



Pathway2Careers™ Curriculum Math Implementation Guide

Selecting and Using P2C Math Lessons



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Instruction Model

Model for Implementation

The Pathway2Careers (P2C) math curricula are intended to be used in a blended learning model. P2C math courses can be used as a core curriculum or lessons can be a supplement to another core curriculum.

Using P2C as a Core Curriculum

Pathway2Careers Curriculum is an innovative approach to algebra and geometry with authentic career application. The curriculum bridges the gap between traditional math outcomes and hundreds of real, high-value careers. Educators can increase student engagement, motivation to learn, and test scores by connecting math learning to careers.

Pathway2Careers curriculum modernizes math by bringing comprehension to the forefront. When students find purpose in their learning, they perform better in school.

The digital curriculum provides teachers with flexible delivery options to connect careers to math learning and demonstrate how mathematical concepts relate to real-world occupations. The comprehensive Pathway2Careers Curriculum allows students to interact with more than 650 unique jobs and receive an in-depth look at math concepts within a specific high-value career with nearly 200 application lessons. Lessons embed state-specific career data, such as salary projections and career outlook information allowing students to discover high-value careers from their region.

There are several resources available to help you implement P2C math curriculum as your core course curriculum.

- **Pathway2Careers Curriculum Crosswalk:** The [curriculum crosswalk](#) will allow you to prepare for replacement with your current offering.
- **Pathway2Careers User Guide:** Receive [step-by-step guidance](#) to access the system on a daily basis to support your core curriculum needs.
- **Pathway2Careers Pacing Guides:** Teachers receive the necessary supports critical in delivering comprehensive math lessons with our various pacing guides. Explore our pacing guides to support your core curriculum implementation
 - [8th Grade Math/Pre-Algebra](#)
 - [Algebra I](#)
 - [Geometry](#)
 - [Algebra IIa](#)
 - [Algebra IIb](#)

Using P2C Math Lessons

There are two suggested modes of implementation for lessons within the P2C math curricula. Lessons can be used in classroom instruction, where teachers lead or guide students through each lesson, as well as independent learning opportunities, where students engage in more autonomous, student-led experiences. The P2C lessons have been explicitly designed to support both modes of implementation. Classroom instruction is recommended as the primary mode, as this offers the ability to enhance student interest and engagement in the learning experience through the application of fundamental math concepts to meaningful career opportunities.

Suggested Modes of Lesson Implementation

Classroom Instruction *Teacher-Led*



Learning Environment: virtual or in-person classroom

Technology: computers, projector, tablets, calculators

Digital Tools: Pathway2Careers

Instructional Materials: P2C Math Lessons

Process: Begin with a review of the spotlighted career in the P2C math lesson, followed with a walk-through of lesson examples. Provide opportunities for students to complete exercises and checks in the classroom environment with teacher monitoring and feedback.

Independent Learning *Student-Led*



Learning Environment: independent learning space (classroom, home, school, or alternate study space)

Technology: computers, tablets, calculators

Digital Tools: Pathway2Careers

Instructional Materials: P2C Math lessons

Process: Assign the appropriate P2C math lesson to students as an independent learning activity (e.g., homework). Instruct students to work through the lesson, starting with the career overview. Encourage students to complete *all* or *specific* practice and check items. Evaluate student performance using the P2C LMS or alternate classroom methods.

Process for Lesson Implementation

Classroom Instruction

Teacher-Led

Step One: Identify P2C Lesson

Review lessons and determine which lessons you will assign to your class along with assignment details and due date.

Step Two: Prepare Materials

Log into Pathway2Careers and determine if students will login and follow along. Utilize the student and teacher edition in either PDF or digital format. Prepare to share lesson content using a computer, tablets, laptops printed materials, etc.

Step Three: Present Lesson to Students

Using the preferred delivery mode (digital or PDF) present the lesson to students. If using an application lesson, review the occupation spotlight and allow students to review career data. Provide opportunities for students to complete the lesson and check items in class.

