

Covalent Compound Scavenger Hunt

- 1) List three covalent objects that can be found in the sinks in this classroom:
 - a) _____
 - b) _____
 - c) _____

- 2) Haikus are three line Japanese poems where the first line has five syllables, the second has seven syllables, and the third has five syllables. Write a haiku about how the electrons behave when a covalent compound is formed.

- 3) Find one example of an edible covalent compound somewhere in the book and give its name, molecular formula, and empirical formula.

Name: _____

Molecular formula: _____

Empirical formula: _____

- 4) Give the names and molecular formulas of five covalent compounds that has "oxide" somewhere in the name. These compounds must actually exist, so don't just make them up!
 - a) _____
 - b) _____
 - c) _____
 - d) _____
 - e) _____

- 5) Describe how a blind person might determine whether a compound is ionic or covalent if they were working alone in a laboratory.
- 6) Ask somebody who is not in your group the following question: "If you were a chemical, would you want to be ionic or covalent, and why?" Write their answer below:
- 7) Write the names of everyday objects that have the same shapes as the following molecular shapes.
- linear: _____
- bent: _____
- trigonal pyramidal: _____
- trigonal planar: _____
- tetrahedral: _____
- 8) Draw the Lewis structures of any three covalent molecules whose formulas can be found in the Appendix of your book:

Covalent Compound Scavenger Hunt - Key

- 1) List three covalent objects that can be found in the sinks in this classroom:
Any three covalent compounds would be fine. Common things include soaps, sponges, paper towels, pencils, pens, and other covalent objects.
- 2) Haikus are three line Japanese poems where the first line has five syllables, the second has seven syllables, and the third has five syllables. Write a haiku about how the electrons behave when a covalent compound is formed.
As long as the poem is three lines long with the correct number of syllables and emphasizes that covalent bonds involve the sharing of electrons, give this credit.
- 3) Find one example of an edible covalent compound somewhere in the book and give its name, molecular formula, and empirical formula.
The thing they list should be a pure covalent compound, and answers will vary.
- 4) Give the names and molecular formulas of five covalent compounds that has "oxide" somewhere in the name. These compounds must actually exist, so don't just make them up!
Any five compounds and formulas of real covalent compounds with "oxide" in the name are acceptable.
- 5) Describe how a blind person might determine whether a compound is ionic or covalent if they were working alone in a laboratory.
If they touch it, it may be soft. It may burn. It may be a liquid or gas. Any other answers which are correct are acceptable.

- 6) Ask somebody who is not in your group the following question: "If you were a chemical, would you want to be ionic or covalent, and why?" Write their answer below:

You will get some very peculiar answers for this one!

- 7) Write the names of everyday objects that have the same shapes as the following molecular shapes.

linear: **baseball bat, golf club, pencil, pen, etc.**

bent: **boomerang, barbecue tongs, forceps, etc.**

trigonal pyramidal: **be generous when giving credit for this one, as there really aren't very many trigonal pyramidal objects in everyday use.**

trigonal planar: **Mercedes hood ornament, etc.**

tetrahedral: **some jacks, pyramids, etc.**

- 8) Draw the Lewis structures of any three covalent molecules whose formulas can be found in the Appendix of your book:

Any three Lewis structures are good, as long as they are correct.