



## 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 and ionic bonds.
2. predict the structure of a covalent compound.
3. draw resonance structures of covalent compounds.

(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 2

- 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](mailto:davidmangus@bpsma.org)



# Chemistry Café

## Topic: Covalent Bonding Week 2

Assignments to do:

Click on the link to view the resource ...

1. Go through the [Lewis Dot Structures](#), [Comparing Ionic and Covalent Bonds](#), [Multiple Bonds and Resonance Structures](#) and [Drawing Covalent Bonds](#) 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 [Lewis Diagrams Made Easy: How to Draw Lewis Dot Structures](#).
5. Watch the video [Drawing Lewis Structures: Resonance Structures- Chemistry Tutorial](#).
6. Watch the video [Covalent vs. Ionic Bonds](#).
7. Complete the [Lewis Dot Structure Introduction Worksheet](#).
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 [Lewis Electron-Dot Structures: Theory to Structure](#).

Complete the [Lewis Dot Structures Worksheet](#).

Complete the [Lewis Dot Structures Practice. Complete this on a separate sheet of paper](#).

### Main Course

Complete the PLIX Simulation [Resonance: Ozone Resonance](#).

Complete the [Resonance Structure Worksheet](#).

Complete the [Resonance Worksheet 2](#).

### Dessert

Complete the PLIX Simulation [Ionic Bond: Covalent and Ionic Bonding](#).

Complete the [Covalent vs Ionic Worksheet 1](#).

Complete the [Covalent vs Ionic Worksheet 2](#).

### 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