

Pre-IB Chemistry Summer Assignment (2008)

- You are responsible for learning the following ions. Be familiar with the symbols and charges, and their names (in some cases, the ions have two names you should know). You will be given a quiz on these during the first week of class and they will continue to appear in everything we do for the semester.

silver ion	Ag ¹⁺	arsenate	AsO ₄ ³⁻
cadmium ion	Cd ²⁺	acetate	C ₂ H ₃ O ₂ ¹⁻
cobalt (II)	Co ²⁺	hypochlorite	ClO ¹⁻
cobalt (III)	Co ³⁺	chlorite	ClO ₂ ¹⁻
chromium (II)	Cr ²⁺	chlorate	ClO ₃ ¹⁻
chromium (III)	Cr ³⁺	perchlorate	ClO ₄ ¹⁻
copper (I) or cuprous	Cu ¹⁺	carbonate	CO ₃ ²⁻
copper (II) or cupric	Cu ²⁺	chromate	CrO ₄ ²⁻
iron (II) or ferrous	Fe ²⁺	dichromate	Cr ₂ O ₇ ²⁻
iron (III) or ferric	Fe ³⁺	oxalate	C ₂ O ₄ ²⁻
ammonium ion	NH ₄ ¹⁺	bicarbonate	HCO ₃ ¹⁻
lead (II) or plumbous	Pb ²⁺	iodate	IO ₃ ¹⁻
lead (IV) or plumbic	Pb ⁴⁺	permanganate	MnO ₄ ¹⁻
tin (II) or stannous	Sn ²⁺	nitrite	NO ₂ ¹⁻
tin (IV) or stannic	Sn ⁴⁺	nitrate	NO ₃ ¹⁻
zinc ion	Zn ²⁺	hydroxide	OH ¹⁻
cyanide	CN ¹⁻	phosphite	PO ₃ ³⁻
thiosulfate	S ₂ O ₃ ²⁻	phosphate	PO ₄ ³⁻
sulfite	SO ₃ ²⁻	thiocyanate	SCN ¹⁻
sulfate	SO ₄ ²⁻	silicate	SiO ₃ ²⁻

- Perform the conversion problems on the attached worksheet. I must receive this assignment, at the school, **no later than noon on Friday, July 25th**.
- Select two newspaper articles that explain how chemistry is being used to solve specific problems in our world. In your one to two page (for each article) **typed** summary, you must define the problem and provide general background information addressed in the article. You must provide an explanation as to how chemistry was used to solve the specific problem. You should provide your opinion as to the value of the technology to society and describe how it may be used in other ways to help society in the future. The goal of this assignment is to reveal how pervasive science is in our world. Science is used everywhere and ongoing research affects us continuously. Please provide a copy of the articles. I must receive both summaries, at the school, **no later than noon on Friday, August 22nd**.

Please feel free to contact me at school (548-0696) or via e-mail at dechcpa@cps.k12.va.us. Enjoy your summer! See you in September.