

## Summer Assignment – MYP Chemistry 2020-2021

This summer assignment is intended to be completed at multiple sessions, NOT at one sitting. You should be prepared to THINK carefully about each response, rather than quickly writing down something that just comes to mind.

Completion of this assignment will not be a grade, but this content will be revisited in class, and you will be expected to have finished it ahead of time. If you choose not to complete it prior to school starting, you will not be given extra time when we address it in class, and will still be held to the same criteria as students who have already completed it.

**1. Questions for Reflection:** For the following questions, take time to think carefully about your response, and craft it to be concise but complete. There is not an exact answer for any of them – the purpose is for you to think very carefully about what it means to **study** science, and what it means to **learn** science. Each question response should be at least 3 sentences but not more than 10.

- a. What is science?
- b. What is a scientist?
- c. How does one become a scientist?
- d. Why do we use the scientific method?
- e. **How** do we use the scientific method? Think of a practical application, not in science class or formal research.
- f. Why is it important to understand science?

**2. Periodic Table:** Please memorize the **element name and symbol** for each of the first 40 elements on the Periodic table. (Periodic Table is included on the next page.)

**3. Math skills:** Practice rearranging the equation below to solve for *each* individual variable, clearly showing every part of each individual step in the process, for each variable.

$$a \times b = \frac{c}{d}$$

# Periodic Table of the Elements

Atomic mass — 28.0855

Symbol — **Si**

Atomic number — 14

Name — Silicon

Group  
1

1.00794

**H**

1

Hydrogen

4.00260

**He**

2

Helium

1

Transition Elements

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>Li</b> 3 Lithium	<b>Be</b> 4 Beryllium											<b>B</b> 5 Boron	<b>C</b> 6 Carbon	<b>N</b> 7 Nitrogen	<b>O</b> 8 Oxygen	<b>F</b> 9 Fluorine	<b>Ne</b> 10 Neon
<b>Na</b> 11 Sodium	<b>Mg</b> 12 Magnesium											<b>Al</b> 13 Aluminum	<b>Si</b> 14 Silicon	<b>P</b> 15 Phosphorus	<b>S</b> 16 Sulfur	<b>Cl</b> 17 Chlorine	<b>Ar</b> 18 Argon
<b>K</b> 19 Potassium	<b>Ca</b> 20 Calcium											<b>Ga</b> 31 Gallium	<b>Ge</b> 32 Germanium	<b>As</b> 33 Arsenic	<b>Se</b> 34 Selenium	<b>Br</b> 35 Bromine	<b>Kr</b> 36 Krypton
<b>Rb</b> 37 Rubidium	<b>Sr</b> 38 Strontium											<b>In</b> 49 Indium	<b>Sn</b> 50 Tin	<b>Sb</b> 51 Antimony	<b>Te</b> 52 Tellurium	<b>I</b> 53 Iodine	<b>Xe</b> 54 Xenon
<b>Cs</b> 55 Cesium	<b>Ba</b> 56 Barium											<b>Tl</b> 81 Thallium	<b>Pb</b> 82 Lead	<b>Bi</b> 83 Bismuth	<b>Po</b> 84 Polonium	<b>At</b> 85 Astatine	<b>Rn</b> 86 Radon

Mass numbers in parentheses are those of the most stable or most common isotope.

Metals

Nonmetals

Lanthanoid Series

Actinoid Series

<b>Ce</b> 58 Cerium	<b>Pr</b> 59 Praseodymium	<b>Nd</b> 60 Neodymium	<b>Pm</b> 61 Promethium	<b>Sm</b> 62 Samarium	<b>Eu</b> 63 Europium	<b>Gd</b> 64 Gadolinium	<b>Tb</b> 65 Terbium	<b>Dy</b> 66 Dysprosium	<b>Ho</b> 67 Holmium	<b>Er</b> 68 Erbium	<b>Tm</b> 69 Thulium	<b>Yb</b> 70 Ytterbium	<b>Lu</b> 71 Lutetium
<b>Th</b> 90 Thorium	<b>Pa</b> 91 Protactinium	<b>U</b> 92 Uranium	<b>Np</b> 93 Neptunium	<b>Pu</b> 94 Plutonium	<b>Am</b> 95 Americium	<b>Cm</b> 96 Curium	<b>Bk</b> 97 Berkelium	<b>Cf</b> 98 Californium	<b>Es</b> 99 Einsteinium	<b>Fm</b> 100 Fermium	<b>Md</b> 101 Mendelevium	<b>No</b> 102 Nobelium	<b>Lr</b> 103 Lawrencium