Step Four: Evaluate Student Learning

Observe student performance on lessons, as well as the check at the end of the lesson. Provide feedback to students regarding their learning by utilizing the feedback feature in digital lessons.

Independent Learning

Student-Led

Step One: Identify P2C Lessons

Review lessons and determine which lessons you will assign as part of student-led exercises.

Step Two: Assign P2C Lesson

Log into Pathway2Careers and assign the P2C lesson in either PDF or digital format to students with assignment details and due date.

Step Three: Provide Student Access

Ensure students can access the assigned lesson by logging into Pathway2Careers. Review any additional instruction provided when sharing with students.

Step Four: Evaluate Student Learning

Assess student performance on assigned practice and check items. Provide feedback to students within Pathway2Careers or alternate assignment communication methods currently used with students.

P2C Math Assessments

About the Assessments

The Pathway2Careers math assessments (powered by the Quantile® Framework for Mathematics) provide students with a Quantile measure that represents students' mathematical achievement level and indicates the skills and concepts they are ready to learn. This information allows educators to more easily align instruction and educational materials with a student's current skill level. The P2C assessments also provide the ability to track students' mathematics growth with multiple assessments throughout the year – beginning, middle, and end. A student's increasing Quantile measure is an indication of his or her readiness to learn progressively more complex mathematical concepts. The rate of growth that students demonstrate can also indicate their likelihood for accessing more advanced math skills.



Using the Assessments

The P2C math assessments consist of three forms designed for a specific period during the school year. The first assessment is called a “beginning-of-the-year” (BOY) form and the other two assessments are called “middle-of-the-year” (MOY) and “end-of-the-year” (EOY) forms. The tests are untimed, but each is designed to take between 30 and 35 minutes for a student to complete. The results can be used to determine a student's readiness for mathematics instruction on grade-level skills and concepts and place the student at the appropriate mathematics ability level. All three test forms have 30 multiple-choice items. The Pathway2Careers math assessments can be used by educators for screening and placement and to inform and plan targeted instruction. Using the Quantile Framework, Pathway2Careers provides fast and effective tools for instructional placement, flexible group decisions, and connecting assessment and instruction for all students.

Assessment Overview

Three Forms

- **Beginning of the Year (BOY)**
- completed as close to the start of the year as possible
- **Middle of the Year (MOY)**
- completed at the midpoint of the year
- **End of the Year (EOY)**
- completed as close to the end of the year as possible

