

Peer-Mentors

When working with a mixed level class, I always begin each term with a peer-mentoring class in which I teach the higher level students how to work with the rest so that each has a positive learning experience. When the student understands that teaching is an excellent way to learn, he is usually willing to do this. Many thoroughly enjoy their role as peer-mentor.

For example, if the lesson is about something the higher level student already knows, teaching her partner is a way to reinforce her own learning and, often, a chance to reach a deeper understanding of it as she reiterates the lesson for her partner. If the lesson is all new material to the peer-mentor, I encourage her to come to me with questions and we will work it out along with the partner. It is good for the partner to see the peer-mentor and/or the teacher make the occasional error and work on fixing it without being embarrassed. A lot of learning can happen as one works out what went wrong and how to fix it.

General class sessions of a large mixed group are most easily divided into groups. The highest level group gets its new lesson for the day while the other two groups are doing review practice sheets or catching up with their homework. When I finish the lesson for the first group, they are left to do their practice sheets while I work with the next group. When the first group finishes their practice sheets and checks each others' work, they then join their peer-mentoring partners to work with them.

Attitude towards Math

I begin each new group of math students by telling them that math is the poor person's therapy. In life, I tell them, one can learn the rules and work hard to try to live by them, but someone or some event can always come along and mess it all up. In math, one learns the rules and works hard to apply them and one will be rewarded with the right answer. This is the formula for a satisfying life: learning, struggle, success!

Whether each student agrees with me or thinks I am a math nut, he or she is intrigued by the notion of math being both fun and a tool for a good life. They are usually willing to at least give me a chance, which is a lot better than sitting there believing they cannot learn math.

Whole Body Learning

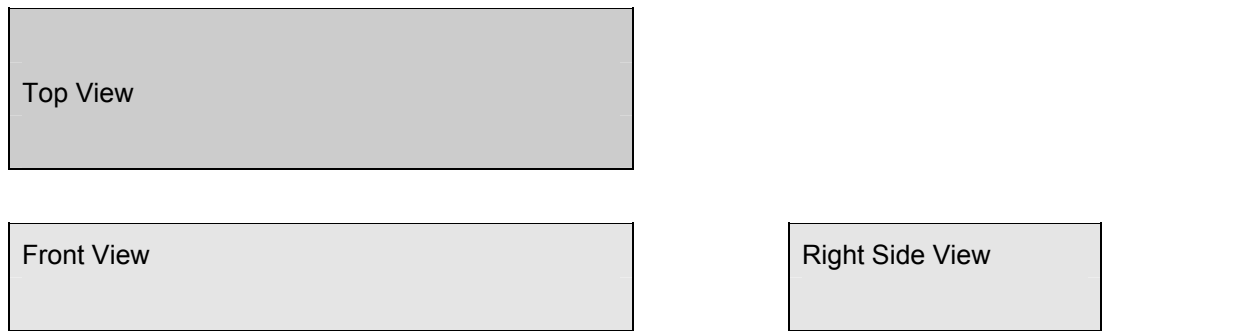
I always approach every lesson as a chance to discover new and wonderful things and encourage the students to have fun. Whenever possible, I try to use their whole bodies in the course of the lesson. Many adults come to school after a hard day at work, or have other reasons for being tired even before the class begins. It helps to keep them moving and alert and the more ways a lesson enters a student, the better the chances are it will stay with him. Many students are kinesthetic learners and absolutely must be able to use their hands, ears, eyes, and bodies in the learning process.

Math is like literature in that it finds a way or ways to describe life. To facilitate learning and to help students get ready for job requirements, I like to combine vocabulary, writing, and blueprint reading with math. For instance, I gather students around a table on which I've placed a simple geometric shape, a rectangular block. I ask them to describe it. They tell me its color, that its edges are sharp, they may know the word rectangular and that it has length, width, and height. They might suggest uses for the block. Next, I give them rulers and have them describe the block in numbers. Throughout this exercise, they pass the block back and forth between them, feel it, heft it, and think about it. They make lists of words that describe the block.

Finally, I have them make a simple blueprint of the block. The blueprint shows three (3) two-dimensional views of the block. They have to measure the block and plan ahead to get it positioned on the paper. After making the blueprints, they use the prints to build a paper model of the rectangular block. It's fun

and they learn that they can have fun while learning.

Here is a simple blueprint of a rectangular solid.



You can easily see how the three views can be cut out and taped together for form half a rectangular solid.

This exercise lets students build things and help each other. Helping each other, developing collegiality, binds them into a cohort and makes it possible for them to work together and to keep each other motivated.

The exercise prepares them for basic blueprint reading and for the home sewers in the class, aides them in using paper patterns. In other words, it gives them practical applications for the math they are learning.

It increases their math and other vocabularies, improves their skills of visualization, and more.