

Supplies and Presumed Knowledge: IBMYP Biology

Welcome to MYP biology and the 2021-2022 academic year! My name is Ms. Arents (though my name will change to Mrs. Quagliano this summer), and I am very excited to have the opportunity to develop your science skills this school year. The previous year's classes were amazing, so I am looking forward to seeing what this next group of students is capable of! Below you will find a supplies list for the class as well as several "presumed knowledge" topics. Before we meet in the fall, I would like you to be familiar enough with the topics to perform well on a short quiz we will have the second week of school.

Supplies for Class:

- Composition Notebook (Lined) **OR** Sketchbook (Unlined)
 - This will be your "Science Notebook" for the year. It will hold notes, class activities, and your homework assignments. You can decide between the composition notebook or the sketchbook; I personally prefer a sketchbook because I prefer taking notes and making drawings on unlined paper.
- Black Pens
- Willingness to try new learning methods and study strategies ([preview of notes](#))

Presumed Knowledge:

A. Characteristics of Life (8 in Total)

- a. Living things are made of one or more **cells**
 - i. Unicellular = One Cell
 - ii. Multicellular = Multiple Cells
- b. Organisms are based on a universal **genetic code**
- c. Living things are able to **respond** to stimuli from their environment
- d. Living things **grow and develop**
 - i. Growth = Increase in Size
 - ii. Develop = Changes in Shape/Structure
- e. Living things have the ability to **reproduce**
 - i. Mitosis = Asexual Reproduction
 - ii. Meiosis = Sexual Reproduction
- f. Living things obtain and use **energy** (metabolism)
- g. Organisms maintain an internal balance (**homeostasis**)
- h. Over time, populations of living things **change**

B. Basic Lab Equipment

- a. The table below shows the tools that I would like you to be familiar with. You do not need to fill out the chart, but if it helps you to remember the information then it is there for you! You may need to look some of these items up online to refresh your memory.

Tool	What does it do?	When would you use it?
Thermometer		
Digital Scale		
Hot Plate		
Beaker		
Beaker Tongs		
Graduated Cylinder		
Test Tube		
Test Tube Rack		
Ring Stand		
Bunsen Burner		
Stirring Rod		
Scoopula		
Scalpel		
Safety Goggles		

C. Basic Lab Safety Rules

- Proper Clothing: goggles, hair tied back, no loose clothing, closed toe shoes, gloves
- The only supplies allowed at the lab stations are paper, pen, and materials provided by your teacher (no notebooks, backpacks, food/drink etc.)
- If there is broken or cracked glassware, alert the teacher immediately (broken glass must be disposed of in the labeled container)
- If you get a chemical on your skin, alert the teacher immediately and wash the affected area thoroughly (depending on the size/location of the affected area, you may need the emergency shower or eyewash station)

D. Selected Cell Organelles

- a. The table below shows parts of a cell that I would like you to be familiar with. You do not need to fill out the chart, but if it helps you to remember the information then it is there for you! You may need to look some of these items up online to refresh your memory.

Organelle (Cell Part)	Description of Structure	Description of Function
Nucleus		
Cell Membrane		
Cell Wall		
Mitochondria		
Chloroplast		
Vacuole		
Ribosome		
Endoplasmic Reticulum		