

Creating Effective Partnerships: Using Flexible Grouping to Enhance Learning

Lucy King recognizes that having students work with partners or in small groups encourages them to deepen their understanding of mathematics as they share their ideas with other students. Ms. King is deliberate in how she assigns the groupings in her classroom.

Developing the skills needed to work with others is an important life skill, but it also has academic benefits. In my classes each year, I have a variety of reasons for grouping my students, including the following:

- *Working with others promotes discussion.* It is much easier to encourage students to talk about their thinking in a large group when they first have someone to talk to in a small group or pair.
- *Listening to the students talk to each other often gives me more information than I would get from individual questioning.* As I walk around and listen to my students talking to their partners or in small groups, I get a sense of what they understand and what they need to work on. I am able to join right in with their discussions when I know they will benefit from my attention.
- *When students work in groups, I can check in with more students during one class.* Each time I stop, I have the opportunity to check in with two or more students at once.
- *I can make choices about who will work effectively together based on my knowledge of the social and mathematical strengths of individual students and those areas in which they need support and development.* I can then form and change groupings based on the mathematics and the needs of the individual students involved. For example, at times I choose to place students with similar levels of understanding together so that they can work on problems without one student simply telling the others the answers. Then, after solving problems in pairs or small groups, two pairs or groups of students can meet together to share their solutions and be exposed to other ways of approaching the mathematics. Other times, I pair students because they bring very different strengths and/or challenges to the pair that could be complementary and move both students forward.

Students often want to choose their own partners, and I make sure to provide students with some opportunities to form their own partnerships. However, they usually work with the partners I have assigned. Assigning partners and helping them learn to work together productively helps to resolve many of the social issues that would otherwise arise, particularly early in the year.

To create effective partnerships, I need to get to know my students, including their strengths and challenges, and attitudes about math. To do this, I give students a variety of problems to solve during the first few days of school, being sure to include problems that have several possible answers. For example,

Henry had a birthday party. He counted 24 legs at the party. His friends were butterflies, pigs, and ducks. How many creatures were at the party?

I choose a problem such as this for a number of reasons.

- It is accessible and engaging to all students. Everyone can find an answer.
- No one “knows” the answer before they start the problem.
- Trying to find all the answers keeps the students engaged for a long period of time, allowing me the opportunity to get around to all the tables to observe how students are approaching the problem. This gives me a sense of the math skills of different students.

After assigning other open-ended questions during the first few days of school, I have enough sense of my students and their strengths and needs that I can assign partners effectively.

As students start working together, I look for examples of “good working together” behaviors that I can point out to the class. In addition, we take the time during math class to talk about how pairs and groups are working. We resolve any issues and create a class definition of “good partners” that we post and refer to throughout the year.

I aim to change partnerships about once a month, as students’ understandings change and develop throughout the year and as we move through the various topics in the math curriculum. The groupings I form for geometry or fractions often look quite different from those I form while studying numbers and operations.

I used to drive myself crazy trying to form new partnerships and keep track of them. I spent too much time and still managed to put students together who had already been partners. Several years ago, a colleague shared a way of managing all of these groupings. I now make an index card for each student in my room, listing all of the different categories of partnerships: math, spelling, computer, and so forth. Each time I make new partners, I label the two students’ cards with the same number. When I need to form new groups, I can see from the students’ cards which students have been partners before. I also keep a master card with each of the categories where I list the dates each of the groups was formed, allowing me to see how long students have been

partnered together. Because of the benefits for my students and myself, making groups work well is well worth the effort.

Cooperative grouping in mathematics can be an important strategy in enhancing learning, but all too often cooperative groups are formed without careful attention to the ways in which students might support each other's mathematical thinking. Grouping is sometimes done strictly according to perceived mathematical ability or to create an arbitrary mix of students in terms of gender, race and ethnicity, and language preference. Sometimes, groups are self-chosen, so that many students consistently work with the same individuals.

Ms. King illustrates a more complex way of thinking about student groupings that takes into consideration students' personalities and her own mathematical goals for each student. Ms. King makes her expectations clear for students, reviews the purpose of the partnerships, provides regular check-ins, and alters pairings when they appear not to meet her expectations.

Encouraging students to work together provides opportunities for students to expand their mathematical knowledge and contribute to the social climate of the classroom. Students need numerous opportunities to work in a variety of thoughtfully chosen groupings.