



Professional
Learning Catalog
Grades 6–12

McGraw-Hill Illustrative Mathematics[®]

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IM CERTIFIED PROFESSIONAL LEARNING

Our catalog is informed by the Concerns-Based Adoption Model, and so we have grouped our offerings roughly around stages of concern that teachers may experience in implementing a new curriculum. Every offering focuses on the knowledge and skills teachers need to teach IM effectively, but they are further grouped into:

Foundation | **Teach & Learn**

Designed for schools in their first implementation year, offerings that support teachers to understand the mathematical progressions in the curriculum, the instructional routines, and other embedded supports for understanding and managing teaching with IM.

Extension | **Teach & Respond**

Designed for schools with experience teaching IM, offerings that support teachers to anticipate, make sense of, and respond to student thinking using tools in the IM curriculum—such as understanding trajectories across grade-levels to support students with unfinished learning, how to adapt instruction based on formative assessment, etc.















Teach & Lead

Designed for schools with experience teaching IM that are ready to teach and lead collaboratively, offerings that focus on building local capacity through teacher collaboration routines and tools for planning, looking at student work, and reflecting on practice.

For the most current McGraw-Hill *Illustrative Mathematics* professional learning offerings, please contact your local McGraw-Hill Sales Representative or visit illustrativemathematics.org

IM CERTIFIED 6–8 MATH

High-Level Implementation Paths and School Year Timeline

Foundation TEACH & LEARN			Extension TEACH & RESPOND	TEACH & LEAD
TEACHERS	COACHES	DISTRICT ADMINISTRATORS	TEACHERS	TEACHERS & COACHES
Start with:			Start with:	Throughout the school year:
 Teaching and Learning with IM 6–8 Math Curriculum. (Unit 1 Overview included.)	 Teaching and Learning with IM 6–8 Math Curriculum. (Unit 1 Overview included.)  Supporting Teaching and Learning with IM 6–8 Math Curriculum.	 Curriculum Overview. Observing a Problem-Based Classroom.	 Teaching and Responding with IM 6–8 Math Curriculum. (A two-day intensive composed of four of the modules below.)	 Nine PLCs, one day each Landing the Lesson: Using Learning Goals for Efficient Activity and Lesson Syntheses Launching the Lesson, so Students Start Strong Supporting Students While They Work Planning with the 5 Practices Framework Planning in Response to the Pre-Unit Diagnostic Assessment Adapting Routines for Extra Support and Extra Challenge Planning in Response “to the End-of-Unit Assessment” Focus on Planning to Support English Learners Focus on Planning to Support Students With Disabilities
Throughout the school year:			Throughout the school year:	
 Remaining Unit Overviews per Grade Level 	 Unit Overviews for Coaches 		 5 Practices: Looking at Student Work  Using Cool-Downs to Plan Instruction Using Pre-Unit Diagnostic Assessments to Plan Instruction Curriculum Diagrams and Representations Working in a Productive PLC	
If additional professional learning is desired:				
 5 Practices: Looking at a Case Study  Instructional Routines Math Language Routines 1 and 2 Facilitated Unit and Lesson Planning				

IM coaching is available to support IM implementation. Coaching focuses on new teaching practices that support student learning.

TEACH & LEARN

Attendees:

Teachers and Coaches

Duration/Format:



12 hours, onsite

Name:

Teaching and Learning with IM 6–8 Math Curriculum

Prerequisites:

None

Agenda:

Day One:

- Problem-based Lesson Structure
- Assessment
- Math Content Routines

Day Two:

- 5 Practices
- Math Language Routines
- Teaching Unit 1
- Classroom Norms

Description:

During this two-day implementation onsite event, teachers and coaches will be guided by an IM Certified facilitator to gain first-hand experience and fluency with the IM curricula.

Attendees Will Understand:

- The structure of an IM lesson—invitation, deep dive, consolidation/application, and its learning goals.
- The available assessment resources and their purposes.
- Instructional routines and their value in the IM curriculum.
- The 5 Practices for Orchestrating Mathematical Discussion and how the IM curriculum uses them to support teachers in their planning and to support student discourse.
- How Math Language Routines in the IM curriculum support English learners and students with disabilities.
- How to organize and plan for Lesson 1.
- Techniques for setting classroom norms that support problem-based learning.

