Guiding Question: ***What does it mean to provide a rigorous mathematics experience for all students?***

Purpose

The primary purpose of this protocol is to provide an opportunity for leadership team members to ensure that they have a common body of knowledge about rigorous mathematics instruction. Special attention is given to the integration of the content with the Standards for Mathematical Practice from the 2011 Massachusetts Curriculum Framework.

Snapshot Description

The team does some initial exercises together to create a working definition of "a rigorous mathematics experience for all students." The Standards for Mathematical Practice are introduced, with a particular focus on one of the math practices and one content standard, and the team watches a video to practice looking for evidence of that sample math practice. The team then discusses and hones their shared definition of "a rigorous mathematics experience for all students."

Goals

- To establish a shared definition of "a rigorous mathematics experience for all students;"
- To become familiar with how the Standards for Mathematical Practice help deepen students' understanding of content.

Who Should Facilitate This Session?

Recommended facilitator is the mathematics coordinator / coach / teacher leader.

Time Estimate 2 hours

Equipment, Resources, and Tools Needed: **(Handouts are 1 per person unless otherwise noted)**	**Preparation:**
• A way to project PPT slides • Blank paper for reflection during wrap-up • Graph paper (for the math task) • Color tiles (for the math task) • Chart paper or white board space + markers • HO 2.2: *Summary of the Protocols* • Handout (HO) 3.1 (optional): *Talking points for Protocol 3 PPT slides* – 1 for facilitator	• Make handouts • Gather other materials • Make sure you can access the video: *Staircase Problem* and make any necessary preparations to watch this video together as a team. The video can found at: http://www.learner.org/resources/series34.html?pop=yes&vodid=121169&pid=937#.

• HO 3.2: *Standards for Mathematical Practice* • HO 3.3: *Math Practices Summary Sheet* • HO 3.4: *Staircase Problem* • At least one copy of the *2011 Massachusetts Curriculum Framework in Mathematics that incorporate the Common Core State Standards*	• Scroll down to the title for Video #6: *Staircase Problem*, and click on the VoD icon to the right. • Set up the video clip in preparation for viewing. You will watch the clip that begins at the start, and ends at 6:52 where the teacher smiles and says "Maybe!"

Tips and Notes Before You Begin:

Note: Prior to this meeting, the Leadership Team members should get a copy of HO 3.2: *Standards for Mathematical Practice* to read prior to the meeting.

1) Team members will be asked to work on a math problem during this protocol. While some team members will enjoy this opportunity, others may feel a bit intimidated. Encourage everyone to play around with the problem a little bit. There is NO need for anyone to actually come up with the answer; rather, time thinking about the math problem will help them make sense of the students' comments, struggles and ideas that come up in the video.
   Make sure you have either graph paper (to draw squares on), and/or color tiles (any kind of small plastic square tiles or colored wooden cubes) that can be arranged on a flat surface and moved around to help any folks who may be at a loss for how to get started with the problem (as well as for anyone else, not necessarily struggling, who enjoys using them as a way to think about the problem!).