**PACING GUIDE**

**COURSE: Geometry** **GRADE(S): 10-11**

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| **MONTH** | **UNIT** | **STANDARDS/SKILLS** | **ASSESSMENTS**  What evidence (formative/summative) is utilized to establish that the content, standards, & skills have been mastered? | **CONTENT**  Topics being covered? What do students need to know? (*nouns*) | **ACTIVITIES**  w/Integration of Technology & Career Ready Practices |
| September | Points, Lines, Planes, and Angles | MA.9-12.G-MG.A, MA.9-12.G-MG.A.1, Use geometric shapes and measures. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Undefined terms, distance, midpoint, bisector, addition and subtraction postulate of segments and angles. | Define terms, oral question and answer,  pair work, computer calculations, exit slip, kahoot activity, check for understanding. |
| October | Deductive Reasoning | MA.9-12.G-CO.C.9, MA.9-12.G-GPE.B.4, Prove theorems about lines and angles. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test,  and MPA | Hypothesis and conclusion, conditional statements, and converse, properties of algebra. | Student create problems, student peer correction, and group work, exit slip, kahoot activity, check for understanding. |
| October | Parallel Lines and Planes | MA.9-12.G-CO.A.1, MA.9-12.G-CO.B.6, MA.9-12.G-CO.B.7, MA.9-12.G-CO.C.9, Knowing precise definition of parallel and perpendicular lines. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Parallel, perpendicular, and skew lines, Supplementary, complementary, and vertical angles, parallel planes. | Students search necessity of parallels.  Group work proving parallels. exit slip, kahoot activity, check for understanding. |
| November | Congruent Triangles | MA.9-12.G-CO.A.1, MA.9-12.G-CO.B.6, MA.9-12.G-CO.B.7, MA.9-12.G-CO.B.8, MA.9-12.G-CO.C.10, Explain the criteria for triangle congruence. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Classify triangles, sum of interior and exterior angles, SSS, SAS, ASA, AAS, HL congruence. | Discussion of congruent versus equal figures, group work applying deductive reasoning explaining solutions, exit slip, kahoot activity, check for understanding. |
| December | Quadrilaterals | MA.9-12.G-CO.A.1, MA.9-12.G-CO.A.3, MA.9-12.G-CO.C.11, MA.9-12.G-GPE.B.4, MA.9-12.G-GPE.B.5, MA.9-12.G-GPE.B.7, MA.9-12.G-MG.A.2, Use theorems of quadrilateral, parallelograms, and trapezoids. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Properties of regular and irregular polygons, types of polygons, quadrilaterals, parallelograms, rectangles, rhombi, squares, and trapezoids. | Group work applying deductive reasoning explaining solutions, exploring careers using geometric shapes, exit slip, kahoot activity, check for understanding. |
| January | Inequalities in Geometry | MA.9-12.G-CO.C.10, MA.9-12.G-GPE.B.4, MA.9-12.G-GPE.B.7, MA.9-12.G-MG.A.1, MA.9-12.G-SRT.B.5, Use theorems and algebra to prove equality in triangles. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Inequality in one triangle, inequality in sides of a triangle, inequality in two triangles, inequality of sides and opposite angles in two triangles. | Oral discussion on inequality and equality in triangles. Student correction of peer problem solving, exit slip, kahoot activity, check for understanding. |
| January | Similarity | MA.9-12.G-SRT.B.5, MA.9-12.G-MG.A.2, MA.9-12.G-SRT.A.1, MA.9-12.G-SRT.A.1b, MA.9-12.G-SRT.A.2, MA.9-12.G-SRT.A.3, MA.9-12.G-SRT.B.5, MA.9-12.N-Q.A, MA.9-12.N-Q.A.1, MA.9-12.N-Q.A.2, Use congruence and similarity criteria ingeometric figures. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Similarity of triangles polygons, and circles, ratio and proportion, proportional lengths, parallels and proportional segments. | Discussion of modeling and similarity in a variety of careers. Problem solving using career problems. Pair search for additional careers using modeling. exit slip, kahoot activity, check for understanding. |