TEACH & LEARN

Attendees:

Teachers

Duration/Format:



Two hours each (24 total, eight per grade level), onsite or virtual

Name:

Unit Overviews Per Grade Level

Prerequisites:

Teaching and Learning with IM 6–8 Math Curriculum

Description:

- Take a deep dive into two lessons.
- Use cool-downs to understand the coherence of the unit.
- Collaboratively plan using the curriculum resources and unit assessments.

Unit overviews support teachers to make effective instructional decisions such as engaging students, effective questioning, pacing, formative assessment, and differentiation, through making visible the big ideas and coherence within a unit, and how understanding the trajectory of learning goals across lesson supports effective planning.

Attendees:

Coaches

Duration/Format:



Six hours, onsite

Name:

Supporting Teaching and Learning with IM 6–8 Math Curriculum

Prerequisites:

Teaching and Learning with IM 6–8 Math Curriculum

Description:

- Curriculum-centered PLC modules.
- Supporting teachers in Unit 1. (Using pre-assessments and cool-downs to plan instruction.)
- Facilitating days one and two.

Attendees:

Coaches

Duration/Format:



Two hours per session (covering all three grade levels), onsite or virtual

Name:

Unit Overviews for Coaches

Prerequisites:

Teaching and Learning with IM 6–8 Math Curriculum

Description:

Work with the IM facilitator to review the highlights of the three grade-level overviews for the unit and the key ideas to bring out when facilitating overviews with teachers.

This is especially valuable for districts who will not be sending their teachers through the IM Certified Unit Overviews and will be leading their teachers on their own.

Select two of these three-hour modules for a full six-hour day of professional learning.

Attendees:

Teachers

Duration/Format:



Three hours, onsite

Name:

5 Practices: Looking at a Case Study

Prerequisites:

None

Description:

Gain an understanding of the 5 Practices for Orchestrating Mathematical Discussions, and how the curriculum embeds this planning structure in the lessons.

Attendees:

Teachers

Duration/Format:



Three hours, onsite

Name:

Instructional Routines

Prerequisites:

None

Description:

Explore the three important mathematical routines used in the IM curriculum: Notice and Wonder, Number Talk, and Which One Doesn't Belong. Plus, gain effective guidance on how these routines are used in IM.

Attendees:

Teachers

Duration/Format:



Three hours, onsite

Name:

Math Language Routines 1

Prerequisites:

None

Description:

Explore four Mathematical Language Routines (MLRs) that support the learning of mathematics and English language development:

- Stronger and Clearer Each Time
- Collect and Display
- Co-craft Questions and Problems
- Three Reads

TEACH & LEARN

Attendees:

Teachers

Duration/Format:



Three hours, onsite

Name:

Math Language Routines 2

Prerequisites:

Math Language Routines 1

Description:

Explore four more Math Language Routines (MLRs) that support the learning of mathematics and English language development:

- Compare and Connect
- Critique, Correct, Clarify
- Discussion Supports
- Info Gap

Attendees:

Teachers

Duration/Format:



Three hours, onsite

Name:

Facilitated Unit and Lesson Planning

Prerequisites:

None

Description:

Collaborate with the IM facilitator on an effective unit and planning structure that focuses the learning across the unit.

Attendees:

District Administrators

Duration/Format:



Three hours, onsite

Name:

Curriculum Overview

Prerequisites:

None

Description:

Survey the IM curriculum with a focus on the philosophy and instructional shifts and the resources available in the curriculum for supporting teachers around student understanding and discourse, planning, assessment, and instructional routines.

Attendees:

District Administrators

Duration/Format:



Three hours, onsite

Name:

Observing a Problem-Based Classroom

Prerequisites:

Ideally, (administrators’) Curriculum Overview, but not required.

Description:

Examine the philosophy of a problem-based classroom and learn how to effectively observe teachers’ instruction of the IM curriculum.

