

# Summer Honors Work Packet

**Course Title:** Honors Chemistry 412

**Teacher:** Mr. Urban

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**Summer work link:** <https://bhssummerassignments.weebly.com/science.html>

**Estimated Time For Completion (Approximate):** 4-6hrs.

**Objectives:** Prepare for the first unit and key concepts of Honors Chemistry.

- Students will be able to read Chapter 1, pages 2 through 21 from the textbook.
- Log into my google classroom for summer work to get the notes, <https://classroom.google.com/c/MzYwNDQwOTg4MzM3?cjc=7sn2imu>.
- Students will take notes on Chapter 1 and prepare for a quiz on Chapter 1
  
- Please join the Remind (Honors Chemistry 23-24): **Text 81010 @murbs412c**
  
- Students will be able to make flashcards for memorization.
  - o Use index cards, not cut strips of paper to produce your flash cards. You will need flash cards of the following:
    - i. Metric Units
    - ii. Polyatomic Ions

**Method(s) of Assessment:**

- o You will see a list of what needs to be on the flash cards in this packet. For elements and ions, put the symbol on one side and the name on the other. Have only one element or ion per card. You will be given a grade for these flashcards on your return from summer and be tested on them throughout the year.

**Impact on 1<sup>st</sup> Quarter Grade:** 50 point assessment grade.

**Due Date:** No later than the 2nd day of school.

Name: \_\_\_\_\_ Honors Chemistry Summer Assignment

### Metric Unit Flashcards

Directions: Write the unit name and quantity on one side and the symbol on the other.

Example Flashcard:

Kilo	1 kilo = 1000 base unit = $10^3$
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### Table of Prefixes

<u>Prefix</u>	<u>Abbrev.</u>	<u>Meaning</u>
Tera-	T	$10^{12}$
Giga-	G	$10^9$
Mega-	M	$10^6$
kilo-	k	$10^3$
hecto-	h	$10^2$
deca-	da	$10^1$
Base Units	- meter, liter, gram, or second	
deci-	d	$10^{-1}$
centi-	c	$10^{-2}$
milli-	m	$10^{-3}$
micro-	$\mu$	$10^{-6}$
nano-	n	$10^{-9}$
pico-	p	$10^{-12}$

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Polyatomic Ion Flashcards

Directions: Write the polyatomic ion symbol on one side and the name on the other.

Example Flashcard:

Cyanide	$\text{CN}^{1-}$
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1- Charge		2- Charge		3- Charge		1+ Charge	
Formula	Name	Formula	Name	Formula	Name	Formula	Name
$\text{H}_2\text{PO}_4^{1-}$	Dihydrogen phosphate	$\text{HPO}_4^{2-}$	Hydrogen phosphate	$\text{PO}_4^{3-}$	Phosphate	$\text{NH}_4^+$	Ammonium
$\text{C}_2\text{H}_3\text{O}_2^{1-}$	Acetate	$\text{C}_2\text{O}_4^{2-}$	Oxalate	$\text{PO}_3^{3-}$	Phosphite		
$\text{BrO}_3^{1-}$	Bromate			$\text{AsO}_4^{3-}$	Arsenate		
$\text{HSO}_3^{1-}$	Hydrogen sulfite	$\text{SO}_3^{2-}$	Sulfite				
$\text{HSO}_4^{1-}$	Hydrogen sulfate	$\text{SO}_4^{2-}$	Sulfate				
$\text{HCO}_3^{1-}$	Hydrogen carbonate	$\text{CO}_3^{2-}$	Carbonate				
$\text{NO}_2^{1-}$	Nitrite	$\text{CrO}_4^{2-}$	Chromate				
$\text{NO}_3^{1-}$	Nitrate	$\text{Cr}_2\text{O}_7^{2-}$	Dichromate				
$\text{CN}^{1-}$	Cyanide	$\text{SiO}_3^{2-}$	Silicate				
$\text{OH}^{1-}$	Hydroxide						
$\text{MnO}_4^{1-}$	Permanganate						
$\text{ClO}^{1-}$	Hypochlorite						
$\text{ClO}_2^{1-}$	Chlorite						
$\text{ClO}_3^{1-}$	Chlorate						
$\text{ClO}_4^{1-}$	Perchlorate						