Implementing the Common Core State Standards

Introduction

This guide explains how to meet the Common Core State Standards for Mathematics (CCSSM) with the Prentice Hall Mathematics: Courses 1, 2 and 3 Common Core Edition © 2013. It looks at the curriculum resources that Pearson has integrated into the program, so that you can prepare for a successful implementation.
Common Core Program Resources

Prentice Hall Mathematics: Courses 1, 2 and 3 Common Core Edition, or Middle Grades Math, is a program built especially for middle school students that provides lessons that are fully aligned to the CCSSM. You can find teacher support and pacing for these lessons in the Teacher’s Edition.

The program contains instructional guidance for both the Standards for Mathematical Practice and the Standards for Mathematical Content, which are the two sets of standards that make up the CCSSM.

First, look at the Standards for Mathematical Practice and learn how they are embedded in each lesson.

Standards for Mathematical Practice

The Standards for Mathematical Practice describe characteristics of mathematically proficient students. Focusing on these eight practices will help your students develop mathematical behaviors. You will find opportunities for students to practice these behaviors daily.

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.
Make Sense of Problems and Persevere in Solving Them

Consider the first Standard for Mathematical Practice: Make sense of problems and persevere in solving them. One of the foundational themes of Middle Grades Math is problem solving. The Problem Solving Handbook, found in the front matter of the student edition, reminds students to understand the problem or make sense of the problem. Guided Problem Solving leads students to make sense of the problem presented, analyze the givens, and develop a solution plan.

Construct Viable Arguments and Critique the Reasoning of Others

Another Standard for Mathematical Practice asks students to construct viable arguments and critique the reasoning of others. Every chapter includes a More Than One Way feature. Here, students analyze and critique the solution plans and reasoning of two students, each of whom presents a different problem-solving approach to the same problem.
Use Appropriate Tools Strategically

Students use appropriate tools strategically when they use various manipulatives, measuring devices, and technology tools in the Activity Labs. By developing fluency in the use of different tools, students are able to select the appropriate tools to solve a given problem.

**Activity Lab**

**Modeling Addition and Subtraction of Rational Numbers**

You already know how to use a number line to add and subtract integers. You also know how to add positive decimals, fractions, and integer

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**Activity Lab**

**Modeling Addition and Subtraction of Rational Numbers**

You already know how to use a number line to add and subtract integers. You also know how to add positive decimals, fractions, and integer numbers. You can use these tools to add and subtract any rational number on a number line.

**ACTIVITY**

1. The sum is represented on a horizontal number line.

2. What is the sum of these two fractions?

3. Can you use the same number line diagrams to represent the difference?

4. Represent each sum or difference on a horizontal number line. Then find each sum or difference.

5. Use the horizontal number line as the one below to represent the sum of 2/3 + 1/3.

6. The vertical number line at the left represents 0.5 or (1/2).

7. What is the value of the expression?

8. Represent 2/3 + 1/3 on a vertical number line diagram until the difference.

Look in the front pages of your Teacher’s Edition for many more opportunities for students to develop proficiency in the Standards for Mathematical Practice. Notice how the specific program features that support each practice are highlighted in blue. After you read about the supporting features, you will see a selection of pages in your Teacher’s Edition that gives students an opportunity to put the standard into practice.

**2 REASON ABSTRACTLY AND QUANTITATIVELY.**

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically; and the ability to contextualize—to pause as needed during the manipulation process in order to probe the constituents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and reasoning and explaining using different properties of operations and objects.

Reasoning is another important theme of the Pearson’s Prentice Hall Middle Grades Mathematics program. Many of the examples in lessons are application examples in which students are guided to represent the situation symbolically, either numerically or algebraically. Through the solving process, they manipulate expressions, students are reminded to check back to the problem situation with the Check for Reasonableness feature. Each lesson ends with a Check Your Understanding feature in which students explain their thinking related to the concepts studied in the lesson. Throughout the exercise sets are Reasoning exercises that focus student’s attention on the structure or meaning of an operation rather than the solution.

Standards for Mathematical Content

Middle Grades Math provides complete coverage of the Standards for Mathematical Content. Every lesson identifies the Standards for Mathematical Content that students will learn. The Correlation and Pacing charts in the front pages of the Teacher’s Edition outline how this is done.

Correlation Chart

The Correlation of Standards for Mathematical Content chart lists each grade-level Standard for Mathematical Content by course and shows the alignment of lessons and activities to the CCSSM.
Pacing Guide

Pacing for a Common Core Curriculum provides a list of every lesson, by chapter, and indicates the Standards for Mathematical Content that each lesson teaches. The proposed pacing for each chapter helps you plan your year with a complete and comprehensive schedule that addresses every core standard.

Technology Components

You will also find updated technology components that align with and assess the CCSSM. This includes ExamView® and Success Tracker™—the online assessment system with chapter tests, instant remediation, and benchmark tests.

Review

This guide introduced meeting the CCSSM with Middle Grades Math.

It examined the Common Core resources developed for Middle Grades Math and discussed how to use them to effectively integrate the standards into your math classroom.

It also explored how to use the Correlation of Standards for Mathematical Content chart and the Pacing for a Common Core Curriculum chart to maintain the successful instructional approach of the program while highlighting the connections to the Standards for Mathematical Practice.