Extension: IM Certified 6–8 Math

TEACH & RESPOND

Attendees:

Teachers

Name:

Teaching and Responding with IM 6–8 Math Curriculum

Agenda:

Day One:

- 5 Practices: Level Two
- Using Cool-Downs to Plan Instruction

Day Two:

- Curriculum Diagrams and Representations
- Working in a Productive PL

Description:

This advanced two-day onsite event brings teachers and coaches together with an IM Certified facilitator for a series of units where they'll gain first-hand experience and fluency with the IM curriculum.

Goals:

- Take a level two deep dive into the 5 Practices with scenario discussions.
- Discover the value of cool-downs as a tool for identifying opportunities for improvement in instructional planning.
- Learn how diagrams and representations support student understanding.
- Use PLC protocols to establish processes that encourage collaboration and productivity.

Duration/Format:

12 hours, onsite

Prerequisites:

Teaching and Learning with IM 6–8 Math Curriculum

Select two of these three-hour modules for a full six-hour day of professional learning.

Attendees:

Teachers

Name:

5 Practices: Looking at Student Work

Description:

Gain a deeper understanding of the 5 Practices by selecting and sequencing student work from curriculum lessons and discussing classroom scenarios that could arise and impact instruction.

Duration/Format:

Three hours, onsite

Prerequisites:

Teaching and Learning with IM 6–8 Math Curriculum

Extension: IM Certified 6–8 Math

TEACH & RESPOND

Attendees:

Teachers

Name:

Using Cool-downs to Plan Instruction

Description:

Use student cool-downs as a formative assessment for identifying how to address student misconceptions or misunderstandings in future lessons, and purposefully differentiate instruction.

Duration/Format:

Three hours, onsite

Prerequisites:

Teaching and Learning with IM 6–8 Math Curriculum

Attendees:

Teachers

Name:

Using Pre-Unit Diagnostic Assessments to Plan Instruction

Description:

Discover how the Pre-Unit Diagnostic Assessment can help uncover student misconceptions or misunderstandings, and illuminate opportunities to address them in future lessons through purposefully differentiated instruction.

Duration/Format:

Three hours, onsite

Prerequisites:

Teaching and Learning with IM 6–8 Math Curriculum

Attendees:

Teachers

Name:

Curriculum Diagrams and Representations

Description:

Description: Understand the progression of important mathematical diagrams and representations in the curriculum, and how they help students understand concepts and algorithms.

Duration/Format:

Three hours, onsite

Prerequisites:

Teaching and Learning with IM 6–8 Math Curriculum

Attendees:

Teachers

Name:

Working in a Productive PLC

Description:

Teachers will learn to collaboratively use PLC Protocols to plan, observe, and reflect on lessons while monitoring self-progress throughout the year. They'll learn to establish processes for working together to more productively use their PLC time for lesson planning based on their students' unique needs.

Duration/Format:

Three hours, onsite

Prerequisites:

Teaching and Learning with IM 6–8 Math Curriculum



Attendees:

Teachers

Name:

Nine PLCs, one day each

Duration/Format:



Six hours, onsite

Breakdown: 1.5 hours per grade-level group.

One session per grade level, for a total of three per facilitator per day, plus 1.5 hours for structured meetings with designated onsite contact who will do follow-up work with teachers.

Prerequisites:

Teaching and Learning with IM 6–8
Math Curriculum

Description:











In this advanced learning series, teachers choose the topics they'd like to master. These PLC topics can be repeated as many times as desired.

The three in bold are recommended to do first for all sites.

- 1. Landing the Lesson: Using Learning Goals for Efficient Activity and Lesson Syntheses**
- 2. Launching the Lesson, so Students Start Strong**
- 3. Supporting Students While They Work**
4. Planning with the 5 Practices Framework
5. Planning in Response to the Pre-Unit Diagnostic Assessment
6. Adapting Routines for Extra Support and Extra Challenge
7. Planning in Response to the End-of-Unit Assessment
8. Focus on Planning to Support English Learners
9. Focus on Planning to Support Students with Disabilities

IM CERTIFIED ALGEBRA 1, GEOMETRY & ALGEBRA 2

High-Level Implementation Paths and School Year Timeline (PL Index to F ollow)

