Leading for Change: Supporting Implementation

CC Series

For more information about the materials you find in this packet, contact:

<<Name>>, <<Title>>
<<Email Address>>

CPM EDUCATIONAL PROGRAM

Lesson Observation

Time	Mode of Instruction (individual, pairs, teams, whole class)	Observation

Lesson Structure	Look Fors	Notes
Launch *What is the learning target of the lesson?* *How are prior knowledge/skills recalled to prepare students for the lesson?* ~5 minutes of a 50 minute lesson	Teacher communicates student expectations for the lesson (Learning Targets).	
	Teacher connects the lesson to prior experience and/or real-world context for students.	
	Students connect the lesson to prior knowledge as the teacher helps them recall background information necessary to engage in the lesson (e.g., vocabulary).	
Explore *What questions are asked to promote student thinking?* *What teacher moves/strategies are used to support productive struggle and collaboration?* *What modes of instruction are evident? (e.g., individual, small group, partner, whole class)* ~35 minutes of a 50 minute lesson	Students are grouped appropriately for the type of problem.	
	Teacher circulates around the classroom as students are working, observing, and selecting mathematical ideas that will advance the class's thinking.	
	Teacher asks open-ended questions to probe student thinking, getting them to explain their thinking, generate discussion, and meet a wide range of learners.	
	Students are collaborating with each other about mathematics and using appropriate vocabulary while doing so.	
Closure *How is the learning target assessed?* *What opportunities do students have to synthesize their learning?* ~10 minutes of a 50 minute lesson	Students formalize, in their own words, the big ideas discussed and make connections to prior learning.	
	Students make connections between today's various approaches and the mathematical ideas at the heart of the lesson.	
	Teacher assesses students' understanding of the math in the lesson (either formally or informally).	
	Teacher paraphrases and summarizes student thinking to make connections to larger mathematical ideas.	

CPM EDUCATIONAL PROGRAM Implementation Support

Implementation Progress Tool

This form is designed to be used by CPM teachers in their first or second year of implementation, either as a tool used to reflect independently, in combination with other teachers (perhaps in a PLC setting), or in conversation with a coach or implementation partner. It can also be used as a tool to track implementation progress, identify and celebrate accomplishments, define priorities for goal setting, and suggest opportunities for future growth. Please note that not all of these elements of teaching and learning would be observed in a single lesson.

The form is structured around the three research pillars upon which the CPM program is built and is designed in three sections.

SECTION ONE describes a critical component that anchors each pillar in any classroom. This area is critical for successful implementation and may require shifts in teacher belief systems.

SECTION TWO describes what you might observe in regards to student learning in a classroom where each pillar is intact.

SECTION THREE lists instructional strategies and practices that teachers use to support each pillar.

SUGGESTIONS FOR USING THIS TOOL:

1. First, re-read and discuss the three pillars to ensure complete understanding of them. (You may want to reference the CPM executive summary for more specifics on each.)
2. Next, consider the description of each pillar listed in section one below. Ask yourself to what extent each pillar is present in your classroom.
3. Next, use the descriptions of desired student learning in section two to analyze what is currently happening in your classroom. What do you see students doing, saying, and accomplishing that shows evidence of the pillars?
4. Finally, use section three to hone in on instructional strategies and assess both your strengths and areas for growth. At what practices do you excel? Which do you find most challenging? Where would you like to spend time building your skills? For which pillar do you need the most support?

The three pillars represent researched best practice in math education around which the CPM program is designed.

Collaborative Learning

Research says students learn ideas more deeply when they discuss ideas with classmates.

Problem-Based Learning

Research says students learn ideas more usefully for other arenas when they learn by attacking problems.

Mixed, Spaced Practice

Research says students learn ideas more permanently when they are required to engage and re-engage with those ideas for months or even years.

SECTION ONE: The pillars that represent necessary first steps in any implementation.

Collaborative Learning

Students and teachers are aware of the purpose for and value of working in teams, and are familiar with team norms and roles.

Problem-Based Learning

Students and teachers share math authority as they value and engage in productive struggle. Teachers guide without taking over the thinking.

