

Lesson 1

Chemistry 0

Fall 2020, L. Tracey Gao

Our Zoom Meeting on Sundays

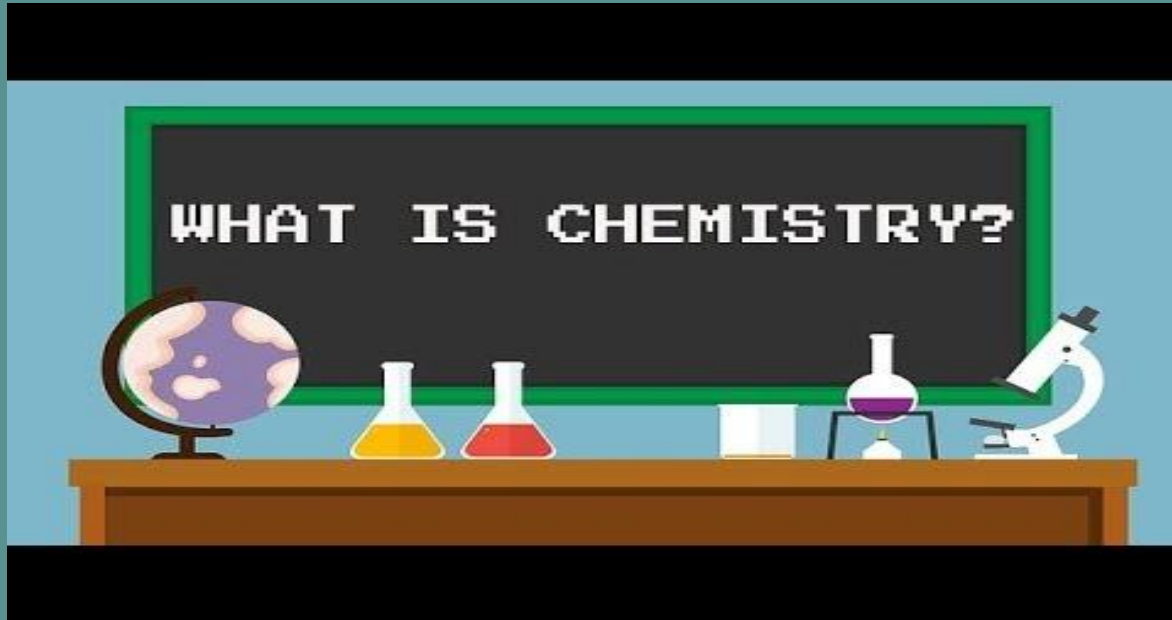
1. Your full name on screen
2. Meeting ID and passcode posted in google classroom

Let's get to know each other!

1. Your name
2. Your school district and grade
3. One fun fact about yourself
4. What have you known about chemistry? Have you heard and known about elements and the periodic table?

What is Chemistry?

Chemistry is a physical science, and it is the study of matter and its properties. It helps us to describe and explain our world.



History of Chemistry

1. The first person we know of who asked questions about matter was Thales, a Greek philosopher.
2. Many of the Greek philosophers then were looking for the essence of all things.
3. Some early experimenters of chemistry were called the **alchemists**. They believed that they could turn lead into gold.
4. By doing quality experiments, early scientists were able to show that basic unit of matter is the **atom**.

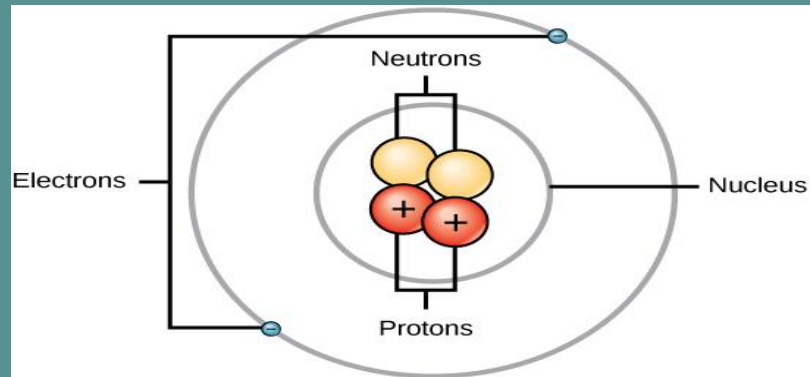


What Is an Atom?

- An atom is the smallest unit of matter that retains all of the chemical properties of an element.
- Atoms combine to form molecules, which then interact to form solids, gases, or liquids.

The Structure of the Atom

- Nucleus:
 - Protons: Positively Charged
 - Neutrons: No Charge
- Outer region of the atom: Electrons



Helium Atom

<https://courses.lumenlearning.com/boundless-chemistry/chapter/the-structure-of-the-atom/>

Branches of Chemistry

The Main Branches of Chemistry



Organic Chemistry



Inorganic Chemistry



Physical Chemistry



Biochemistry



Analytical Chemistry



Basic Concepts

- Technology in Chemistry
- Matter- Solids, Liquids, and Gases
- Chemical Bonding
- The Periodic Table
- Naming Compounds
- Chemical Reactions
- Acid, Base and pH
- Balancing Simple Equations