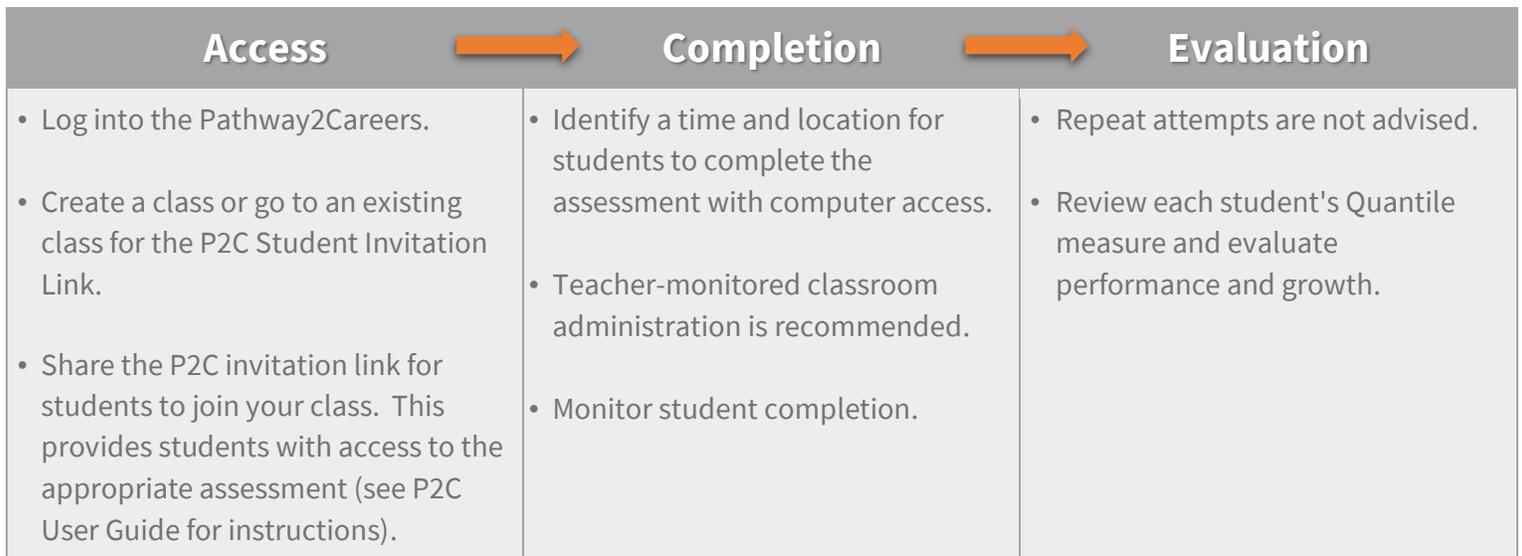
Test Items and Requirements

- Each form contains thirty multiple-choice items
- Formula sheets are provided during completion
- Calculator, pencil, and graph paper are required for completion
- Students can return to previous questions as needed to review answers

Timing and Delivery

- Estimated completion time = 30-35 minutes
- Administered online through Pathway2Careers
- Teacher-monitored classroom administration recommended
- Automatic scoring provided within Pathway2Careers following submission

Process for Using Assessments



Interpreting Results

Results from the Pathway2Careers math assessments are reported as scale scores (Quantile measures).

This scale extends from Emerging Mathematician (below 0Q) to

above 1600Q. The score is determined by the difficulty of the

items a student answered both correctly and incorrectly. A

student's Quantile measure helps to forecast their ability to

successfully learn mathematical concepts and master skills

(Quantile Skills and Concepts or QSCs) at the introductory level

with classroom instruction. As the Quantile measure of a student

increases, the mathematics

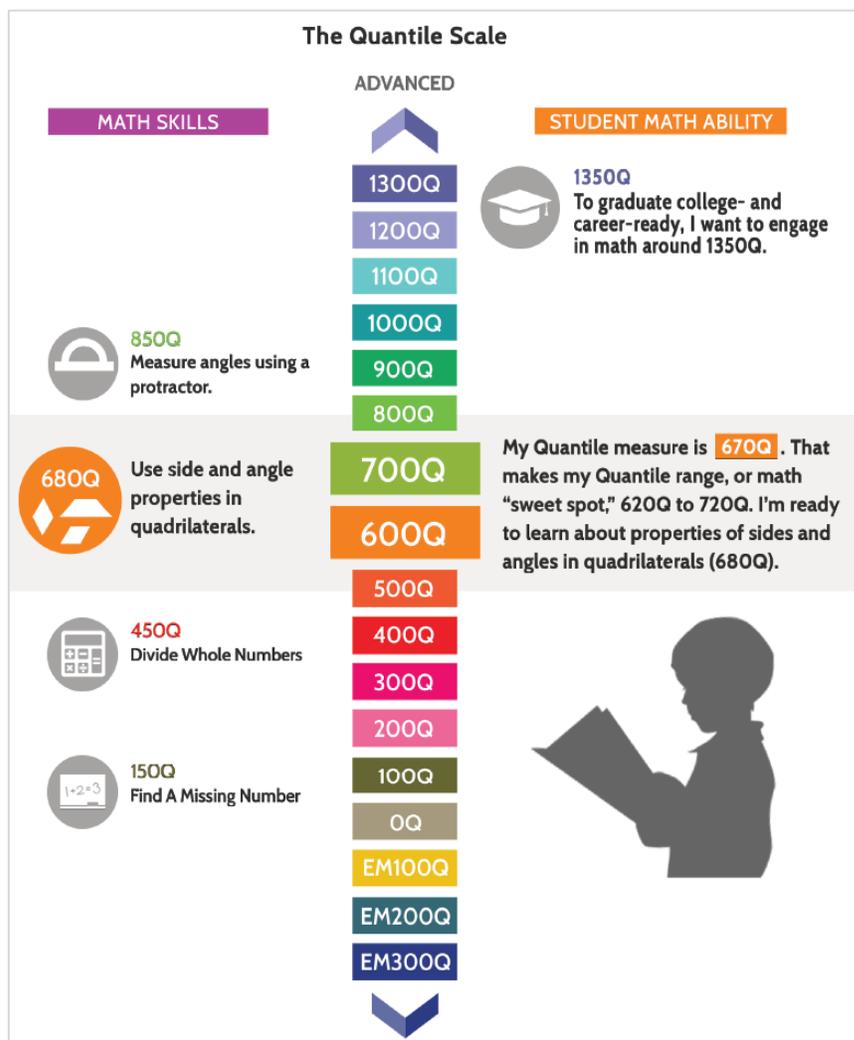
concepts they can learn become more complex. Additional information related to Quantile

