

# **Misconceptions about Acids and Bases: A Learning Exercise**

Activity developed at Kwantlen University College, Surrey, B.C

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(Adapted by **Catherine Filteau** of Champlain Regional College in Lennoxville)

In small groups of 3-4 people, students must solve six multiple-choice questions about acids and bases, and agree on the answers to be formulated. Further to this initial exchange, the teacher tells each team how many correct answers were obtained, but does not specify which are the right answers. Discussions then resume to increase the number of correct answers. After the second round of discussions, the members of the team with the most correct answers are asked to mix with the other groups to provide assistance. Further to this exchange, the teacher explains the best answers.

Concepts about acids and bases are taught in high school, and when this topic is addressed in cegep, many students rely on formulas and use their calculators without thinking. This exercise allows students to evaluate their knowledge while helping them determine their limits. The object is to use this exercise as an introduction to the section on acids and bases. Further to discussions, all students will have had an opportunity to give their point of view and rank the reasons, whether good or bad, that guided their choices. This will make it easier for them to change their misconceptions about acids and bases, and help them better understand the chemistry principles involved. The time spent to complete this exercise in class facilitates subsequent learning of concepts of acids and bases.