Fourth Grade Number Talks FAQ

The following article is written by compiled responses of fourth grade teachers in North Carolina's Randolph County School System. It is designed to help teachers who are implementing number talks find answers to questions that they may have at the beginning of the process.

1. What do you do when your students are stuck on one number talk strategy? One option is to ask students a questions to prompt them to think of the numbers in a different way. For example, "Could you use a doubles combination to help solve this problem?" or "What might happen if I used addition instead of subtraction?" Another option would be to ask students to get creative with their strategy. Ask them something like "Can you think of a different strategy that we have used in class before?" or "Can you think of a way that subtraction could help you mentally solve the problem?" Another option is to evaluate the problems. If students are struggling, the problems may be too too difficult. A final option (use sparingly) is to make up an imaginary student from previous years in order to demonstrate a new strategy. Say something like, "A student in my class last year used this strategy..." Follow up by recording the strategy and asking students to reflect on the pros and cons.

2. I have students who constantly have five strategy fingers held up but only have one strategy. How do I get them to be honest? When setting norms for number talks at the beginning of the year, be sure to address this point. Discuss that the purpose of the finger strategy is help inform you as the teacher. If a student holds up an incorrect number of strategies, it is not helpful to you as the teacher and gives you incorrect information.
When this happens in my classroom, I usually have students write down their strategies. If the student who holds up five fingers only has two strategies then we have a discussion about the value of those two strategies. I also let my students know that we are not in competition for who can find the most strategies. I want them to understand that, in the end, we are looking for efficient, effective strategies that can be relied upon.

3. How do you check to make sure students have mastered the strategy? I have found that the easiest way to check for mastery of a strategy is to create a small assessment. This may be a few problems similar to the ones we have been working on in class, a few problems purposefully selected to highlight a particular strategy, or a few problems where I ask students to record at least two strategies for solving. I look to see if students accurately complete the assessment using efficient mental math strategies. If students have mastered it, I move on to the next strategy.

4. Where should I start with number talks in my classroom? Start simple. You can use dot images to assess how students are decomposing numbers, subitizing, and adding single digits. Using a simple problem allows you to focus your lesson on procedures and hand signals. Be sure to model your thinking so that students get a clear picture of expectations. Another suggestion is to show students number talk videos so that they are able to see the activity in action. The book *Number Talks: Helping Children Build Mental Math and Computation Strategies* by Sherry Parrish is an excellent resource in implementing number talks in the elementary classroom.

5. What hand signals do you use to make number talks meaningful? I use several hand signals to check for understanding. After displaying the problem, students give a thumbs up close to their chest when they have an answer. After that, students put up more fingers as they solve the problems using different strategies. Some students might have two to three fingers up before I ask for answers. When it is time for students to share their answer with the class, other students can respond with hand signals. They form a sign language "y" with their thumb and pinky finger and shake it between themselves and the speaker to indicate that they agree with the answer. If students disagree with the answer, they hold up their pointer finger and middle finger and gently shake it between themselves and the speaker.

Fourth Grade Number Talks FAQ

6. What if my students use strategies that are difficult to follow? Remember that you don't have to write up every strategy that students give you. Be selective! You want to highlight strategies that are going to lead to the goals that you are trying to accomplish through the lesson. Remember, this is a student-led exercise, but you are in control of the pen/marker that records the strategies. You can ask the student to write the strategy on a piece of paper and then analyze the strategy to see if it is one you want to discuss with the class on another day.

7. How can I make sure the number talks don't take too long? When I first started my number talks, they would take up a lot of my math time. I soon realized it is only necessary to complete one or two problems per session in order to be effective. Also, it is not necessary to write up every strategy that students share (see FAQ#6). Choose a few students to share out and then move on. Working through number talks is very similar to a normal math lesson. Create a learning target for that number talk. With the learning target in mind, you can focus your discussion in order to be efficient with your time. Also remember that number talks are a series of lessons that last 10-15 minutes each day. If you don't get to a problem or strategy on one day, continue it on the following day.

8. How do I let a student know they're on the wrong path? Generally, the student will realize their own errors when they begin sharing their methods with their classmates. Other classmates may also chime into the discussion and suggest ways the strategy can be corrected. Sometimes, the student will be convinced that their answer is correct. It is important to listen to their explanation before making a snap judgment or beginning to record the strategy. After carefully listening to the student, you may realize the student has portions of the strategy you want to highlight or a common error to discuss with the class. You can also revoice the strategy and ask questions at points of concern. This may help the student see the mistake on their own.

9. What happens if all my students give me the same strategy? First determine whether or not the given strategy is sufficient to meet the lesson's learning targets. If so, move on. There is no rule saying that you need multiple strategies for every number talk. However, if you are desiring a specific strategy in the lesson, ask more specific questions to elicit different responses. For example, if you want students to decompose to add, you may say, "Can anyone think of a way to add these numbers by breaking them apart?" By being more specific with your questions, you can guide students to a new strategy.

10. What is the best way to determine which students share their strategies during a number talk? It is important to remember that each child can contribute valuable information to the discussion. A little patience goes a long way. I have found that the students who don't necessarily stand out in math usually devise some of the most creative strategies. Avoid calling on the same students all of the time. I record my number talks in a notebook that I place under the document camera to project for the class. This notebook allows me to keep track of which students I have called on and which students I have not. This also allows me to track the progression of their strategies and mental math.

Fourth Grade Number Talks FAQ

11. Help! My kids blurt out the answer immediately! How do I fix this? Students need to understand the rules and procedures in order for your time to be effective. Be sure to discuss expectations for student behavior during number talks starting with your very first lesson. Model your thinking during the talks so that they can see what is appropriate. Allow some time for your students to view a video of other students participating in a number talk. Create an anchor chart that lists do's and don'ts and post it near your meeting area in order to remind the students of expectations.

12. Why are Number Talks important? When students are able to use mental math strategies to tackle problems, their mathematical reasoning becomes stronger. By being able to hear other students' thinking, they are able to learn multiple approaches to solving problems, which ultimately leads to the use of efficient strategies and generalization of mathematical concepts.