measures and Quantile skills and concepts can be found at

quantiles.com/educators/understanding-quantile-measures/.

Quantile measures from the P2C math assessments can be used to:

- Evaluate student math readiness relative to peers
- Monitor student growth in math over time
- Match students with P2C math lessons that best fit their math readiness
- Understand careers students are prepared to access



Approaches to Interpreting Assessment Scores

Evaluating Math Readiness Relative to Peers

- Review class assessment results in Pathway2Careers.
- Compare individual student Quantile measures to the class average.
- Evaluate Quantile measures relative to national student norms at hub.lexile.com/quantile-grade-level-charts.

Monitoring Student Growth in Math

- Locate student assessment Quantile measures in Pathway2Careers.
- Review Quantile measures for the BOY, MOY, and EOY assessments.
- Compare student performance between assessments to evaluate the degree of growth for each student.

Matching Students to P2C Math Lessons

- Review students' assessment results in Pathway2Careers.
- Examine lessons in Pathway2Careers and identify lessons with Quantile matches for individual students.
- Use Quantile tools to further assist in lesson matching hub.lexile.com/find-your-lesson/search.

Understanding Student Career Preparedness

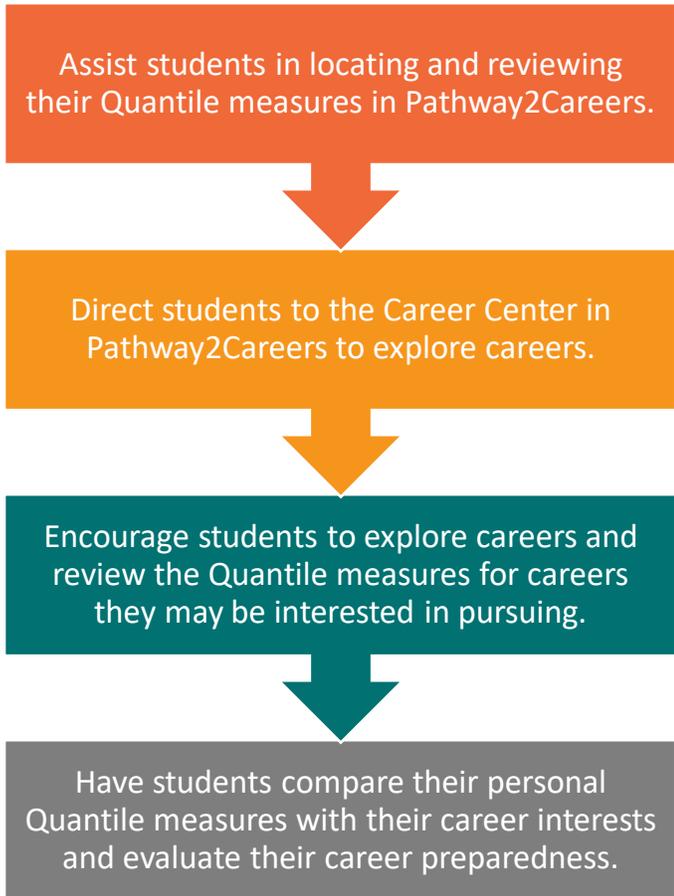
- Evaluate student assessment Quantile measures in Pathway2Careers.
- Locate the Quantile Career Database in Pathway2Careers.
- Assist students in exploring careers aligned with their math preparedness in the Quantile Career Database.

