The mission of Hermon High School is to prepare students for personal success in college, career and community.

Geometry Explorations

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Geometry will provide students with the foundation to continue on to additional mathematics courses. This year begins learning basic concepts and skills, giving students' the foundation to move toward higher level thinking. This class moves at a slower pace to ensure student understanding and giving students the opportunity to get additional help when needed. Success in this course will better prepare students to reach more advanced topics in their high school math careers. Geometry requires continual effort and attention. Expectations are for students to do their best everyday. It is very important that students seek help as soon as they are feeling confused, lost, or overwhelmed. We want students to experience success in mathematics and feel confident in their abilities.

Graduation Standards

1 - Number and Quantity: Reason and model quantitatively, using units and number systems to solve problems.(addressed through ongoing skills check)
2 -Algebra: Interpret, represent, create and solve algebraic expressions.
3. Functions: Interpret, analyze, construct and solve linear, quadratic, and trigonometric functions
4 -Geometry: Prove, understand, and model geometric concepts, theorems, and constructions to solve problems.
5 - Apply the formulas for area of geometric shapes, and use those formulas to solve problems.

Unit 1	**Geometry Basics**
Summary	Students will be introduced to points, lines, and angles. Accuracy of measurement will be explored, and the concept of congruence will be introduced.
Performance Indicators Assessed in Unit	**(AR.A.7)** Create equations that describe numbers or relationships. **Geometry: (AR.A.8)** Understand solving equations as a process of reasoning and explain the reasoning. G.S. 4 **Geometry: (GR.A.3)** Prove geometric theorems and when appropriate, the converse of theorems. G.S.4
Unit 2	**Parallel Lines and Transversals**
Summary	Students will be able to identify different angle relationships created by parallel lines and a transversal.
Performance Indicators Assessed in Unit	**(AR.A.7)** Create equations that describe numbers or relationships **(AR.A.8)** understand solving equations as a process of reasoning and explain the reasoning **4.Geometry: (GR.A.3)** Prove geometric theorems and when appropriate, the converse of the theorem
Unit 3	**Area, surface Area and Volume**
Summary	Students will be utilizing formulas for area, surface area and volume of polygons, circles and 3 dimensional objects.
Performance Indicators Assessed in Unit	**M.2B - Write and solve equations and inequalities in one variable.** ● (A.CED.A) Create equations that describe numbers or relationships. **M.4H - Compute perimeter, area, surface area, and volume of geometric shapes**

	● (G.MD.A) Explain volume formulas and use them to solve problems. ● (G.MD.B) Visualize relationships between two-dimensional and three-dimensional objects. (G.MG.A) Apply geometric concepts in modeling situations.
Unit 4	**Triangles**
Summary	Students will learn how to use triangles and their properties to model and analyze many real-world situations. They will also learn about relationships in and among triangles, including congruence and similarity. Students will apply the Pythagorean Theorem
Performance Indicators Assessed in Unit	**M.2B - Write and solve equations and inequalities** ● (A.CED.A) Create equations that describe numbers or relationships. **M.4C: Use similarity of triangles in problem solving** ● (G.SRT.A)Understand similarity in terms of similarity transformations. ● (G.SRT.B) Prove theorems involving similarity. **M.4D: Use congruence of triangles in problem solving.** ● (G.CO.B) Understand congruence in terms of rigid motions. **M.4E: Use properties of triangles in problem solving** ● (G.SRT.C). Define trigonometric ratios and solve problems involving right triangles. ● (G.CO.C) Prove geometric theorems.
Unit 5	**Quadrilaterals and Circle**
Summary	For this unit students focus on quadrilaterals and circles. They learn the properties of the various quadrilaterals and learn the special properties of circles. They also learn about inscribed and circumscribed polygons, tangents, angle and arc measures, and chords.
Performance Indicators	**M.4F - Identify and use properties of quadrilaterals** ● (G.CO.Corems about parallelograms **M.4G - Identify and use properties of circles** ● (G.CO.C.11) Prove geometric theorems. ● (G.C.A.1-3) Understand and apply theorems about circles. ● (G.C.B) Find arc lengths and areas of sectors of circles. ● (G.PE.B) Use coordinates to prove simple geometric theorems algebraically. **M.2B - Write and solve equations and inequalities in one variable.** ● (A.CED.A) Create equations that describe numbers or relationships.)

Summative Assessments Retake

- Students have the opportunity to retake summative assessments.
- The student must submit a retake form to the teacher within five (5) school days of the date that the summative assessment score is reported to the student.
- The highest score a student can receive on a retake or late assessment is a 75.
- The score achieved on a retake will replace the current score (even if the score is lower).
- If a student is making up a test from an absence, that assessment will be graded up to 100.

Make-up Work

Upon their return to school from an absence, it is the student's responsibility to secure make-up work from their teacher. The due date of the missed work will be one additional class period for each day of absence from that class or at the discretion of the teacher.

Grading of Formative Assessments

- Formative assessments will count as 30% of the grade.
- Formative assessments may be scored on either a 0-100 scale or a 0-4 scale.
- The 0-4 scale will be represented in Power School as 4=100, 3=87, 2=77, and 1=67.
- The method of scoring of formative assessments will be determined by assignment.