressions and Graphs	Foundational Skills Solving a System of Equations	<ul style="list-style-type: none"> • Seeing Structure in Expressions (A-SSE) • Arithmetic with Polynomials and Rational Expressions (A-APR) • Creating Equations (A-CED) • Reasoning with Equations and Inequalities (A-REI) • Expressing Geometric Properties with Equations (G-GPE) 	<p>How are Systems solved How do I apply foundational skills How are TEG Graphed and understood?</p>	<p>Test and Quizzes Real World SOE Graphing project Business Model Development/Analysis</p>
Functions and their Graphs	Transformation of Functions Graph Transformation Patterns	<ul style="list-style-type: none"> • Interpreting Functions (F-IF) • Building Functions (F-BF) • Linear, Quadratic, and Exponential Models (F-LE) • Trigonometric Functions (F-TF) 	<p>What general patterns govern the transformations of most functions and graphs?</p>	<p>Test and Quizzes Real World Function Types graph Project V2/ICBM Target Plotting</p>
Numbers and Trig	Simplification of Complex Expressions SOH CAH TOA	<ul style="list-style-type: none"> • The Real Number System (N-RN) • Quantities (N-Q) • The Complex Number System (N-CN) • Trigonometric Functions (F-TF) 	<p>How do I apply Trigonometry in multistep problems? How can I use Trig to find unknown vectors?</p>	<p>Test and Quizzes Trigonometric Solutions Packets Real World Trig Project</p>
Probability	Solving Compound Events Calculation Odds	<ul style="list-style-type: none"> • Interpreting categorical and quantitative data (S-ID) • Making Inferences and Justifying Conclusions (S-IC) 	<p>How do I calculate and interpret probability for complex situations? How do I min/max based on probability?</p>	<p>Test and Quizzes Min/Max an RPG character Project Casino Analysis</p>

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| | | <ul style="list-style-type: none">• Conditional Probability and the Rules of Probability (S-CP) | | |
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