The Quantile Career Database

The results of the P2C math assessments can also be used to assist teachers, students, and parents in connecting with the math demands of a variety of careers. The P2C math assessments provide student Quantile measures which can be compared to the Quantile measures that represent the math demand of potential careers in the Quantile Career Database. The combination of practical application of mathematical skills in the P2C curricula and the information provided by the Quantile Career Database provides students, parents, and school staff with a strong, research-based connection for career preparedness. The Quantile Career Database includes information

related to the mathematics demands (expressed in the Quantile metric) for over 450 careers spanning the 16 career clusters.

Process for Using the Quantile Career Database



Financial Managers

SOC Code:
11-3031.00 ([know more](#))

Highest Math Course Required:
Calculus

Number of Years of Education:
16

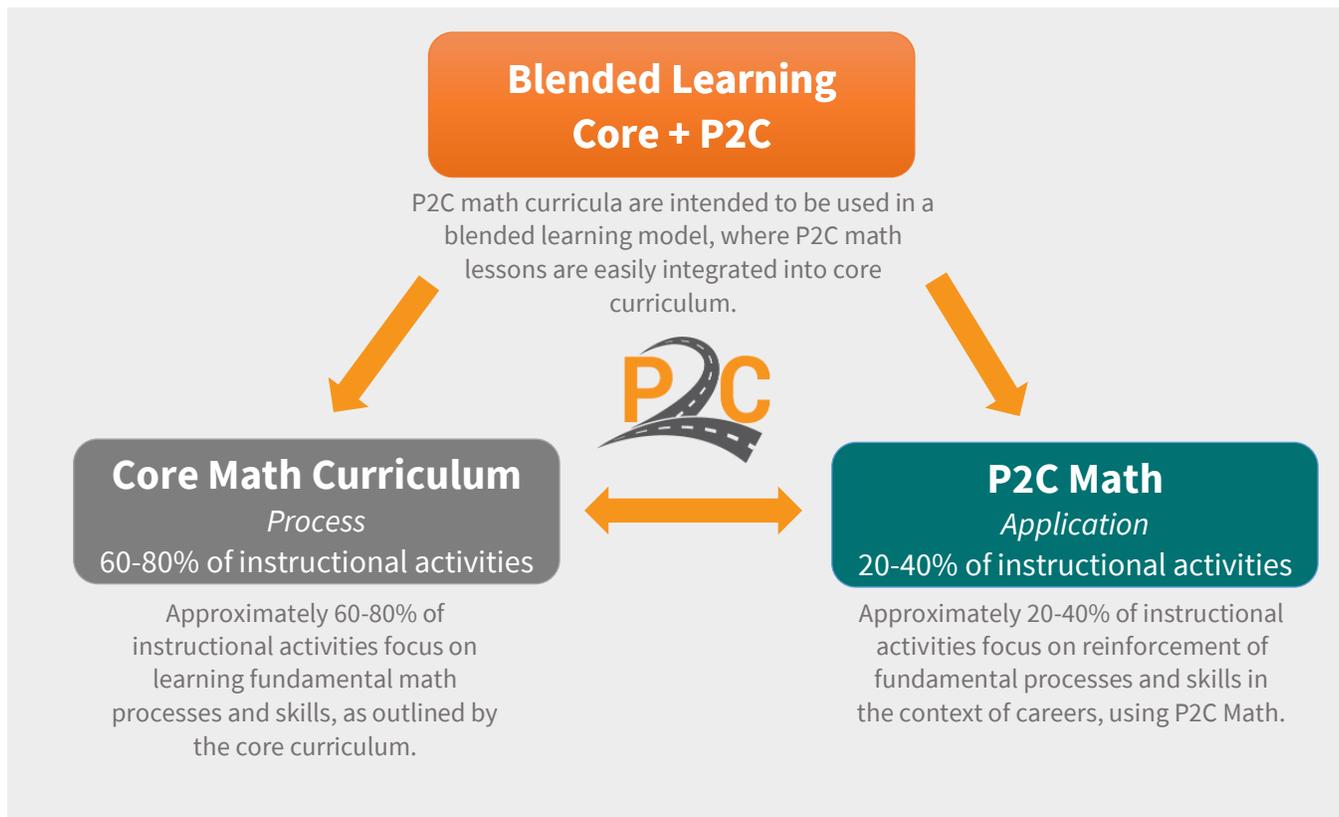
Quantile Information

| Lower Quantile Measure: | Median Quantile Measure: | Higher Quantile Measure: |
|-------------------------|--------------------------|--------------------------|
| 690 | 1020 | 1120 |

Bright Career Outlook

Integrating P2C as Supplemental Curriculum

Lessons within the core curriculum can follow a typical instructional plan with much of the instructional material remaining unchanged. The P2C math lessons can be integrated into the core curriculum as substitute or added content that replaces or expands upon the application and practice activities within the core curriculum. Using the P2C lessons as a learning opportunity for students that can strengthen fundamental math concepts as students apply what was learned within the core curriculum.



Implementation for Supplemental Use

Selecting P2C Math Lessons

The P2C Math lessons are designed for core curriculum but can be a supplement and are integrated within current lesson plans. Each P2C lesson is best used in place of, or in addition to, practice and application activities within the core curriculum.

Step One:

Review Core Curriculum

