



January 2019

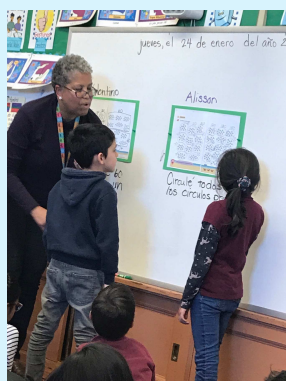
Muir Lesson Study News 2nd Edition!

Carlos from Ms. Alley's class, finding the usefulness of 10 during the public lesson

Congrats Second Grade Team!

Our second grade team provided us with quite an opportunity to think about key instructional strategies, teacher moves and the mathematical content we teach at John Muir. Because of their careful planning (thank you team!) we were able to reflect on how to get our scholars engaged in mathematical discourse and ways to make student thinking visible.

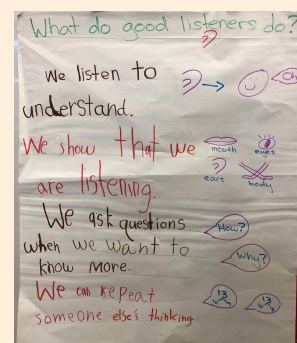
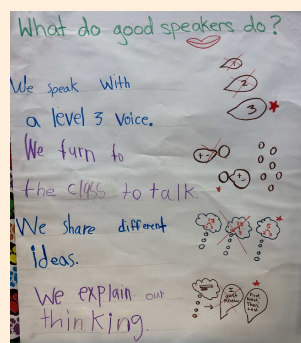
A few key learnings from our post lesson discussion: **First, discussion protocols and expectations** set students up to be leaders of classroom discussions. It was evident that the second grade team has been working hard on setting up discussion protocols and expectations. Ms. Alley's students asked each other questions, showed genuine desire to understand their classmates thinking, and were able to build off each other's ideas. **Second, visible student thinking drives student discussions and learning.** Ms. Alley reflected on how her anticipated board work and the board work she constructed through the careful listening of student ideas changed the expected course of the discussion. Did you notice how Ms. Alley labeled students ideas on the board? **Finally, we are still grappling** with ways to best utilize student misconceptions to build mathematical understanding. We did learn that the more we understand the mathematics and listen to our students ideas, the better we can anticipate student responses and be responsive to our students. However, we aren't quite satisfied with ways in which we are using misconceptions to build tension, excitement, and construct understanding. Remember when Allison forgot to count 110? We are going to continue to think about how to best utilize situations like that!



Valentino helping Allison to see why she counted 246 shells, and he counted 236. Many teachers thought this was one of the most exciting portions of the lesson. Tension grew as students had different answers.

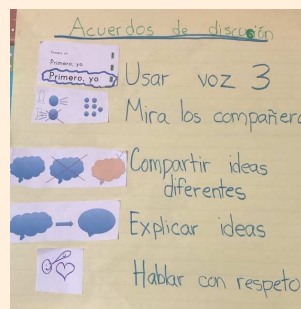
Around Muir

The K/1 Team realized while their students were making real progress orienting their thinking in partners or small group discussion- whole group it was more challenging. The team decided to teach students what good speakers and listeners do. This includes talking loud enough for your classmates to hear you- even in the back! Check out how the first grade team turned lesson on what good speakers and listeners do in math into a shared writing activity!

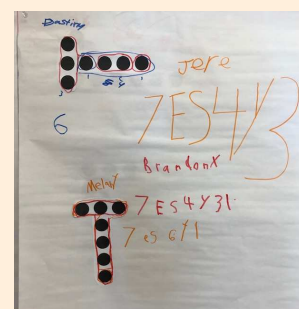


First grade student discussion norms at John Muir

The K/1 team has also been thinking of what it means to make student thinking visible in their classrooms. The kinder team has been focused on ways to make student thinking visible during number talks. They are working on one of the core Kindergarten math standards: decomposing numbers less than 10. They also continue to gamify their math lessons by having students engage in math menu games that reinforce concepts from their Japan Math lessons. If you're interested in seeing some of their games in action- [follow this link!](#)



