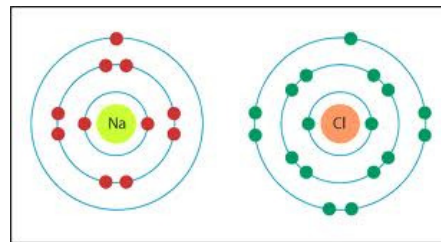


Mini Poster Assignment for Comparison of Covalent and Ionic Compounds

Name: _____

Period: _____



Objective: To show how ionic and covalent compounds are formed and how they are similar and different.

How to do it:

1. Choose one ionic compound and one covalent compound
2. The appropriate chemical formulas for each of the compounds should be included on the poster, with a description of what the chemical formula represents (note: there are slight differences between the meaning of the formula for an ionic and a covalent compound—look back in your notes).
3. *Name* the chemical compound, using the correct naming convention.
4. Draw the individual atoms involved as Bohr models (see diagram in top right), including their electron configurations (i.e. $\text{Na} = 1s^2 2s^2 2p^6 3s^1$)
5. Show how those atoms become compounds – through diagrams and description. Ionic compound formation could be shown using electron dot notation or the ion card modeling activity with a corresponding description of what is represented in the diagram. Covalent compound formation should be shown using a Lewis structure drawn in the correct geometry with a corresponding description of what it represents.
6. Write a small description of the properties and/or uses of both of the compounds. Be sure to include the websites (name and URL) where you found your information.
7. Indicate an analysis of all of the similarities and differences between ionic and covalent compounds. Include a minimum of 5 *significant* similarities and 5 *significant* differences between the two types of compounds. They should be topics that we learned in class—not random information from the internet.

Ionic:

Choose any compound that can be created using the first 20 elements in the periodic table from Hydrogen to Calcium. - Do not do use: NaCl...too easy...

Covalent:

Please choose from the following list of covalent compounds – or get the okay from me for another compound: CH_4 , NF_3 , CCl_4 , SF_2 , NCl_3 , NH_3 , SiO_2 , CS_2 , Cl_2O , NH_3 , Cl_2 , F_2 , S_2

YOUR POSTER IS DUE AT THE END OF CLASS ON FRIDAY, FEBRUARY 14th (Happy Valentine's Day ☺)

The rough draft will be on the back of this sheet and just be a sketch of the compounds and list of similarities and differences. For the good copy use a 11x17 sheet of paper that is provided. If you lose the sheet – please buy an appropriately sized paper. Do not hand in a large poster.

Grading Criteria:

Beginning (0)	Developing (1-2)	Accomplished (3-4)	Exemplary(5-6)
Communication			
The student does not reach a standard described by any of the descriptors given to the right.	The student uses a limited range of scientific language correctly . The student communicates scientific information with limited effectiveness . When appropriate to the task, the student makes little attempt to document sources of information.	The student uses some scientific language correctly. The student communicates scientific information with some effectiveness . When appropriate to the task, the student partially documents sources of information.	The student uses sufficient scientific language correctly. The student communicates scientific information effectively . When appropriate to the task, the student fully documents sources of information correctly .
<p>Sufficient scientific language - electrons, proton, neutrons, ionization, transfer, sharing, ionic bonding, covalent bonding, orbits, charges and brackets, a thorough and complete list of similarities and differences</p> <p>Effectively – clear Bohr diagrams, nucleus properly labelled, electrons clear, transfer or sharing made clear, colour used to enhance understanding, similarities and differences clearly distinguished</p> <p>Fully documents sources correctly – for all sites used for #6 above – website name and URL given.</p>			
Knowledge and Understanding			
The student does not reach a standard described by any of the descriptors given to the right	The student recalls some scientific ideas, concepts and/or processes.	The student describes scientific ideas, concepts and/or processes.	The student uses scientific ideas, concepts and/or processes correctly to construct scientific explanations .
<p>Correctly constructs scientific explanations –</p> <ul style="list-style-type: none"> • Steps of ionic and covalent bonding shown correctly • Bohr diagrams drawn correctly • Short yet complete description of the properties and/or uses of each compound • An exhaustive list of similarities and differences between ionic and covalent compounds is given. 			

Set up the poster like this:

Ionic	Covalent
Name	Name
Chemical Formula and what it represents	Chemical Formula and what it represents
Application/Properties of the Compound (include the websites used)	Application/Properties of the Compound (include the websites used)
Bohr diagrams of the atoms involved, including electron configuration	Bohr diagrams of the atoms involved, including electron configuration
Ionic Bonding – diagram and description	Covalent Bonding – diagram and description
Similarities and Differences between Ionic and Covalent Compounds	