

## Chapter 19 Ionic Equilibria in Aqueous Systems

This chapter covers titration curves, buffers, and  $K_{sp}$ , which are all in the AP curriculum. It is very important for AP students to understand how to deal with acidic and basic solutions, including learning how the Henderson-Hasselbalch equation can be used for solving acid-base buffering system problems. Other concepts covered in this chapter and in the AP curriculum include  $pK_a$  and  $pK_b$ , common indicators, acid-strong base titrations, and the expected approximate pH of different types of titrations.

The AP Exam often contains questions about solubility, especially of sparingly soluble substances and the resulting equilibrium constant,  $K_{sp}$ . In addition, predicating and calculating precipitate formation when solutions are mixed is a frequent topic. This chapter also reviews solution vocabulary important for AP students to master such as molar solubility, saturation, and solubility product.