

## Promoting Student Success in Chemistry 31

**Many of our beginning chemistry students need help with prerequisites and basic skills.**

1. Math (exponents, metric system, percent, units, nature of an equation)
2. English (comprehension, reading)
3. Classification (periodic table, classification of matter, nomenclature)
4. Study Skills (how to study, memorization, misconceptions, etc.)
5. Organizational Skills (organizing notebook, organizing answers in a test)
6. Class Management (acquiring textbook, knowing schedule, syllabus, homework due dates)
7. Lack of Confidence (the result of above deficiencies)

### How to Help our Students

1. Make the classroom environment conducive to learning. Maintain a positive classroom climate.
2. Minimize memorization. Increase explanation.
3. Include the learning theory in the discussion of the sci. method. Provide concrete steps used to study beginning chemistry. Emphasize the steps.
4. Introduce the periodic table in the first week. Classify elements and memorize symbols of only 36 important elements. Provide index cards to help memorize.
5. Discuss significant figures on the first day in the laboratory.
6. Have the schedule and the homework due dates readily available to students.
7. We say this class takes 12 to 15 hours of study time per week. Help student start studying many hours a week from the first day. Give homework on the first day. Stress the importance of doing homework on time. Schedule about 5 quizzes by the fourth week.
9. Stress the importance of getting help. Let students know where and when help is available.
10. Use blackboard to make student grades available.
11. Provide word problems in written form and then solve them in the classroom.
12. Make the chemical nomenclature scheme readily available.
13. Help students improve their organizational skills with respect to writing notes (by providing a format) and doing word problems.
14. Provide opportunity to practice challenging problems over and over again.

**A Provocative Hypothesis:** The Chemistry 31 textbook is written for students with few deficiencies. It not only does not work for many of our students, it is part of the problem for some of our students.