

SFUSD Signature Strategy #3: Participation Quiz - Secondary

What is this strategy?

A Participation Quiz¹ is a strategy to help establish or reinforce norms for group work in a cooperative environment. While students work together in their group on a math task, the teacher takes public notes—on a document camera, whiteboard, chart paper, or overhead projector—about the quality of their group work (social moves) and the quality of their mathematical discussions (math moves). The teacher then takes notes on how students work together, their use of classroom norms, or the specific language they use to communicate their mathematical ideas.



Why would I use this strategy?

Publicly taking notes on students' interactions allows the teacher to communicate the behaviors they value and wish to encourage, as well as mitigating perceived status differences between students—that is, highlighting strengths of students who are may not be perceived to be strong in math. Some teachers assign each group a grade at the end of a Participation Quiz. Other teachers prefer to focus on the feedback rather than giving it a score. This protocol might be named differently, for example, "Groupwork Feedback," to reflect the teacher's objective.

When do I use this strategy?

This strategy can be used whenever students are working in collaborative groups. It is especially useful when establishing classroom and groupwork norms, and when doing tasks that do not require much teacher assistance.

How do I use this strategy?

1. Choose a worthy task.

The teacher chooses a task that is accessible, challenging, important, and requires students to read and talk together. If a task is too hard, the teacher may spend more time answering group questions than observing, and if a task is too routine students will naturally do these individually since little collaboration will be required. The task should also lend itself to a variety of math abilities.

2. Decide on a focus.

The teacher decides which group norms or Standards for Mathematical Practice he or she wants students to focus on. This decision depends on the context of the classroom. Early in the year, the teacher may focus on establishing norms, such as getting a quick start (reading problem promptly and making sure group understands), working together (heads leaning in and working in the middle of the group), and asking the group questions before asking the teacher. Later in the year, the teacher may focus on refining a norm that a particular class is struggling with, such as making statements with reasons, or the teacher may choose to highlight strengths of specific students that have low status (students who are not generally seen as strong in math).

3. Communicate the focus to students.

The teacher lets his or her class know that a Participation Quiz will be happening during the group work portion of the lesson. The teacher is clear about what he or she is looking for and uses language that students understand. The teacher explains that he or she will publically record a snapshot of the students working together in their groups.

¹ This description is based on *Smarter Together—Collaboration and Equity in the Elementary Math Classroom* by Featherstone, Crespo, Jilk, et. al. and the *Instructional Toolkit for Mathematics* produced by Oakland Unified School District.

For example, the teacher can say that he or she is looking for:

- ❖ Quick Start
- ❖ “Because” statements (addresses the norm: “We make statements with reasons”).
- ❖ Students “leaning in” (addresses the norm: “We work together on the same problem”).
- ❖ Group questions only.

As students work, the teacher publically records statements about how groups are working and making sense of the math together. This can be done on a document camera, whiteboard, chart paper, or overhead projector. The recording sheet is split into as many spaces as there are groups (see example diagram below). Some groups may not notice this public documentation, while other times they pay attention and change their behaviors to meet the norms.

4. Debrief the notes taken.

The teacher takes time before the end of class or in the middle of the task to debrief. Time is given for students to read comments. The teacher highlights key evidence that supports the groupwork norms. The focus on groupwork norms to start the class and then end the lesson can be a powerful way to reinforce the kinds of cooperative behaviors that teachers want to establish.

When students are used to seeing this structure, teachers can use these public notes as a “quiz” to assess students and groups on their groupwork skills. Generally, the focus should be on positive behaviors, although over time honest critiques of behavior may be included as well.

Example Participation Quiz Feedback Form

<p>Group 1 QS (Quick Start) “Miguel, can you re-read the problem?” “I said this was $3x + 2$ because...”</p>	<p>Group 2 QS “So, I think this means...” Heads leaning in “What did you mean by...” “So, x means... do you get it?”</p>
<p>Group 3 QS “I’m not sure what to do. Can you...” Using a table of points “I think the pattern is $+3$; see, look at...” Using “because” statements</p>	<p>Group 4 Reading problem “Melissa, explain to me how you got the equation.”</p>
<p>Group 5 QS “Can you repeat your idea?” “Let’s make a graph.” “Something’s not right. What do you think?” Explaining graph and equation.</p>	<p>Group 6 QS “I don’t understand the where the 2 shows up on the graph.” “Oh...I see the adding 3 in the table and graph; now...that makes more sense.” Students leaning in on work in the middle</p>

Further Resources

SFUSD Mathematics Department web site: <http://www.sfusdmath.org/participation-quiz--group-feedback.html>
Smarter Together-Collaboration and Equity in the Elementary Math Classroom Featherstone, Crespo, Jilk, et. al.