Foundation TEACH & LEARN		Extension TEACH & RESPOND	TEACH & LEAD
TEACHERS & COACHES	DISTRICT ADMINISTRATORS	TEACHERS	TEACHERS & COACHES
Start with:		Start with:	Throughout the school year:
 Teaching and Learning with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum. (Unit 1 Overview included.)	 Curriculum Overview. Observing a Problem-Based Classroom.	 Teaching and Responding with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum. (One day intensive comprised of any two modules below.)	 Nine PLCs, one day each Landing the Lesson: Using Learning Goals for Efficient Activity and Lesson Syntheses Launching the Lesson, so Students Start Strong Supporting Students While They Work Planning with the 5 Practices Framework Planning in Response to the Pre-Unit Diagnostic Assessment Adapting Routines for Extra Support and Extra Challenge Planning in Response to the End-of-Unit Assessment Focus on Planning to Support English Learners Focus on Planning to Support Students with Disabilities
Throughout the school year:		Throughout the school year:	
 Remaining Unit Overviews per Course and Math Modeling Overviews 		 5 Practices: Looking at Student Work  Using Cool-Downs to Plan Instruction Using Pre-Unit Diagnostic Assessments to Plan Instruction	
If additional professional learning is desired			
 5 Practices: Looking at a Case Study  Instructional Routines Facilitated Unit and Lesson Planning			

IM Coaching is available to support the implementation of the IM curriculum focusing on new teaching practices to support student learning.

TEACH & LEARN

Attendees:

Teachers and Coaches

Duration/Format:

12 hours, onsite

Name:

Teaching and Learning with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum

Prerequisites:

None

Agenda:

Day One:

- Problem-based lesson structure
- Assessment
- Math Content Routines

Day Two:

- 5 Practices
- Math Language Routines
- Teaching Unit 1
- Classroom Norms

Description:

During this two-day implementation onsite event, teachers and coaches will join an IM Certified facilitator for an overview of the IM curricula.

Attendees Will Understand:

- The structure goals of an IM lesson—invitation, deep dive, consolidation/application, and its learning goals.
- The available assessment resources and their purposes.
- Instructional Routines and their value in the IM curriculum.
- The 5 Practices for Orchestrating Mathematical Discussion, applying them throughout the IM curriculum.
- How Math Language Routines in the IM curriculum support English learners and students with disabilities.
- How to organize and plan for Lesson 1.
- Techniques for setting classroom norms that support problem-based learning.

TEACH & LEARN

Attendees:

Teachers

Duration/Format:



Two hours each (23 total), onsite or virtual one per unit per course and mathematical modeling overview per course

Name:

Unit Overviews per Course

Prerequisites:

Teaching and Learning with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum

Description:

Unit overviews support teachers to make effective instructional decisions such as engaging students, effective questioning, pacing, formative assessment, and differentiation, through making visible the big ideas and coherence within a unit, and how understanding the trajectory of learning goals across lesson supports effective planning.

Goals:

- Take a deep dive into two lessons.
- Understand the learning trajectory and coherence of the unit by reviewing selected activities.
- Collaboratively plan using the curriculum resources and unit assessments.

Attendees:

Teachers

Duration/Format:



Two hours, onsite or virtual

Name:

Math Modeling Overview: Algebra 1

Prerequisites:

Teaching and Learning with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum

Description:

Understand what it means to model with mathematics and the role of modeling in high school. Experience one of the course level modeling prompts, and discuss the attributes of different versions of the prompt along with the next steps for using a modeling prompt with students.

Attendees:

Teachers

Duration/Format:



Two hours, onsite or virtual

Name:

Math Modeling Overview: Geometry

Prerequisites:

Teaching and Learning with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum

Description:

Understand what it means to model with mathematics and the role of modeling in high school. Experience one of the course level modeling prompts and discuss the attributes of different versions of the prompt along with the next steps for using a modeling prompt with students.

Attendees:

Teachers

Duration/Format:

Two hours, onsite or virtual

Name:**Math Modeling Overview: Algebra 2****Prerequisites:**

Teaching and Learning with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum

Description:

Understand what it means to model with mathematics and the role of modeling in high school. Experience one of the course level modeling prompts, and discuss the attributes of different versions of the prompt along with the next steps for using a modeling prompt with students.

Select two of these three-hour modules for a full six-hour day of professional learning.