| February / March | Right Triangles and Trigonometry | MA.9-12.G-SRT.C.6, MA.9-12.G-SRT.C.7, MA.9-12.G-SRT.C.8, MA.9-12.G-SRT.D.10, MA.9-12.G-SRT.D.11, MA.9-12.G-SRT.D.9, Use Pythagorean theorem and trigonometric ratios to solve problems. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Geometric mean, Pythagorean theorem, 45-45-90 and 30-60 90 triangles, trigonometric ratios, and Law of sine and cosine. | Review square roots. Solve every day and career problems involving right triangle geometry. Using ti-84 calculator to solve problems using trigonometric ratios, exit slip, kahoot activity, check for understanding. |
| March / April | Circles | MA.9-12.G-C.A.1, MA.9-12.G-C.A.2, MA.9-12.G-C.A.3, MA.9-12.G-C.A.4, MA.9-12.G-C.B.5, MA.9-12.G-GPE.A.1, Prove theorems with circles and segments and lines in circles. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Apply theorems about circles, chords, secants, tangents, and radii, Apply theorem of arcs and angles. | Students give examples of the circle and its impact on everyday life. Group work solving problems of linear measurement and circles, exit slip, kahoot activity, check for understanding. |
| April / May | Areas of Plane Figures | MA.9-12.G-C.B.5, MA.9-12.G-GPE.B.7, MA.9-12.G-MG.A.2, MA.9-12.S-MD.B.5, MA.9-12.S-MD.B.5b, MA.9-12.S-MD.B.6, MA.9-12.S-MD.B.7, Apply concepts of density based on area in modeling situations. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Areas of irregular and regular figures such as parallelograms, triangles, trapezoids, rectangles, rhombus, squares, regular polygons, circle and sector. | Students will discuss product and items measured in square units. Students will use computers to change unit measurements, exit slip, kahoot activity, check for understanding. |
| May | Areas and Volumes of solids | MA.9-12.G-GMD.A.1, MA.9-12.G-GMD.A.2, MA.9-12.G-GMD.A.3, MA.9-12.G-GMD.B.4, MA.9-12.G-MG.A.2, MA.9-12.G-MG.A.3, Use volume formulas for cylinders, pyramids, cones, and spheres. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Base area, lateral surface area, total surface area, and volume, of prisms, cylinders, pyramids, and cones. | Students will discuss product and items measured in cubic units. Students will use computers to change unit measurements, exit slip, kahoot activity, check for understanding. |
| May | Transformations | MA.9-12.G-CO.A.2, MA.9-12.G-CO.A.3, MA.9-12.G-CO.A.4, MA.9-12.G-CO.A.5, MA.9-12.G-CO.B.6, MA.9-12.G-GMD.B.4, MA.9-12.G-SRT.A.1, MA.9-12.G-SRT.A.1a, MA.9-12.G-SRT.A.1b, MA.9-12.G-SRT.A.2, Represent transformations in a plane including translation and dilation.   |  | | --- | |  | | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Translations, dilations, coordinate geometry, and distance. | In groups students will use discovery to find ways to translate and dilate figures, exit slip, kahoot activity, check for understanding. |
| June | Applications of probability | MA.9-12.S-CP.A.1, MA.9-12.S-CP.A.2, MA.9-12.S-CP.A.3, MA.9-12.S-CP.A.4, MA.9-12.S-CP.A.5, MA.9-12.S-CP.B.6, MA.9-12.S-CP.B.7, MA.9-12.S-CP.B.9, MA.9-12.S-IC.A.1, MA.9-12.S-IC.A.2, MA.9-12.S-IC.B.3 MA.9-12.S-IC.B.5, MA.9-12.S-IC.B.6, MA.9-12.S-ID.A.1, MA.9-12.S-ID.A.2, MA.9-12.S-ID.A.4. MA.9-12.S-ID.B.5, MA.9-12.S-ID.B.6, MA.9-12.S-MD.B.6, MA.9-12.S-MD.B.7, Apply the fundamental principal of counting. | Formative assessment / pair and share, group work, pass out of class, question and answer, Summative assessment / homework, classwork, quizzes, test, and MPA | Find probability an event will occur, display data using frequency distributions, histograms, and stem-and-leaf plots, and to compute central measures of tendency, identify mutually exclusive and independent events and to find the probability of such events, recognize and analyze normal distribution. | Group activity using area and volume to solve for probability of an event occurring under different data, exit slip, kahoot activity, check for understanding. |
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