

Lesson 2 Compounds, Chemical Formulas, and Covalent Bonds

Predict three facts that will be discussed in Lesson 2 after reading the headings. Record your predictions in your Science Journal.

Main Idea

From Elements to Compounds

I found this on page _____.

I found this on page _____.

I found this on page _____.

Covalent Bonds—Electron Sharing


I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

Details

 **Recall** information about elements and compounds. Read each statement. If it is true, write T in the center column. If it is false, write F in the center column and rewrite the underlined words to make the statement true.

Statement	T or F	Correction
<u>Compounds</u> are chemical combinations of <u>elements</u> .		
Compounds <u>usually</u> have the same properties as the <u>bonds</u> they are made from.		
Atoms form bonds by sharing <u>physical properties</u> .		

Define covalent bond.

Describe types of covalent bonds.

Covalent Bond	Description of Valence Electron Sharing	Comment on the Strength of the Bond
Single		
Double		
Triple		

Lesson 2 | Compounds, Chemical Formulas, and Covalent Bonds (continued)

Main Idea

Covalent Compounds

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Details

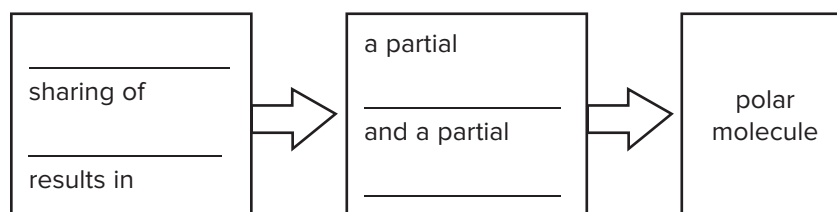
 **Identify** 4 common properties of covalent compounds.

1. _____
2. _____
3. _____
4. _____

Complete the analogy.

Atom is to element as _____ is to compound.

Summarize the structure of polar molecules.



 **Explain** why water is a polar molecule.

Differentiate polar and nonpolar molecules with regard to shared electrons.

Polar Molecules	Nonpolar Molecules

Relate the saying “like dissolves like” to the ability of compounds to dissolve one another.

Lesson 2 | Compounds, Chemical Formulas, and Covalent Bonds (continued)

Main Idea

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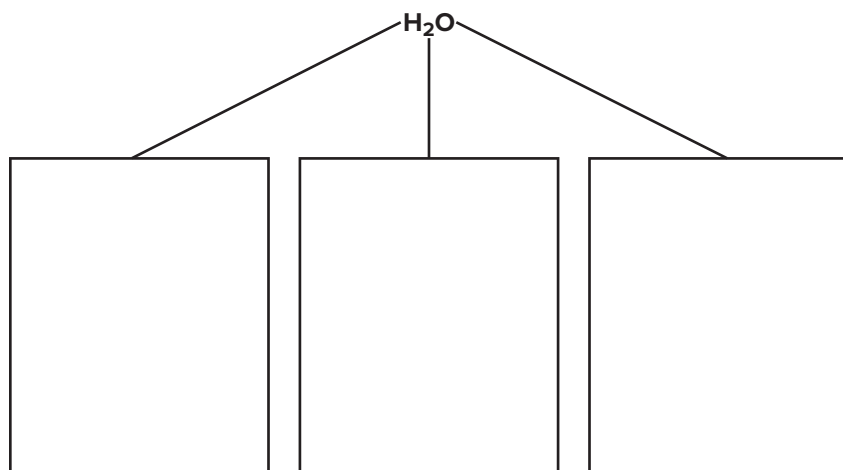
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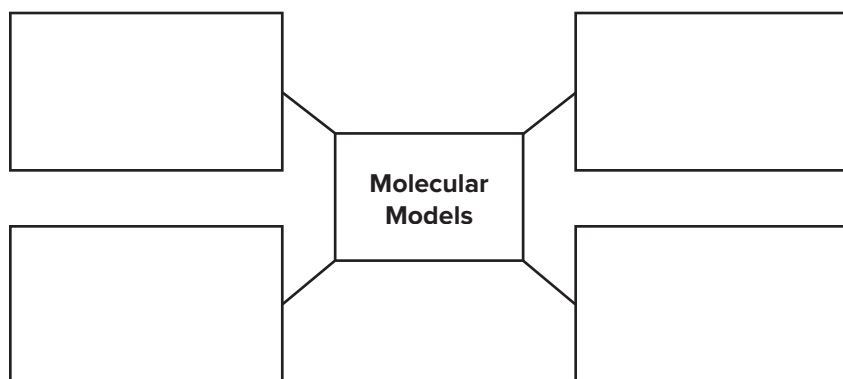
Details

Define chemical formula.

Explain the chemical formula for a molecule of water. Describe what each symbol represents.



Identify four types of molecular models.



Connect It

Explain why there are many more covalent compounds than there are pure elements.
