Introduction to the Program

Introduction

The *Common Core State Standards Integrated Pathway: Mathematics III Program* is a complete set of materials developed around the Common Core State Standards (CCSS), the overview of the Integrated Pathway for the Common Core State Mathematics Standards, and the Mathematics III content map found in Appendix A of the Common Core State Standards. Topics are built around accessible core curricula, ensuring that the *CCSS Integrated Pathway: Mathematics III Program* is useful for striving students and diverse classrooms.

This program realizes the benefits of exploratory and investigative learning and employs a variety of instructional models to meet the learning needs of students with a range of abilities.

The *CCSS Integrated Pathway: Mathematics III Program* includes components that support problem-based learning, instruct and coach as needed, provide practice, and assess students' skills. Instructional tools and strategies are embedded throughout.

The program includes:

- More than 150 hours of lessons, addressing the six units of CCSS IP: Mathematics III
- Essential Questions for each instructional topic
- Vocabulary
- Instruction and Guided Practice
- Problem-based Tasks and Coaching questions
- Step-by-step graphing calculator instructions for the TI-Nspire and the TI-83/84
- Station activities to promote collaborative learning and problem-solving skills
- Embedded Instructional Strategies to enable access for all students

Purpose of Materials

The *CCSS Integrated Pathway: Mathematics III Program* has been organized to coordinate with the CCSS Integrated Pathway: Mathematics III content map and specifications from Appendix A of the Common Core State Standards.

Each lesson includes activities that offer opportunities for exploration and investigation. These activities incorporate concept and skill development and guided practice, then move on to the application of new skills and concepts in problem-solving situations. Throughout the lessons and activities, problems are contextualized to enhance rigor and relevance.

PROGRAM OVERVIEW
Introduction to the Program

This program includes all the topics addressed in the CCSS Integrated Pathway: Mathematics III content map. These include:

- Inferences and Conclusions from Data
- Polynomial Relationships
- Rational and Radical Relationships
- Trigonometry of General Triangles and Trigonometric Functions
- Mathematical Modeling of Inverse, Logarithmic, and Trigonometric Functions
- Mathematical Modeling and Choosing a Model

The eight Mathematical Practices described in the Common Core are infused throughout:

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

Structure of the Teacher Resource

The *CCSS Integrated Pathway: Mathematics III Program* materials are completely reproducible. The Program Overview is the first section. This section helps you to navigate the materials, offers a collection of graphic organizers and suggested strategies for their use, and shows the correlation between the Common Core State Standards and the CCSS Integrated Pathway: Mathematics III content map found in Appendix A of the Common Core State Standards.

The Program Overview is the first section. This section helps you to navigate the materials, offers a collection of graphic organizers and suggested strategies for their use, and shows the correlation between the Common Core State Standards and the CCSS Integrated Pathway: Mathematics III content map found in Appendix A of the Common Core State Standards.

The remaining materials focus on content, knowledge, and application of the six units in the CCSS Integrated Pathway Mathematics III curriculum: Inferences and Conclusions from Data; Polynomial Relationships; Rational and Radical Relationships; Trigonometry of General Triangles and Trigonometric Functions; Mathematical Modeling of Inverse, Logarithmic, and Trigonometric Functions; and Mathematical Modeling and Choosing a Model. The units in the *CCSS Integrated Pathway: Mathematics III Program* are designed to be flexible so that you can mix and match activities as the needs of your students and your instructional style dictate.

The Station Activities correspond to the content in the units and provide students with the opportunity to apply concepts and skills, while you have a chance to circulate, observe, speak to individuals and small groups, and informally assess and plan.

Each lesson begins with a pre-assessment and ends with a progress assessment. These allow you to assess students' progress as you move from lesson to lesson, enabling you to gauge how well students have understood the material and to differentiate as appropriate.

***Please note*:** Throughout the printed Teacher Resource, page references are provided on the lower, inner corner of some pages. These references indicate the corresponding page(s) in the Student Workbook (SWB) and/or Student Resource Book (SRB) as appropriate. These page references have been included here to facilitate assigning materials to students.

Glossary

The Glossary contains vocabulary terms and formulas from throughout the program, organized alphabetically. Each listing provides the term and the definition in both English and Spanish.