Locate a detailed table of contents, scope and sequence, and/or pacing guide for your core curriculum. Review information presented for lessons within each unit or chapter.

Step Two:

Identify Concepts and Standards

For each lesson within your core curriculum, identify: (1) the specific math concepts and (2) the Common Core State Standards coverage (if available).

Step Three:

Align P2C Lessons with Core Curriculum

Match the math concepts and standards from your core curriculum with those provided for the P2C math lessons.

Step Four:

Integrate P2C Lessons

List P2C lesson matches alongside planned lessons from your core curriculum. Replace or add practice and application activities from your core curriculum with the P2C career-focused lessons.

Sample Lesson Selection

Step One: Review Core Curriculum

Locate a detailed table of contents, scope and sequence, and/or pacing guide for your core curriculum. Review information presented for lessons within each unit or chapter.

To the right is a sample table of contents that demonstrates the type of information needed from the core curriculum. Listed within this table are specific lesson titles, as well as associated CCSS for each lesson. This will be the basic information used to start the lesson matching process.

| Sample Algebra I Table of Contents | CCSS |
|---|----------------------|
| Unit 1: Algebra Foundations | |
| Lesson 1.1 Variables and Expressions | A-SSE.1a, A.SSE.2 |
| Lesson 1.2 Order of Operations | A.SSE.1b, A.SSE.2 |
| <i>continued</i> | |
| Unit 2: Linear Equations | |
| Lesson 2.1 Writing Equations | A.CED.1 |
| Lesson 2.2 Solving One-Step Equations | A.REI.3 |
| <i>continued</i> | |
| Unit 3: Linear Functions | |
| Lesson 3.1 Graphing Linear Equations | F.IF.4, F.IF.7a |
| Lesson 3.2 Graphing to Solve Linear Equations | A.REI.10, F.IF.7a |
| <i>continued</i> | |
| Unit 4: Equations and Linear Functions | |
| Lesson 4.1 Graphing Equations – Slope-Intercept Form | F.IF.7a, S.ID.7 |
| Lesson 4.2 Writing Equations – Slope-Intercept Form | F.BF.1, F.LE.2 |
| <i>continued</i> | |
| Unit 5: Linear Inequalities | |
| Lesson 5.1 Solving Inequalities – Addition and Subtraction | A.CED.1, A.REI.3 |
| Lesson 5.2 Solving Inequalities – Multiplication and Division | A.CED.1, A.REI.3 |
| <i>continued</i> | |