Mixed, Spaced Practice

Both individual lessons and chapters are followed, using suggested pacing. Review & Preview problems are assigned and valued as an essential part of learning.

SECTION TWO: Features of desired student learning when the pillars are in place.

Collaborative Learning	Problem-Based Learning	Mixed, Spaced Practice
Students read and make sense of problems together.	Student thinking at varied depths of conceptual understanding are openly shared and valued.	Students work through lessons at an appropriate pace.
Students are able to listen to the ideas of others and communicate their own ideas both in teams and during whole class discussions.	Students demonstrate and value both conceptual and procedural knowledge.	Students understand that mastery takes time, effort, and support.
Students listen carefully to the thinking of others and respond with clarifying questions or extensions of their own.	Students look for, compare, and connect multiple models and solution strategies.	Students are aware of learning targets and periodically self-assess their progress towards those targets.
Students engage in productive mathematical discourse, justifying answers, creating viable arguments, and critiquing the reasoning of others.	Students recognize that incorrect work can be a stepping stone to learning and are willing to share and investigate their thinking.	Students solidify learning as they work on Review & Preview problem sets daily as intended.

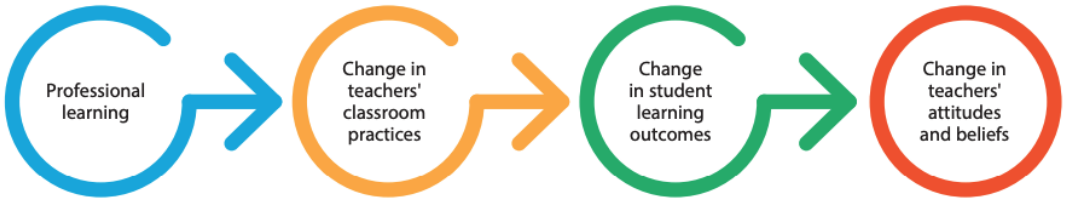
SECTION THREE: Instructional strategies evident when the pillars are in place.

Collaborative Learning	Problem-Based Learning	Mixed, Spaced Practice
Teachers create an environment of collaboration and consistently provide feedback on students' progress towards effective collaboration.	Teachers use the lesson launch to connect to prior learning and clearly communicate the learning target.	Teachers plan and pace lessons as intended, based on a thorough understanding of the learning progression of each chapter and the course as a whole.
Teachers use a variety of classroom modes (whole group, study team, partner, individual) at appropriate times within each lesson.	Teachers circulate purposefully to interact with all teams, monitoring and questioning the thinking of students.	Teachers anticipate common misconceptions and consider varied levels of understanding to differentiate and move all students towards stated learning targets.
Teachers use Study Team and Teaching Strategies (STTS) and Team Roles with purpose.	Teachers use questioning to uncover student thinking, and then provide opportunities for that thinking to be shared.	Teachers provide timely feedback on student practice of previously introduced skills and on beginning understandings of developing concepts.
Teachers hold students individually accountable within the team environment.	Teachers formatively assess student needs and take appropriate action to support accessibility.	Teachers elicit students' informal ideas and leverage them towards developing formal mathematical vocabulary and procedures at appropriate times in the course.
Teachers are aware of and take status issues into consideration when managing teamwork.	Teachers design and facilitate lesson closure that provides opportunities for students to make connections between various solutions and key mathematical ideas.	Teachers use varied assessments that are based on mastery over time and assess both conceptual and procedural knowledge.

CPM EDUCATIONAL PROGRAM

Flip the Script on Change: Implications of the Model

"Experience shapes teachers' attitudes and beliefs."



Guskey, Thomas R., "Flip the Script on Change: Experience Shapes Teachers' Attitudes and Beliefs" (2020). Educational, School, and Counseling Psychology Faculty Publications. 45.
https://uknowledge.uky.edu/edp_facpub/45

Facilitator - *1. Efforts to change attitudes and beliefs directly rarely succeed.*

Resource Manager - *2. Change is a gradual and difficult process, especially for teachers.*

Recorder/Reporter – *3. Feedback on results is essential.*

Task Manager – *4. Change requires continued follow-up, support, and pressure.*

Professional Learning Progression

CPM's professional learning vision is to recognize and foster teacher expertise and leadership in mathematics education. Our curriculum-based professional learning actively engages teachers in best practices that support foundations for implementation and build instructional practice. CPM's Professional Learning Progression plan consists of two complimentary series:

Series 1:

Foundations for Implementation

The Foundations for Implementation series, a series of live events and on-demand modules completed in the first year of implementation, emphasizes the three pillars of CPM: Collaborative Learning, Problem-Based Learning, and Mixed, Spaced Practice. This series focuses on the mathematics found in the chapters, the course structure, and the classroom environment.