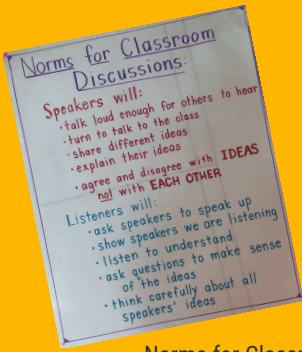
Kindergarten Math Discussions Agreements



A kindergarten number talk in Mr. Delgadillo's Class, they are learning to decompose numbers less than 10.

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Norms for Classroom Discussion in Mr. Steve's second grade class!

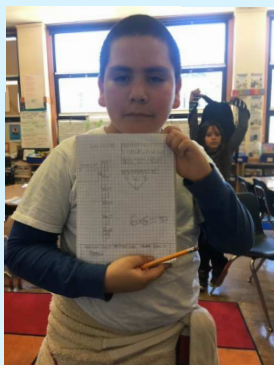
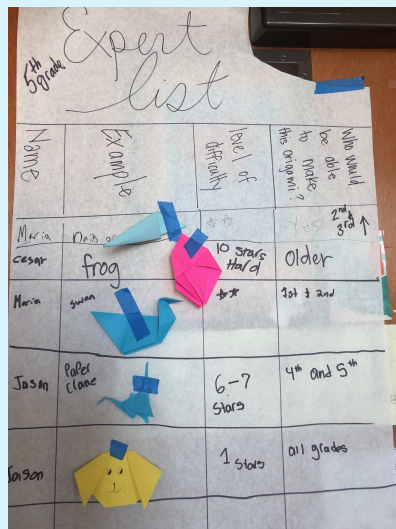
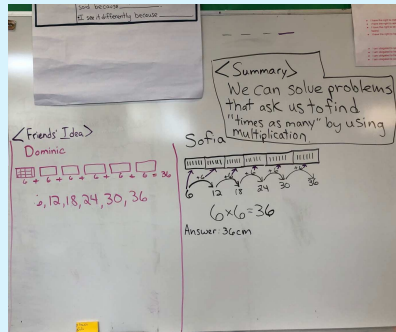
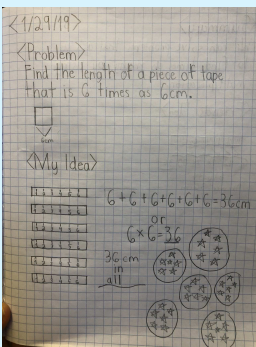


Fourth graders are studying fractions this month

Our third grade team has been deep in discussions around what it means to make student thinking visible through their use of board work and student math notebooks. Through our cross site collaboration with Hillcrest Elementary, they recently taught a Teaching Through Problem Solving unit on elapsed time, and now are trying out a unit based a Japan Math Multiplication Unit. Even Ms. Nokes, our librarian and a member of their lesson study team has taken back some of the teams' strategies to make student thinking visible in problem solving lessons in the library!

Check out our third graders math notebooks, student- led board work and some problem solving in the library. Can you notice different ways this team is making their students thinking visible in their classrooms?

The third grade team make student thinking visible through board work and student lead discussions of TTP lesson.



Making student thinking visible in the library: 5th grade expert lists of origami! Create an example, determine the level of difficulty and decide what grade levels at Muir would be suited to make your origami figure!

Our 4/5 team created classroom discussion rights and obligations with their students. The team felt that while many students participated in the classroom discourse, they wanted all students to feel that they not only had the right to engage, but were also obligated to show their classmates the same amount of engagement through active speaking- or listening to understand. This team (along with our whole school) continue to grapple with and improve different ways to make student thinking visible throughout lessons. The team believes that the more visible the student thinking around the mathematics, the deeper the level of discourse students will be able to have.

Check out what the've been up to in their classrooms!

