Geometry (prentice hall)

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| Unit | Time | Title | Students will… | Book Chapter/  sections | CCSS | EMATHS  Resource | Prime  Resources | Moodle |
| 1 | ~6 weeks | Foundations of Geometry | Be introduced to and expand on fundamental skills and apply them throughout the course. | Chapter 1 and 3 | G.CO.1  G.CO.9  G.CO.12  G.CO.13  G.GPE.5  G.GPE.6 | -Bearings |  | -History of Geometry  -Video point, line, plane  -Video Segment and rays  -measuring with protractor  -Video Measuring Angles  -Unit pre and post test |
| 2 | ~3 weeks | Reasoning | Be able to understand the basics of critical thinking and the role of logic, and write several forms of proofs. | Chapter 2 | G.CO.1  G.CO.7  G.CO.9  G.GPE.5 | -A deductive system  -if and only if  -reasoning  -Rube Goldberg |  | - Brain Teasers  - Rube Goldberg WS and Video  -Video: conditional Statements and writing conditional statements, Contrapositive,  Video: Laws of Detachment and Syllogism  Video: Proofs (all)  -Unit Pre and Post Tests |
| 3 | ~6 weeks | Triangles | Be able to identify types of triangles, find area and perimeter, triangle congruence and coordinate proofs. | Chapter 4 and 5  10-1 | G.CO.10  G.SRT.4  G.SRT.5  G.PE.7  G.MG.1 | -Altitudes of Equilateral triangles  -Aircraft Carrier |  | -Video classifying Triangles  -Video Exterior Angle Theorem  - Video Triangle inequality theorem  -Vocabulary Quiz  -Interactive: Area and Perimeter of a Triangle  -Video: Using the Pythagorean  Theorem  -Video: application problem of Pythagorean Theorem  -Video: Pythagorean Theorem and Distance Formula  -Video: Corresponding Angles and Sides  -Video: SAS, ASA, HL, CPCTC  -Video Midpoint formula  -Construction Animations.  -Unit pre and post test |
| 4 | ~3 weeks | Quadrilaterals | Be able to identify the types of quadrilaterals, properties of quadrilateral, postulates and theorems, and coordinate proofs. | Chapter 6  10-1 | G.CO.11  G.GPE.4  G.GPE.5  G.GPE.7  G.MG.1 | -Properties of Quad.  - Constructions of Quadrilaterals  -Cube Project  -Wonderful world of Area |  | -Wonderful World of Area  -Constructions of Quads.  - Video Sum of Angles  -Video: Properties of Parallelograms, Rhombuses, Rectangles, Square, Trapezoids, and Kites  - Unit Pre and Post Test |
| 5 | ~6 weeks | Similarity and Transformations | Be able to describe transformations in the coordinate plane, describe similarity and congruence based on transformations, and solve problems based on the transformations. | Chapter 7 and 9  10-4 | G.CO.2  G.CO.3  G.CO.4  G.CO.5  G.CO.6  G.CO.7  G.CO.8  G.SRT.1  G.SRT.2  G.SRT.3  G.SRT.5 | -Composition of dilations | -Transformation game  - Similarity and sails  - Fitting Triangles  -Scaling away  -Scaling Up  -Corresponding parts of similar triangles  -Similar Figures | Videos  -Identifying a translation, reflection, Rotation, Dilations, Similar polygons.  -Drawing a translation, reflection, Rotation  Dilations, Similar Polygons  - Architecture Application  - application problems  -Similarity  -Reflections/ Rotation in the coordinate plane  -Lines of Symmetry interactive  -Center of Dilation interactive  -Unit Pre and Post |
| 6 | ~5 weeks | Trigonometry | Be able to use the Pythagorean theorem, explore the relationship between sides and angles of a right triangle, sine, cosine, tangent, and the laws associated with them. | Chapter 8  10-5 | G.SRT.6  G.SRT.7  G.SRT.8  G.SRT.9  G.SRT.10  G.SRT.11  G.GPE.7 | -Law of sin and cosine  -Bicycle crash  -Area using sine  - Circle Folding  -Unit Circle | Unit Circle | -Area Using Sine  -Right Triangle Trig.  - Video: 30-60-90  - Video: 45-45-90  - Interactive Quiz  -Video: Law of sine, Law of Cosine, Area of Triangle  - Unit Pre and Post Test |
| 7 | ~3 weeks | Polygons and Circle | Be able to calculate the area and perimeter of polygons using different formulas, describe the parts/pieces of a circle, and explore the relationships between them. | Chapter 12  3-5, 7-2, 10-3 | G.CO.1  G.C.1  G.C.2  G.C.3  G.C.5  G.GPE.1  G.GPE.2  G.GPE.2  G.GMD.1  G.MG.1 | -Formula for regular polygons  -Finding Circle  -Investigating Circles |  | -Video: Identifying polygons  - Polygon properties Table  - Video: Classifying Polygons  - Video: Sum of angle measure in a polygons  - Video: Equation of a circle  - Video: Line and Segments related to circles  -Video: Tangents, Chords, Secants  -Unit Pre and Post Test |
| 8 | ~3 weeks | 3-D Shapes | Be able to describe the properties of 3-D shapes, use formulas for surface area and volumes to solve application problems. | Chapter 11 | G.GMD.1  G.GMD.2  G.GMD.3  G.GMD.4  G.MG.1  G.MG.2  G.MG.3 | -Tumbling Cube  -Cubo  -Nets  -Prisms  -Twenty four face  - Thank you boxes | -Prom center piece | -Cube Project  -Video: Polyhedrons  - Video: 3-D Symmetry  - Cross Section interactive  - Nets Interactive  - Nets of 3 D Figures  -Surface Area Videos: Prism, Cylinder, Pyramid,  Cones, Sphere  -Volume Video: Prism, Cylinder, Pyramid, Cone, Sphere  -Application Videos  -Similar Figures  -Propane Take Problem  -Unit Pre and Post Test |