

Course Syllabus

1. Title - Informal Geometry – Standard
2. Text - *Holt McDougal Larson Geometry Common Core Edition* (Larson, Boswell, Kanold, Stiff. Houghton Mifflin Harcourt 2012)
3. Prerequisites - Algebra I Standard or Algebra IA

4. Course Description

Informal geometry is a standard level course designed for those planning to talk Algebra with Career Applications. Major topics include congruent triangles, polygons, circles, similar triangles, perimeters, and areas. The topics emphasize basic geometric properties and reasoning but with less involvement of formal proof. Technology such as the TI-Nspire will be used to enhance student learning. Does not currently meet math requirements for NCAA Clearinghouse.

a.

5. Course Content

- a. Semester 1

- i. Chapter 1 – Essentials of Geometry
- ii. Chapter 2 – Reasoning and Proof
- iii. Chapter 3 – Parallel and Perpendicular Lines
- iv. Chapter 4 – Congruent Triangles
- v. Chapter 5 – Similarity
- vi. Chapter 6 – Right Triangles and Trigonometry

- b. Semester 2

- vii. Chapter 7 – Quadrilaterals
- viii. Chapter 8 – Quadrilaterals
- ix. Chapter 9 – Properties of Transformations
- x. Chapter 10 – Properties of Circles
- xi. Chapter 11 – Measurement of Figures and Solids

6. Course Format

Course material in Informal Geometry will be presented in a variety of instructional methods, including, but not limited to:

- i. Teacher led lectures
- ii. Small group discussion
- iii. Hands-on work with calculators, other technology, and manipulatives
- iv. Analysis of mathematical tasks
- v. Class projects
- vi. Student Presentations
- vii. Group work
- viii. Discovery/Problem solving opportunities

7. Course Expectations

- a. Students are expected to be active participants in the learning process. This includes participating in class discussions, thinking about questions posed by the teacher and by classmates, construct viable mathematical arguments, and to help create an atmosphere that is conducive to learning.
- b. Students are expected to be responsible students. Responsible students are ready to learn throughout class by having required materials, being respectful of others and self, and being focused on mathematics. Students are also expected to complete assigned tasks (homework, class work, and other assignments), and seek extra help from the classroom teacher, as needed. Furthermore, responsible students will correct mistakes on homework and quizzes and will do their best to learn for understanding.
- c. Students are expected to show knowledge of all course objectives and apply that knowledge to real world situations. Furthermore, retention of material beyond the unit assessments is necessary. Students are expected to apply previously learned mathematics to new content to strengthen their mathematical understanding. Students will be expected to apply algebraic, numerical, and graphical reasoning to solve problems and explain their reasoning to others.
- d. The TI-Nspire is required.

8. Grades

- a. Grades will be determined by points received on notes, homework assignments, quizzes, projects and tests.
- b. Homework and notes make up between 10 and 20 percent of the overall grade. Quizzes range between 30 and 40 percent while tests make up the remaining 40 to 60 percent.
- c. As per department policy, extra credit shall not exceed 2% of the students' grade.

9. Mathematical Practice Standards: All Morton High School Students will:

- a. Make sense of problems and persevere in solving them
- b. Reason abstractly and quantitatively
- c. Construct viable arguments and critique the reasoning of others
- d. Model with mathematics
- e. Use appropriate tools strategically
- f. Attend to precision
- g. Look for and make use of structure
- h. Look for and express regularity in repeated reasoning