

Group Work

Urban School [Math Department Handbook](#)

Group work is not in opposition to lectures or to individual work. Rather it complements them. What is essential is that the students be intellectually engaged, and learn new ideas. Skillful navigation between various formats is the most effective way to promote engagement and learning.

Groups

- Groups of four (three or five if necessary).
- Picked randomly, every other week. (This allows various combinations to turn up; it makes no assumptions about kids; and since it changes regularly, no one can be too unhappy.)
- Students discuss how to solve problems, compare answers, and help each other.
- Students rarely actually split the work. More often, they work separately, asking for and offering help as needed.
- Students are responsible to help each other, irrespective of who's "ahead."
- Do not ask students to "wait" for each other—in fact, discourage that.

The Teacher

- Be active at all times, circulating among the groups, answering questions, coaching, asking questions. (Sometimes: write down some notes on students, for later use when writing course reports.)
- Develop peripheral hearing and vision: while you're working with one group, you are still responsible for keeping the other ones on task.
- Encourage active listening.
- Help students learn how to teach, not tell.
- Take each group to their next step, rather than aiming for a least common denominator for the whole class.
- When appropriate (at the very least once per period), interrupt group work and lead a whole-class discussion.

Advantages

- Students talk about math. (They're the ones who need to!)
- Stronger students help the others.
- The teacher hears where the real questions are.
- The teacher is free to talk to one group or individual.
- Students listen to and hear the teacher, who answers questions they do have.
- Students are active, not passive.
- Much learning takes place when going over homework.
- Students see each other work, which can allow them to learn about organization, note taking, and documentation of answers.

Disadvantages

- Keeping records of students' work is a little harder.
- There is some loss of accountability in homework. Remedies:
 - quick daily survey of who's done it
 - extra problem sets to do alone and turn in
 - quizzes
- Some students will try to get a "free ride." It is essential that most tests and other assessments be individual.

What prevents groups from working well?

- Students who are behind on homework.
- Students who want to get ahead in order to have less homework.
- Students who hurt other students' feelings.
- Students who refuse to help others.
- Students who are very silent and rarely say anything.
- Students who sit too far so they can't be heard and their papers can't be seen.
- Students who just want to work with a certain person and no one else.
- Students who are cynical and sarcastic.

The first obstacle is by far the main one and must be taken very seriously. Talk to the advisor; call the parents—whatever works. The second is best addressed by separating class work from homework. The other problems are helped by gentle interventions into the group process by the teacher. Ask for the behavior you want directly, rather than by making speeches (in other words: "Could you help Johnny with #3?" rather than "It is nice to help others.") If you notice the last one, it's best to talk to the student outside of class.

Sometimes students or their parents may complain that group work is holding them back. This concern is best addressed by making sure the course is challenging, every day.