

Briarcrest AP Chemistry Summer Assignment 2026

Welcome to AP Chemistry! To keep chemistry concepts fresh and to prepare you for class, please complete the following prior to the 1st day of class. Come prepared to ask questions about anything you do not understand.

Part 1

Read chapters 1-3 & 6-7 of *Chemistry: The Central Science, 15th Edition* by Brown, LeMay, Bursten, Murphy, Woodward, and Stoltzfus © 2022. Be sure you know the following skills:

- Name all types of compounds (ionic, covalent, acids etc.)
- Use stoichiometry & dimensional analysis
- Find empirical & molecular formulas
- Write & balance chemical equations.

Part 2

Set up your AP Classroom (**code available August 1st**) and complete the **“AP Chemistry Summer Assignment 2026”**. This assignment is **due by the beginning of class on August 13th**. Class code will be emailed to you and posted on onCampus.

Part 3

Memorize common cations, anions, and the following list of common polyatomic ions:

Cations (1⁺)

ammonium (NH_4^{1+})

hydronium (H_3O^{1+})

Anions (1⁻)

acetate ($\text{C}_2\text{H}_3\text{O}_2^{1-}$)

bromate (BrO_3^{1-})

cyanide (CN^{1-})

dihydrogen phosphate ($\text{H}_2\text{PO}_4^{1-}$)

hydrogen carbonate or bicarbonate (HCO_3^{1-})

hydrogen sulfite or bisulfate (HSO_3^{1-})

hydroxide (OH^{1-})

iodate (IO_3^{1-})

nitrate (NO_3^{1-})

nitrite (NO_2^{1-})

perchlorate (ClO_4^{1-})

chlorate (ClO_3^{1-})

chlorite (ClO_2^{1-})

hypochlorite (ClO^{1-})

permanganate (MnO_4^{1-})

thiocyanate (SCN^{1-})

Anions (2⁻)

carbonate (CO_3^{2-})

chromate (CrO_4^{2-})

dichromate ($\text{Cr}_2\text{O}_7^{2-}$)

hydrogen phosphate (HPO_4^{2-})

peroxide (O_2^{2-})

oxalate ($\text{C}_2\text{O}_4^{2-}$)

sulfate (SO_4^{2-})

sulfite (SO_3^{2-})

thiosulfate ($\text{S}_2\text{O}_3^{2-}$)

Anions (3⁻)

phosphate (PO_4^{3-})

phosphite (PO_3^{3-})

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All of this material is a review from Chemistry. We will quickly cover this material within the first two weeks of school, so please work on this during the summer. This assignment will count as your first daily grade. ***The information and skills will be on the Unit 1 Test.***