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MS Team: Ms. Lo's Science 8 Argyle (Period 5)

Introduction





Welcome to Science 8! This course is divided into five units: **Scientific Method**, **Chemistry**, **Cell Biology**, **Physical Science**, and **Earth Science**.

A breakdown of these units:

Category	Sub Units
Scientific Method	Practice developing scientific investigative skills: hypothesis formulation, materials and procedure development, data collection and interpretation, conclusion formulation
Chemistry	Kinetic Molecular Theory and Atomic Theory
Cell Biology	Cells & Diffusion and Immune System
Physical Science	Electromagnetic Radiation and Optics
Earth Science	Plate Tectonics

The Big Ideas of Each Unit

Keep these big ideas in mind as we move through the course.

Chemistry	Cell Biology	Physical Science	Earth Science
<p>The behaviour of matter can be explained by the kinetic molecular theory and atomic theory.</p> 	<p>Life processes are performed at a cellular level.</p> 	<p>Energy can be transferred as both a particle and a wave.</p> 	<p>The Theory of Plate Tectonics is the unifying theory that explains Earth's geological processes.</p> 

Assessment

Students will be assessed both formally (report cards) and informally (feedback on assignments) reported. There will be labs, quizzes, and assignments.

Grades

NYM	F	(0 – 49%)
AE	C-	(50 – 59%)
	C	(60 – 66%)
	C+	(67 – 72%)
ME	B	(73 – 85%)
EE	A	(86 – 100%)

Equipment and Materials

- 3- ring binder, dividers, lined-paper.
- Pen (2 colors), pencil, eraser, highlighter, ruler, calculator, coloring pencils or markers (we need to limit sharing of materials during this time).
- Agenda (you will write in this often).

The Essentials

- Be on time.
- Turn off the phone and put it in your backpack.
 - If you cannot control yourself, then your phone will be confiscated for the duration of the class.
- Be prepared.
 - Bring all necessary materials to class.
 - Check MS Teams daily for announcements!!
- If you are going to be absent...
 - Email or message me ahead of time to get notes and assignments.
 - Ask for missed work upon your return.
 - Tests and quizzes will be written the day you return. No exceptions.

Extra Help

- I am always available for extra help in the morning in Room 150 (**8:45 – 9:15am**).
- If you wish to come for extra help, send me a private message on MS Teams or an email to make an appointment.
- Any questions, message me privately on MS Teams or email.

Unit 1: Chemistry

Big Idea: The behavior of matter can be explained by the kinetic molecular theory and atomic theory

It is expected that students will understand:

- **Kinetic Molecular Theory:** explains how particles move in different states
- **Atomic theory:** provides evidence for the existence of atoms and molecules
- **Protons, Neutrons and Electrons** are the subatomic particles of the atom

Unit 2: Biology

Big Idea: Life processes are performed at a cellular level.

It is expected that students will understand:

- **Living things** respire, grow, take in nutrients, produce waste, respond to stimuli, and reproduce; there is a debate as to whether or not to classify **viruses** as living things
- **Cell Theory:** living things are made of one or more cells, all cells come from pre-existing cells, the cell is a basic unit of life
- Types of cells: **prokaryotic** and **eukaryotic** cells, **plant** and **animal** cells, cells contain structures that carry out essential functions
- **Photosynthesis** and **cellular respiration**
- The relationship of micro-organism with living things: basic functions of the **immune system**, vaccination and antibiotics, impacts of epidemics and pandemics on human populations

Unit 3: Physics

Big Idea: Energy can be transferred as both wave and a particle

It is expected that students will understand:

- Types and effects of **electromagnetic radiation**
- **Light:** properties and its behavior as a wave and a particle

Unit 4: Earth and Space Science – Plate Tectonics on Earth

Big Idea: The theory of plate tectonics is the unifying theory that explains Earth's geological processes

It is expected that students will understand:

- **Plate Tectonic** movement: types, plate boundaries and earthquakes and volcanoes
- Major **geological events** of local significance
- **First People knowledge** of: local geological formations, and significant local geological events
- **Layers of the Earth**