**Step Two:
Identify Concepts and Standards**

For each lesson within your core curriculum, identify: (1) the specific math concepts and (2) the Common Core State Standards coverage (if available).

This second step can be easily accomplished by reviewing the lesson topics and standards within the table of contents. Lesson titles can provide quick information on the primary concepts presented within a lesson. Lesson topics also can assist in determining what specific elements of a standard may be addressed in the lesson.

| Sample Algebra I Table of Contents | CCSS |
|---|-------------------|
| Unit 1: Algebra Foundations | |
| Lesson 1.1 Variables and Expressions | A-SSE.1a, A.SSE.2 |
| Lesson 1.2 Order of Operations | A.SSE.1b, A.SSE.2 |
| <i>continued</i> | |
| Unit 2: Linear Equations | |
| Lesson 2.1 Writing Equations | A.CED.1 |
| Lesson 2.2 Solving One-Step Equations | A.REI.3 |
| <i>continued</i> | |
| Unit 3: Linear Functions | |
| Lesson 3.1 Graphing Linear Equations | F.IF.4, F.IF.7a |
| Lesson 3.2 Graphing to Solve Linear Equations | A.REI.10, F.IF.7a |
| <i>continued</i> | |
| Unit 4: Equations and Linear Functions | |
| Lesson 4.1 Graphing Equations – Slope-Intercept Form | F.IF.7a, S.ID.7 |
| Lesson 4.2 Writing Equations – Slope-Intercept Form | F.BF.1, F.LE.2 |
| <i>continued</i> | |
| Unit 5: Linear Inequalities | |
| Lesson 5.1 Solving Inequalities – Addition and Subtraction | A.CED.1, A.REI.3 |
| Lesson 5.2 Solving Inequalities – Multiplication and Division | A.CED.1, A.REI.3 |
| <i>continued</i> | |

Step Three:
Align P2C Lessons with Core Curriculum

Match the math concepts and standards from your core curriculum with those provided for the P2C math lessons.

In this step, lessons are most easily matched by looking for similarities in lesson titles. Lessons from the core curriculum can be matched to lessons with similar titles within the P2C table of contents. Once a topic match has been found, further confirmation of a match can be achieved

by evaluating standards. If both lesson titles and CCSS align, a suitable lesson match has been made.

Important Note: Because the P2C math lessons are supplementary, there may not be a lesson match for every core lesson.

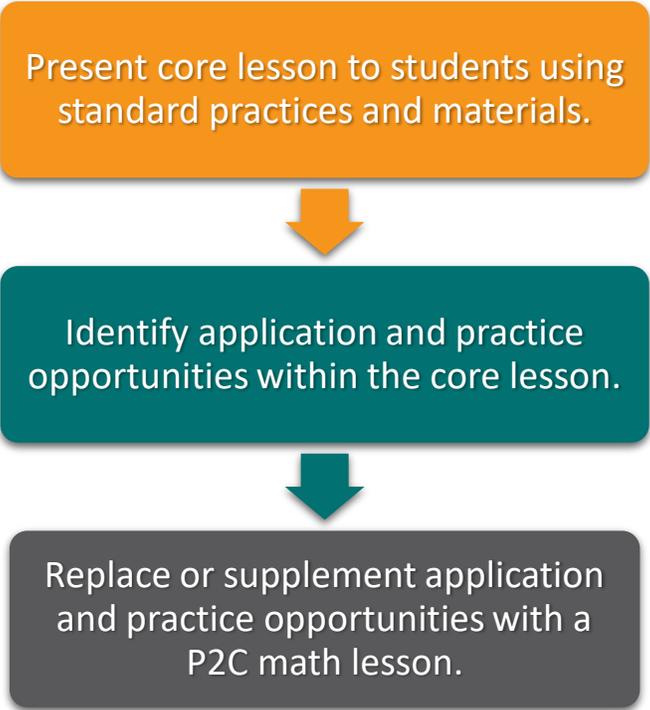
| Sample Algebra I Table of Contents | CCSS |
|---------------------------------------|-------------------|
| Unit 1: Algebra Foundations | |
| Lesson 1.1 Variables and Expressions | A-SSE.1a, A.SSE.2 |
| Lesson 1.2 Order of Operations | A.SSE.1b, A.SSE.2 |
| <i>continued</i> | |
| Unit 2: Linear Equations | |
| Lesson 2.1 Writing Equations | A.CED.1 |
| Lesson 2.2 Solving One-Step Equations | A.REI.3 |
| <i>continued</i> | |

