



The Effective Mathematics Teaching Practices

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1 The Effective Math Teaching Practices, or EMTPs are a research-based framework for enhancing
2 both teaching and learning in mathematics. These eight teaching practices were introduced by the
3 National Council of Teachers of Mathematics in 2014. Teachers who engage in the EMTPs design
4 and deliver engaging and meaningful mathematical experiences for students that foster critical
5 thinking, and ensure accessibility for all learners. The intent of the EMTPs is to bridge the gap
6 between successfully and coherently addressing rigorous standards and designing opportunities for
7 students to engage in the standards for mathematical practice as a core component of their
8 learning.

9 As you review the Effective Math Teaching Practices framework, you will notice EMTP 1 positioned
10 at the top, indicating that it is the starting point for effective instruction. Once a clear goal is
11 established, the teacher must make strategic decisions about how to achieve that instructional goal.
12 Planning will include selecting a task that promotes reasoning and problem-solving, which is EMTP
13 2, and planning instruction that will guide students to develop procedural fluency grounded in
14 conceptual understanding, which is EMTP 6.

15 Once the teacher has identified learning goals, selected a task, and planned to develop procedural
16 fluency, she must facilitate the instruction. The remaining EMTPs outline the framework for
17 teaching an effective mathematics lesson. EMTP 4 - facilitating discourse - supports this process,
18 while the four remaining practices play key roles in how the teacher supports learning.

19 The teacher anticipates how students might approach the mathematical task or problem. This helps
20 her consider the types of representations students might use, craft purposeful questions that guide



21 their thinking, and plan specific ways to encourage productive struggle, ensuring that students

22 remain engaged while working through challenges.

23 This anticipation also helps the teacher to identify potential strategies students may use - whether

24 they are successful or not - allowing her to elicit their thinking and adjust her guidance as needed.

25 This intentional planning, made before instruction begins, sets the stage for effective teaching and

26 supports students in reaching the mathematical goals set by the teacher.

27 By integrating these practices, teachers can create dynamic, inclusive math lessons in which

28 students are empowered to think critically, solve problems, and build a strong foundation for future

29 math success. Through thoughtful planning and intentional support, teachers can help students

30 engage deeply with mathematics and achieve meaningful learning outcomes.