

**Unit: Chemistry: Compounds and Naming**

**Unit Question: What's in a name?**

**At the end of the unit students will be expected to know:**

- The difference between ionic and covalent compounds
- How to name ionic and covalent compounds
- How to construct formulae for ionic and covalent compounds
- How ionic and covalent compounds may affect our environment

**Areas of Interaction:**

- Approaches to Learning
- Environments

**Summative Tasks:**

- Each student will design their own compound and naming quiz with a minimum of 20 open-ended questions
- Their quiz must include an answer key
- Each student will assign their quiz to a random person in their class. They will assess the students' quiz themselves, and the teacher will also assess the quiz
- Each student will also research a specific ionic or covalent compound and write a 700 word essay which describes the physical and chemical properties of the compound, and the compound's effect on the environment
- Criterion A and C rubrics will be used for assessment (attached on the back)

**Due Date:** \_\_\_\_\_

### Criteria A: One World

Student: \_\_\_\_\_ Grade: \_\_\_\_\_  
 Assignment: \_\_\_\_\_ Date: \_\_\_\_\_

Students should understand the interdependence of science and society. Students are expected to discuss how science is applied and used to solve specific problems in life and society. Students should be given the opportunity to explore local and global scientific issues and evaluate the interaction between science and scientific developments with social, economic, political, environmental, cultural and ethical factors. Assessment tasks should allow students to demonstrate their understanding of the role of science in society through the development of analysis and critical thinking. Suitable assessment tasks to assess this criterion include essays, case studies and research projects, but also debates and oral presentations.

	0	1-2	3-4	5-6
<b>Issue Explanation</b>	The student does not reach a standard described by any of the descriptors given with respect to ionic or covalent compounds.	The student mentions how chemical compounds are applied to addressing a specific local or global issue in the environment.	The student describes how chemical compounds are applied to addressing a specific local or global issue in the environment.	The student explains how chemical compounds are applied to addressing a specific local or global issue concerning the environment.
<b>Benefits and Limitations</b>	The student does not reach a standard described by any of the descriptors given respect to ionic or covalent compounds.	The student states some of the benefits or limitations of chemical compounds in addressing an issue with environments.	The student describes some of the benefits or limitations of chemical compounds in addressing an issue with environments.	The student explains some of the benefits and limitations of chemical compounds in solving an issue with environments.
<b>Impact</b>	The student does not reach a standard described by any of the descriptors given respect to ionic or covalent compounds.	The student attempts to describe how chemical compounds and their applications interact with at least one of the following factors: social, economic, political, environmental, cultural and ethical.	The student describes how chemical compounds and their applications interact with at least one of the following factors: social, economic, political, environmental, cultural and ethical.	The student discusses how chemical compounds and their applications interact with some of the following factors: social, economic, political, environmental, cultural and ethical.

Criterion A: One World	Score
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### Criteria C: Scientific Knowledge and Concepts

Student: \_\_\_\_\_ Grade: \_\_\_\_\_  
 Assignment: \_\_\_\_\_ Date: \_\_\_\_\_  
 Students should show their understanding of the main scientific ideas and concepts of science, by applying these to solve problems in familiar and unfamiliar situations. Students should develop critical-thinking skills to analyze and evaluate scientific information.

Suitable assessment tasks to assess this criterion include complex questions in tests, critical analysis of case studies, research projects or media articles on scientific issues. Assessment tasks should provide opportunities for students to demonstrate their understanding by solving problems in familiar and unfamiliar situations, and by analyzing and evaluating scientific information presented to them.

	0	1-2	3-4	5-6
<b>Scientific Ideas and Concepts</b>	The student does not reach a standard described by any of the descriptors given in relation to naming compounds.	The student recalls some scientific ideas and concepts in relation to naming compounds.	The student explains scientific ideas and concepts in relation to naming compounds.	The student thoroughly explains scientific ideas and concepts in relation to naming compounds.
<b>Application of Scientific Understanding</b>	The student does not reach a standard described by any of the descriptors given in relation to naming compounds.	The student applies scientific understanding to solve simple problems in relation to naming compounds.	The student applies scientific understanding to solve problems in familiar situations in relation to naming compounds.	The student applies scientific understanding to solve problems in familiar and unfamiliar situations in relation to naming compounds.
<b>Analysis of Scientific Understanding</b>	The student shows no ability to analyze scientific information. No explanation is provided in relation to naming compounds.	The student attempts to analyze scientific information by identifying parts, relationships or causes. No explanation is provided or it shows little understanding in relation to naming compounds.	The student analyzes scientific information and provides an explanation that shows understanding. Judgments are made with little or no scientific support in relation to naming compounds.	The student analyzes and evaluates scientific information by making scientifically supported judgments about the validity of the ideas or the quality of the work when naming compounds.

Criterion C:	Score
Knowledge	