

Questioning Techniques and Classroom Management

by Tim Williamson, Los Angeles County Office of Education

Classroom management techniques are an absolute must for every science teacher, especially during the first few months of school. There are numerous management techniques, some better than others. Some might work for you personally but not for one of your colleagues. There is, however, one management technique that will work for everyone if practiced correctly: Getting students involved in your classroom discussions. Duh! This last statement is not rocket science; it's common knowledge to every classroom teacher, science or otherwise. So, what's the big deal? The "big deal" is knowing how to do it! How do you get your students to become part of your class discussion? Get your students to ask questions.

This is not always an easy task, and in order to be successful you must provide an atmosphere that is open to questions. As the teacher, you should actively encourage students to ask questions. That means encouraging *all* questions, not just the ones that are on-topic or clearly formulated. Students need to feel that it is safe for them to wonder about things and to ask any question out loud. It does not mean that you have to derail the lesson to address every question as it arises. While looking interested in the question, you could ask the student to post the question on a "question board" in the classroom, or write it in a "questions" section in his or her science journal. It also does not mean that you need to know the answer to every question. Not even the most famous scientist in the world could know everything about science. The important thing is not that you provide the information, but that you model how to find it. For example, a good answer might be, "I don't know. If I wanted find out, I'd ask Mr. Smith down the hall, or I'd go to the library and find a book about lizards."

Some teachers like to schedule occasional "random question" times. This is a time when students look at the questions they have written down in their journals or on the classroom question board, and the class discusses how to go about finding the answers. (If a science activity finishes early and you have ten minutes to spare, random question time is a great way to fill it.) As the teacher, you should take every student seriously. Even if the question is ridiculous, you should still make an effort to address it. Remember: there is no such thing as a "dumb" question.

The teacher should also be a role model who asks questions. Students need to see adults who are interested in the world around them. One way you can be a role model is to watch for stories about science in the news. You could post clippings on the wall, or mention things you have seen on the TV news. Enthusiasm is infectious, and curiosity catches on.

Another way to be a role model is to admit that you don't know everything already. If the teacher is a walking textbook who already knows everything that is worth knowing, students will never have a chance to see "what to do when you don't know." This may stifle their personal curiosity about the world: In an inquiry-based science lesson, the teacher presents him- or herself as a life-long learner, who is interested in the topic at hand. Don't make up answers to your students' questions if you don't know the f real answer. They will soon discover your "little secret" and lose respect for you. If you don't know the answer to one of your students' questions, say so! Then let the students observe your discovery process. Or even better, you all discover the answer together.

When you ask questions of the students, try to go beyond asking them to repeat facts back to you. If you can formulate interesting questions that require students to think for a while and provide reasons for their answers, you will model the kind of sophisticated thinking that we hope students will develop. There are three types of questions you can ask your students . . . but that's another article at another time!

When your students are engaged in classroom discussions, they very likely will not be causing problems. Imagine that! Classroom discipline problems can be solved just by asking the right kind of questions and having your students engaged in classroom discussions.

(Some of the above information comes from a curriculum project developed by the Los Angeles County Office of Education science consultants, entitled *Mars Science Investigations, Teacher Resource CD*.)

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