



Course: CP/CPA Chemistry

We hope that you, your families and loved ones are well! During the COVID-19 pandemic school closure, we will be doing our best to provide you engaging activities that will enrich your understanding of Chemistry. During term 4, you will primarily be exploring matter, including characteristics of elements and the formation of ionic and covalent compounds.

Goal for this week

Learning Objectives:

Students will be able to ...

1. to identify covalent bonds.
2. predict the name of a covalent compound.
3. calculate the electronegativity of a bond to determine if it is nonpolar covalent, polar covalent, or ionic.

(2016 MA STE Standard: HS-PS1-2)

Literacy Objectives:

1. Reading: to understand a concept and construct meaning
2. Writing: to take notes
3. Writing: to generate a response to what one has read, viewed, or heard
4. Reasoning: to identify a pattern, explain a pattern, and/or make a prediction based on a pattern

(<https://www.bpsma.org/schools/brockton-high-school/about-us/mission-literacy-charts>)

Lesson:

Chemistry Café: Covalent Bonding Week 1

- See the page(s) below for a complete description of what to do and the resources you will need.
- ***Your science teacher will be in contact to clarify expectations (like when and how to submit your work for credit) for your class.***

WHY THIS MATTERS

Covalent bonding is very important to everyday life. It is how nonmetals bond with one another to create compounds. Covalent compounds can be found in [all living things](#). Complex carbon molecules aren't the only possible building blocks, check out how Caltech scientists are "[Bringing Silicon to Life](#)"!

Additional Support

Email:

- Please reach out to your science teacher with specific questions about the lesson.

Office Hours:

- Here is a list of the [science teachers' office hours](#). Please email your teacher to set up meeting times.

Other questions:

- Science Department Head
Dr. David Mangus
davidmangus@bpsma.org



Chemistry Café

Topic: Covalent Bonding Week 1

Assignments to do:

Click on the link to view the resource ...

1. Read through the [Covalent Bonds](#), [Covalent Compounds](#), [Naming Molecular Compounds](#) PowerPoints and take notes.
2. Have access to the [Valence Electrons Periodic Table](#).
3. Have access to the [Electronegativity Periodic Table](#).
4. Watch the video [The Chemical Bond: Covalent vs. Ionic and Polar vs. Nonpolar](#).
5. Watch the video [Hydrogen Bonds- What Are Hydrogen Bonds- How Do Hydrogen Bonds Form?](#)
6. Watch the video [Naming Covalent Compounds](#).
7. Complete the [Introduction to Covalent Bonding Webquest](#).
8. Choose 3 assignments from the café below to complete:
You should select 1 appetizer, 1 main course, and 1 dessert

Appetizer

Complete the [PLIX Simulation Polarity: Electronegativity](#).

Complete the [Chemical Bonding Worksheet](#).

Complete the [Covalent Bonding Identification Worksheet](#).

Main Course

Complete the [PLIX Simulation: The Structure of Water](#).

Complete the [Worksheet on Visualizing Hydrogen Bonding](#)

Complete the [Chemistry of Water Worksheet](#).

Dessert

Complete the [PLIX Simulation Binary Molecular Compounds – Naming and Formulas: Train Cars](#).

Complete the [Naming Molecular Compounds worksheet](#).

Complete the [Naming Molecular Compounds 2 worksheet](#).

Recommended Pacing

Monday: Begin pre-work assignments, **Tuesday:** Complete pre-work assignments, **Wednesday:** Complete an appetizer, **Thursday:** Complete a main course, **Friday:** Complete a dessert