

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT

Math Course 2 Honors

Date: June 2014

Proposed Grade Level(s): 6th – 8th

Subject Area: Mathematics

Grading: A-F

Course Length: One year

Prerequisites: “B” or better in Course 1 OR Course 1 Honors or passing Challenge test with 80% or better in all standard clusters

COURSE DESCRIPTION:

Course 2 Honors is an accelerated course for students working above grade level. The content of this course is compacting two grade levels into one year, addressing both 7th and 8th grade standards. Topics of the course include rational numbers and exponents, proportionality and linear relationships, sampling and inference, and creating, comparing, and analyzing geometric figures. The rigor and pacing of this course should be a consideration in placement.

GENERAL GOALS (ESSENTIAL QUESTIONS are written in the detailed units of instruction):

Students need a solid foundation in number sense and operations to be successful in this fast paced course. As emphasized in the California Mathematics Framework, it is critical that students do not skip grade level content in order to accelerate, as that may lead to learning gaps in later coursework. The goal of this course is to provide students the opportunity for enrolling in advanced level coursework once in high school.

CCSS STUDENT READING/WRITING/SPEAKING AND LISTENING COMPONENTS:

The *Standards for Mathematical Practice* describe the attributes of mathematically proficient students and expertise that mathematics educators at all levels should seek to develop in their students. Mathematical practices provide a vehicle through which students engage with and learn mathematics – with a heavy focus on reading, writing, and explaining.

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

DETAILED UNITS OF INSTRUCTION:

| Units/CC Standards | Chapters | Essential Questions |
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| Unit 1 Rational numbers and Exponents | Chapter 1: The Language of Algebra | How can you use numbers and symbols to represent mathematical ideas? |
| 7.NS, 8.NS, 8.EE | Chapter 2: Operations with Integers | What happens when you add, subtract, multiply, and divide integers? |

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| | Chapter 3: Operations with Rational Numbers | What happens when you add, subtract, multiply and divide rational numbers? |
| | Chapter 4: Powers and Roots | Why is it useful to write numbers in different ways? |
| Unit 2 Proportionality and Linear Relationships 7.RP, 7.EE, 8.EE | Chapter 5: Ratio, Proportion, and Similar Figures | How can you identify and represent proportional relationships? |
| | Chapter 6: Percents | How can you use proportional relationships to solve real-world percent problems? |
| | Chapter 7: Algebraic Expressions | Why are algebraic rules useful? |
| | Chapter 8: Equations and Inequalities | How are equations used to describe and solve multi-step problems? |
| | Chapter 9: Linear Functions | How are linear functions used to model proportional relationships? |
| Unit 3 Introduction to Sampling and Inference 7.SP | Chapter 10: Introduction to Sampling and Inference | How are statistics used to draw inferences about and compare populations? |
| Unit 4 Creating, Comparing, and Analyzing Geometric Figures 7.G, 8.G | Chapter 11: Congruence, Similarity, and Transformations | How can you determine congruence and similarity? |
| | Chapter 12: Volume and Surface Area | How are two-dimensional figures used to solve problems involving three-dimensional figures? |

TEXTBOOKS AND RESOURCE MATERIALS:

McGraw Hill Math Accelerated (pending board approval).

COMMON CORE STATE STANDARDS ADDRESSED:

7th and 8th grade content standards are addressed – see units of instruction above.

DISTRICT ESLRs TO BE ADDRESSED:

When students exit a secondary mathematics course, they will be:

- **Self-directed Learners** who will be able to use notes and a textbook to assist them in continuing their learning outside of the classroom setting.

- **Efficient Communicators** who can explain mathematical concepts to others and use mathematics to organize and explain data.
- **Quality Producers** who understand the importance of neat, organized work that demonstrates their thinking and understanding of the solution they've formed to solve a problem.
- **Constructive Thinkers** who are able to attack problems with organization, logic, and mathematical skills they've developed in a systematic fashion.
- **Collaborative Workers** who can work in a variety of settings in culturally diverse groups. They will be able to form and use study groups to strengthen their own understanding in addition to providing the same service for classmates.
- **Responsible Citizens** who accept the consequences of their actions and who demonstrate their understanding of their role in the learning process.

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