In-Person Days
Participants attend either a regional location or residential institute.

Virtual Sessions
Participants join live virtual sessions held in the CPM Professional Learning Portal.

On-Demand Modules
Participants also complete instructional modules along with course-specific content modules and content sessions for each chapter.

See the reverse side for more details and visit **professionallearning.cpm.org/events** to register.

Series 2:

Building on Instructional Practice

The Building on Instructional Practice series is a series of live events completed in the second year of implementation. These live events foster the development of effective strategies for teaching and analyzing student work to provide effective feedback.

Building on Assessment
Participants examine learning progressions and develop formative assessment plans. (3 days or 6 virtual sessions)

Building on Equity
Participants further develop equitable practices to support typically underserved students. (3 days)

Building on Discourse
Participants study how to facilitate meaningful mathematical discourse. (3 days or 6 virtual sessions)

Prerequisite: Foundations for Implementation Series

Additional Implementation Support:

Implementation Support Visits
Implementation Support Visits (ISV) are included in year one of implementation. The intent of an ISV is to provide individual support, non-evaluative feedback, and an opportunity for teacher reflection as teachers begin to connect the knowledge they have obtained during CPM learning to the realities of the classroom. The visits are a reflective conversation with a teacher about a lesson, and can include a class period of observation of each teacher using a CPM lesson and a time to debrief with each of the teachers. This can be in-person or virtual depending upon availability. An ISV is an opportunity to discuss what is going well in the classroom as well as to offer suggestions and ideas that could be implemented.

On-Demand Modules
CPM's On-Demand Modules are included with an eBook license. They include learning on many topics, such as Closure & Team Assessments; Review & Preview; Intentional Planning; Supporting Productive Struggle; Assessment Practices; Focus on Assessment; Building on Foundations; Teacher Toolkit – Collaboration, Pacing, and Routines; Public Relations; Inclusion, and Implementation for Leadership.

Foundations for Implementation Series

	Summer Learning	School Year Learning
Live Events	Virtual Sessions 1–2 or Day 1 in-person Collaborative Learning Virtual Sessions 3–4 or Day 2 in-person Problem-Based Learning Virtual Sessions 5–6 or Day 3 in-person Mixed, Spaced Practice Virtual Content Sessions 1 & 2 (Chapters 1 & 2)	Virtual Sessions 7–8 or Day 4 in-person Implementing CPM: Struggles, Solutions, and Actions Virtual Sessions 9–10 or Day 5 in-person Implementing CPM: Struggles, Solutions, and Actions
On-Demand Instructional Modules	Introduction to Foundations Overview Instructional Module 1 Closure and Team Assessments Instructional Module 2 Review & Preview Instructional Module 3 Intentional Planning	Instructional Module 4 Supporting Productive Struggle Instructional Module 5 Assessment Practices
On-Demand Content Modules (course-specific support)	Content Module 1 (Chapter 1) Content Module 2 (Chapter 2)	Additional Content Modules for each course, selection varied by course (Chapter 3 – Final Course Chapter)

Continuous, Year-Round Support

- Content Modules
- CPM Social Media
- Teacher and Parent Tips
- Implementation Support Visits (School Year Only)

On-Demand Modules (optional)

- Building on Foundations
- Teacher Toolkit
- Public Relations
- Inclusion

Notes:

1. After Introduction to Foundations is complete, the remaining Instructional Modules may be completed in any order.
2. Summer learning events are designed to prepare teachers for initial implementation. School year learning events provide ongoing implementation support during the school year.
3. It is recommended that Content Modules 1 and 2 be completed before the start of the school year.