Attendees:

Teachers

Duration/Format:

Three hours, onsite

Name:**5 Practices: Looking at a Case Study****Prerequisites:**

None

Description:

Gain an understanding of the 5 Practices for Orchestrating Mathematical Discussions, and how the curriculum embeds this planning structure in the materials to support both teacher planning and student learning.

Attendees:

Teachers

Duration/Format:

Three hours, onsite

Name:**Instructional Routines****Prerequisites:**

None

Description:

Understand the purpose and important structures of the Info Gap Math Language Routine and three mathematical content routines used in the IM curriculum:

- Notice and Wonder
- Math Talk
- Which One Doesn't Belong?

Plan to implement an instructional routine and describe how to use the routine in the classroom.

TEACH & LEARN

Attendees:

Teachers

Duration/Format:



Three hours, onsite

Name:

Facilitated Unit and Lesson Planning

Prerequisites:

None

Description:

Collaborate with the IM Certified facilitator on an effective unit and planning structure that focuses the learning across the unit.

Attendees:

District Administrators

Duration/Format:



Three hours, onsite

Name:

Curriculum Overview

Prerequisites:

None

Description:

Survey the IM curriculum with a focus on the philosophy and instructional shifts and the resources available in the curriculum for supporting teachers around student understanding and discourse, planning, assessment, and instructional routines.

Attendees:

District Administrators

Duration/Format:



Three hours, onsite

Name:

Observing a Problem-Based Classroom

Prerequisites:

Ideally, (administrators') Curriculum Overview, but not required

Description:

Understand important student actions observed in a problem-based classroom, how these actions are supported by curriculum lesson plans, and a process for observing a curriculum lesson.

TEACH & RESPOND

Attendees:

Teachers

Name:

Teaching and Responding with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum

Description:

- 5 Practices: Looking at a Case Study
- 5 Practices: Looking at Student Work
- Instructional Routines
- Facilitated Unit and Lesson Planning
- Using Pre-Unit Diagnostic Assessment to Plan Instruction Using Cool-Downs to Plan Instruction

Duration/Format:



Six hours, onsite

Prerequisites:

Teaching and Learning with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum

Select two of these three-hour modules for a full six-hour day of professional learning.

Attendees:

Teachers

Name:

5 Practices: Looking at Student Work

Description:

Gain a deeper understanding of the 5 Practices by selecting and sequencing student work from curriculum lessons and discussing classroom scenarios that could arise and impact instruction.

Duration/Format:



Three hours, onsite

Prerequisites:

None

TEACH & RESPOND

Attendees:

Teachers

Name:

Using Cool-Downs to Plan Instruction

Description:

Use student cool-downs as a formative assessment for identifying how to address student misconceptions or misunderstandings in future lessons, and purposefully differentiate instruction.

Duration/Format:



Three hours, onsite

Prerequisites:

Teaching and Learning with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum

Attendees:

Teachers

Name:

Using Pre-Unit Diagnostic Assessment to Plan Instruction

Description:

Discover how the Pre-Unit Diagnostic Assessment can help uncover student misconceptions or misunderstandings and illuminate opportunities to address them in future lessons through purposefully differentiated instruction.

Duration/Format:



Three hours, onsite

Prerequisites:

Teaching and Learning with IM Algebra 1, Geometry, and Algebra 2 Math Curriculum

TEACH & LEAD

Attendees:

Teachers

Name:

Nine PLCs, one day each

Duration/Format:



Six hours, onsite

Breakdown: 1.5 hours per grade-level group.

One session per grade level, for a total of three per facilitator per day, plus 1.5 hours for structured meetings with designated onsite contact who will do follow-up work with teachers.

Prerequisites:

None

Description:

These PLC topics can be repeated as many times as desired.

The three in bold are recommended to do first for all sites.

1. Landing the Lesson: Using Learning Goals for Efficient Activity and Lesson Syntheses

2. Launching the Lesson, so Students Start Strong

3. Supporting Students While They Work

4. Planning with the 5 Practices framework

5. Planning in response to the Pre-Unit Diagnostic Assessment

6. Adapting Routines for Extra Support and Extra Challenge

7. Planning in response to the End-of-Unit Assessment

8. Focus on Planning to Support English Learners

9. Focus on Planning to Support Students with Disabilities

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