

7-Step PLC Cycle Planning Framework for Problem Solving

From Student Work to Instructional Action: A Practical PLC Framework

STEP	PURPOSE	GUIDING QUESTIONS FOR THE PLC	ARTIFACT / EVIDENCE PRODUCED
1. PLAN	Intentionally design a shared problem-solving experience that reveals student thinking. Align the task with mathematical goals, the problem-solving process, and Vision of a Learner competencies.	What do we want students to understand? What task will reveal that understanding? What strategies or misconceptions might we see? What evidence of mathematical thinking and learner competencies will we collect?	Selected rich task; learning intention and success criteria; anticipated strategies; problem-solving and VoL connection; evidence-collection plan
2. ENGAGE	Facilitate the task while gathering authentic evidence of how students approach, solve, communicate, revise, and persevere through a problem.	What are students actually doing as they solve? What strategies are they choosing? Where are they getting stuck? What are we hearing and observing that may not appear on the finished paper?	Student work; observation notes; photos or vertical-board work; strategy notes; student comments and reflections
3. EXAMINE	Study student work collaboratively to identify patterns in understanding, strategies, misconceptions, and problem-solving behaviors. Move beyond right or wrong.	What do we notice? What does the work tell us students understand? What patterns do we see across students? How might we categorize work based on thinking rather than scores?	LASW notes; categorized student work; patterns and misconceptions; strategy groups; PLC observations and wonderings
4. INVESTIGATE	Go beyond the paper when the team needs more information. Use student interviews and conferences to uncover the thinking behind the work.	What can't we tell from the paper? Which students should we talk with? What questions could uncover their thinking? Is this a misconception, strategy issue, conceptual gap, or something else?	Conference notes; student explanations; anecdotal data; clarified misconceptions; additional evidence of understanding

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5. RESPOND	Turn analysis into action. Determine what students need next and design differentiated instruction while keeping thinking and problem solving central.	Based on our evidence, what should happen next? Which students have similar needs? What small-group instruction would move their thinking forward? Who needs support, another representation, a new strategy, or greater challenge?	Flexible small groups; targeted instructional plan; next task or routine; questioning plan; intervention and enrichment plan
6. REVISIT	Give students another opportunity to apply learning so teachers can determine whether instruction changed student thinking—not simply whether an intervention was completed.	What changed? Are students using new or more efficient strategies? Can students transfer learning to another problem? Who is becoming more independent, and who still needs support?	Follow-up student work; progress-monitoring evidence; before-and-after samples; updated groups; evidence of strategy growth
7. REFLECT & CELEBRATE	Make growth visible to students and teachers. Reflect on mathematical understanding and the behaviors that supported learning; use that information to launch the next cycle.	What growth do we see? What did students learn about themselves as problem solvers? Where do we see Vision of a Learner evidence? What does this evidence tell us to plan next?	Student reflections; VoL evidence; teacher and PLC reflection; examples of growth; next instructional question

KEEP AT THE CENTER: Student Thinking • Problem-Solving Process • Vision of a Learner • Collective Efficacy

Don't start with the score. Start with the thinking.