

Name
TA

Chemistry 11
2021-2022



Learning Guide # 9: Chemical Bonding I

BIG IDEA: Lewis Dot Diagrams, Ionic Bonds, Covalent Bonds and Electronegativity

Fundamental Knowledge (I know)

- How to draw Lewis dot diagrams for BOTH Ionic and Covalent Compounds
- How to determine the polarity of a molecule
- How to write Lewis structures for basic compounds
- The concept of Resonance AND can explain it using examples

Curricular Competencies (I can)

	Proficiency Scale Teacher and Student self assessment (Circle one)	Evidence (How do you know?)
<u>I can:</u> Formulate physical or mental theoretical models to describe a phenomenon	Emerging (EMG) Initial Understanding Developing (DEV) Partial/Near Complete Understanding Proficient (PRF) Complete Understanding Extending (EXT) Sophisticated Understanding	
Evaluate the validity and limitations of a model or analogy in relation to the phenomenon modelled.	Emerging (EMG) Initial Understanding Developing (DEV) Partial/Near Complete Understanding Proficient (PRF) Complete Understanding Extending (EXT) Sophisticated Understanding	

Student Signature:

Teacher Signature:

Date:

Instructions To help guide your learning, make your way through the activities in Option 1, Option 2, or Option 3. You may “mix and match” between the different Option columns.

TOPIC	OPTION 1	OPTION 2	OPTION 3
Lewis Dot Diagrams AND Ionic Bonds	<p>Create a glossary of the “Key Words” in chapter 9 (Pgs. 357 – 390)</p> <p>Read Pages 358 - 360 and complete Review Questions: 9.1, 9.2, 9.5 – 9.8, and 9.10 – 9.14 on Pgs. 390 and 391.</p> <p>Complete “<i>Example: Practice Exercises</i>” 9.1 on Pgs. 360 and 361.</p>	<p>Create a list of five (5) examples of ionic compounds and their associated Lewis dot diagrams.</p> <p>Read Pages 358 - 360 and complete Review Questions: 9.1, 9.2, 9.5 – 9.8, and 9.10 – 9.14 on Pgs. 390 and 391.</p> <p>AND Create flash cards for each of the “Key Words” in chapter 9 (Pgs. 357 – 390)</p> <p>Complete “<i>Example: Practice Exercises</i>” 9.1 on Pgs. 360 and 361.</p>	<p>Choose your own adventure!</p> <p>Pick up a planning sheet from the Science Kiosk.</p> <p>Create a plan! Make sure you read through the first page of this LG, as you will need to design ways to learn/practice and show your understanding of the topic(s) and skill(s) (competencies.)</p> <p>You will need to have a teacher approve your plan before beginning the LG.</p>
Covalent Bonds AND Electronegativity	<p>Read Pages 366 - 372 and complete Review Questions: 9.27, 9.28, 9.30 - 9.32 and 9.34 on Pgs. 391 and 392.</p> <p>Complete “<i>Example: Practice Exercises</i>” 9.2 on Pg. 371.</p>	<p>Create a list of five (5) examples of covalent compounds and their associated Lewis dot diagrams.</p> <p>Read Pages 366 - 372 and complete Review Questions: 9.27, 9.28, 9.30 - 9.32 and 9.34 on Pgs. 391 and 392.</p> <p>Complete “<i>Example: Practice Exercises</i>” 9.2 on Pg. 371.</p>	
Writing Lewis Structures	<p>Read Pages 372 - 374 and complete “<i>Example: Practice Exercises</i>” 9.3, 9.4, and 9.5 on Pgs. 373 and 374.</p>	<p>Write Lewis Structures for five (5) ionic and or molecular compound (3 + 2 or 2 + 3)</p> <p>Read Pages 372 - 374 and complete “<i>Example: Practice Exercises</i>” 9.3, 9.4, and 9.5 on Pgs. 373 and 374.</p>	
The Concept of Resonance	<p>Read Pages 377 - 379 and complete Review Questions: 9.49 on Pg. 392.</p>	<p>Create a digital project to summarize your understanding about Resonance AND Explain Resonance.</p> <p>Read Pages 377 - 379 and complete Review Questions: 9.49 on Pg. 392.</p>	
Chapter Review	Complete “ <i>problems</i> ” 9.18 and 9.44		
Lab	Lab 9B: Model Building with Covalent Molecules		
Self Assessment	Reflect on the Fundamental Knowledge and Curricular Competencies. Use the rubric and make goals to improve for your next learning guide.		
Interview AND Quiz	See you teacher for an interview (Bring all your complete work to the interview) AND to have a quiz slip signed for the test center.		

Resources can be found at www.THSSscience.com or the Science Kiosk

User: THSS

Password: science