

COURSE: Contemporary Math

Marking Period	Unit	Topics	Skills	Assessments
1	1	Introduction to Critical Thinking and Problem Solving	-Approaches to Mathematical thinking -Application of critical thinking to problem solving	-Class Discussion -Presentations -Group Projects -Quizzes and Exams
1	2	Numbers and Counting	-Estimation -Fibonacci Numbers -Prime Numbers -Modular and Clock arithmetic -Encryption -Irrational Numbers -Real Numbers	-Class Discussion -Presentations -Group Projects -Quizzes and Exams
1-2	3	Infinity	-Correspondence -Cardinality -Cantor Sets -Power Sets -Applications of infinity to geometry	-Class Discussion -Presentations -Group Projects -Quizzes and Exams
2	4	Geometry	-Proof of the Pythagorean Theorem -Applications of closed polygons -The Golden Ratio and Rectangle -Tessellations -Symmetry -Solids -Non-Euclidian Geometry -The 4 <sup>th</sup> Dimension	-Class Discussion -Presentations -Group Projects -Quizzes and Exams
2	5	Topology	-Torus -Mobius Strip -Klein Bottle -Circuits and Pathways -Knot Theory -Fixed Points	-Class Discussion -Presentations -Group Projects -Quizzes and Exams
2-3	6	Chaos and Fractals	-Fractals -Iterations -Julia and Mandelbrot Sets	-Class Discussion -Presentations -Group Projects

COURSE: Contemporary Math

			-Chaos -Dimensions of Fractals	-Quizzes and Exams
<b>3</b>	<b>7</b>	Uncertainty	-Conflicting Probability -Probability -Combinatorics -Data Collection -Measures of Dispersion -Hypothesis Testing	-Class Discussion -Presentations -Group Projects -Quizzes and Exams
<b>3-4</b>	<b>8</b>	Applications of Probability and Statistics	-Expected Value -Calculating Risk -Investment Mathematics -Business Applications -Mathematics of Voting and Polling -Fair Division	-Class Discussion -Presentations -Group Projects -Quizzes and Exams
<b>4</b>	<b>9</b>	Summative Unit	-All of the above	-Final Group Presentation