# SPARK Science Lab Worksheet

SPARK Hybrid Education Center | Upper Nov Lab Wk2: Chemical Bonding

Student Name: _____ Date: _____

## Purpose

Investigate: Chemical Bonding

## Materials

* Materials for advanced chemical bonding lab
* Protective equipment
* Data sheets
* Calculator

## Procedure

**1. Review background: Ionic bonds; covalent bonds; Lewis structures; polar vs nonp**

**2. Form a detailed hypothesis with expected data ranges.**

**3. Conduct lab: Lab: build Lewis structures for 8 molecules; determine shape**

**4. Record quantitative data with units.**

**5. Calculate results and determine percent error where applicable.**

## Data / Observations Table

| Trial/Sample | Independent Variable | Dependent Variable M | Calculated Value | % Error |
|---|---|---|---|---|
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## Analysis Questions

**1. What was the quantitative result of this Chemical Bonding lab?**

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**2. Was your hypothesis supported? Cite specific data values.**

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**3. Calculate the percent error if an accepted value is known.**

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**4. What systematic error might affect these results? How would you eliminate it?**

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## Conclusion

In my own words, what did I learn from this lab?

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