



Mathematics

Course: Math 6
Middle School: Edison

Essential Course Information

- Revised Curriculum
- Full Year - 6 Credits

Course Overview

This course is the first required course in the 6-8 grade-band. It covers the key prerequisite operations with integers, decimals, and fractions and introduces the concepts of rational proportion, expression and equations, algebraic thinking, and the fundamentals of statistical thinking

Unit	Estimated Class Time	Overview
Unit 1-Ratio Reasoning	4 weeks	In this unit, students will develop understanding of ratio concepts, equivalent ratios, different methods of writing ratios and how to utilize part-to-part and part-to-whole ratios to model and solve problems. Students will create and use ratio tables to compare ratios and solve problems.
Unit 2- Ratio Reasoning: Unit Rates & Percents	4 weeks	In this unit, students will learn that a rate is a ratio that tells how many units of one quantity there are for every 1 of another quantity. Students will then use unit rates to solve real world problems. Students will also learn that a percent is a way of expressing a rate out of 100 and will use their knowledge of ratios and learn about proportions to solve problems about percentages.
Unit 3 - Decimals & Fractions	5 weeks	In this unit, students will add, subtract, and multiply multi-digit decimals, develop an understanding of division of whole numbers and multi-digit decimals, apply the four operations with fractions, and find the volume of rectangular prisms with dimensions consisting of whole numbers, decimals, and fractions.
Unit 4 - Expressions & Equations	7 weeks	In this unit, students will find the area of two-dimensional figures and the surface area of three-dimensional figures and extend learning to introduce pre-algebra concepts and evaluate algebraic expressions including exponents and finding greatest common factor and least common multiple of sets of whole numbers.
Unit 5 - Algebraic Thinking	5 weeks	This unit introduces students to creating equivalent expressions, solving equations with one variable, and analyzing the relationship between independent and dependent variables.
Unit 6 - Positive & Negative Numbers	5 weeks	Students will use positive and negative numbers to describe quantities in the real world while using opposite and absolute values. They will extend the number line into the negative to compare positive and negative numbers and use this to make real life comparisons. Students will also understand that a solution to an inequality with one variable can have infinite solutions and will graph these solutions on a number line. Lastly, they will use their understanding of positive and negative numbers on a number line to plot points on a four quadrant graph.
Unit 7 - Statistical Thinking	4 weeks	In this unit students will understand that data distributions can help answer statistical questions and that when data is collected to answer a question, the answers are not always the same. Students will extend their knowledge of number lines to organize sets of data into graphs and use these graphs to make sense of the information. Then students will summarize data using measures of center.

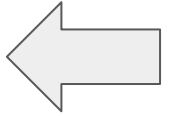
Content Continuum

Course before..

Math 5- In Grade 5, instructional time focus on three critical areas: (1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions); (2) extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and (3) developing understanding of volume.

Current Course

Math 6



Course after..

Math 7 or PreAlgebra-7- In Grade 7, instructional time focuses on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.

INSTRUCTIONAL / SUPPLEMENTAL MATERIALS

1. Textbook: i-Ready Classroom Mathematics
2. Online resources and supplemental to enhance understanding of course content and skills

All existing resources will be evaluated for alignment to new curriculum.

KEY FEATURES OF REVISION

- Student access to digital resources, diagnostic assessments, online instruction
- Integration of performance based assessments, common writing tasks, and projects.
- Incorporations of activities and assessments that develop 21st century skills.

Special Education sections of Math 6 are offered (inclusion, pull-out resources, learning and language disabilities).

Differentiation strategies will be included (DATE)

Mathematics Department
West Orange Public Schools
Emad Abu-Hakmeh, Supervisor 6-12

