

Unit 2: Matter and Chemical Change *End of Unit Project*

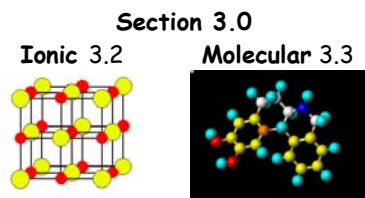
You must also choose **1** of these **CHEMISTRY** Projects to complete the End of Unit Project Assignment

Description of Project Goals

1. To create **3D Ionic and Molecular Comparison Models** that show the differences between these two different types of compounds.
2. To design and construct an **Identification Kit** that will help students Identify unknown chemicals found in the science lab.
3. To prepare a **3D Timeline** which summarizes the story of how the theory of matter evolved.

Background:

Ionic/Molecular Comparison Models (Alone, w/partner)



Forensic ID (Alone or, w/partner)

Identifying Unknown Chemicals
What happens when you come across a chemical in the science lab that is not labeled? How can you positively identify it and then label it correctly, so it can be safely **used** and/or **stored** and/ or **disposed of**?

3D Timeline Story of Matter (Alone, w/partner, Group of 3) Section 2 (2.1)

Throughout time, as people made observations of the world around them, explanations needed to be more detailed and continually modified as new evidence was discovered. Plot the major events to tell your story of how the current **Theory of Matter** developed from past ideas of matter.

Specifications:

Ionic / Molecular Comparison Models (Model)

Each model must represent a common compound and must be complete.

The comparative part of this project is to make a flipchart that will be used with the models during your presentation.

Flipchart Comparisons:

- *Melting and boiling points*
- *Naming procedure*
- *Electrical conductivity*
- *Components (carbon)*
- *Metals/Non-metals*
- *Charges*
- *Position on Periodic table*
- *Crystal shape or structure*
- *State*

Forensic ID (Kit)

Your **Kit** should contain testing supplies and/or directions for testing:

- *Physical characteristics*
- *Chemical characteristics*
- *Acids and bases*
- *Glucose test*
- *Lipid test*
- *Protein test*
- *Starch test*
- *Ionic compound*
- *Molecular compound*
- *Water test*
- *Oxygen test*
- *Phosphates Test*
- *Ammonia test*
- *Heavy metal test*
- *Salt test*
- *Toxin Test (LD50)*

What steps should be followed to accurately identify the unknown chemical substance?

3D Timeline Story of Matter (3D Timeline)

Materials should reflect close connections to the parts of history that they represent.

Timeline should include details from:

- *Stone Age*
- *Bronze Age*
- *Iron age*
- *Alchemy*
- *Chemistry*
- *Atomic Theory*
- *Quantum Theory*

Evaluation:

Product: (Does it apply scientific principles effectively?)
20%

Self-Evaluation
5%

Presentation:
Peer Evaluation
5%

Teacher Analysis
10%