| P2C Pathway2Careers Algebra I Table of Contents | | |
|--|---------------------|--|
| 1. Algebra Foundations | | |
| Lesson Topic | CCSS | Occupation |
| Lesson 1.1 Real Numbers | N-RN.3 | Multiple |
| Lesson 1.2 Dimensional Analysis | N-Q.1, N-Q.2, N-Q.3 | Multiple |
| Lesson 1.3 Unit Analysis | N-Q.1 | Dental Laboratory Technicians |
| Lesson 1.4 Modeling with Quantities | N-Q.2 | Terrazzo Workers and Finishers |
| Lesson 1.5 Precision and Accuracy | N-Q.1, N-Q.3 | Environmental Science And Protection Technicians |
| Lesson 1.6 Algebraic Expressions | A-SSE.1, A-SSE.1a | Multiple |
| Lesson 1.7 Writing and Simplifying Algebraic Expressions | A-SSE.1, A-SSE.1a | Multiple |
| Lesson 1.8 Structure of Expressions | A-SSE.1, A-SSE.1a | Economics Teachers, Postsecondary |
| 2. Solving Equations | | |
| Lesson Topic | CCSS | Occupation |
| Lesson 2.1 Solving One- and Two-Step Equations | A-REI.1, A-REI.3 | Multiple |
| Lesson 2.2 Writing Linear Equations | A-CED.1, A-REI.3 | Credit Counselors |
| Lesson 2.3 Solve Multi-Step Equations | A-REI.1, A-REI.3 | Multiple |

Step Four:
Integrate P2C Lessons
 List P2C lesson matches alongside planned lessons from your core curriculum. Replace or add practice and application activities from your core curriculum with the P2C career-focused lessons.

| Sample Algebra I Table of Contents | CCSS | P2C Lesson Match |
|---------------------------------------|--------------------|------------------|
| Unit 1: Algebra Foundations | | |
| Lesson 1.1 Variables and Expressions | A-SSE.1a, A.SSE.2 | No match |
| Lesson 1.2 Order of Operations | A.SSE.1b, A.SSSE.2 | No match |
| <i>continued</i> | | |
| Unit 2: Linear Equations | | |
| Lesson 2.1 Writing Equations | A.CED.1 | Lesson 2.1 |
| Lesson 2.2 Solving One-Step Equations | A.REI.3 | Lesson 2.2 |
| <i>continued</i> | | |

This last step involves listing P2C lesson matches within the core curriculum. This can be done prior to the start of the course or as a continuous process while teaching the course. For each lesson match, the most effective approach will be to present the core lesson using standard practices and materials. This will provide a firm foundation of basic skills and concepts. When opportunities arise within the core lesson to apply or practice concepts, use the P2C math lesson to replace or supplement these activities. The use of the P2C math lessons will strengthen student learning of core concepts through the application of these fundamental skills to authentic work activities.





Implementation Support

Please [Submit a Ticket](#) with your question or problem and we will be happy to help!