



CW High School

Chemistry I A

1. Measurement in Chemistry (16.67%)

Learning Targets

1.1 I can solve problems using scientific notation and significant figures.

Learning Target	Descriptor	Definition
4	Proficient	I can solve problems using scientific notation and significant figures.
3	Developing	I can determine sig figs in multiple step chemistry problems.
2	Basic	I can use convert from regular numbers to significant notation in the correct number of sig figs.
1	Minimal	I can recognize the significant and non-significant zeros.
0	No Evidence	No evidence shown.

1.2 I can apply the use of dimensional analysis on various chemistry problems.

Learning Target	Descriptor	Definition
4	Proficient	I can apply the use of dimensional analysis on various chemistry problems.
3	Developing	I can set up multiple step conversions.
2	Basic	I can use conversion factors to manipulate units.
1	Minimal	I can create conversion factors.
0	No Evidence	No evidence shown.

1.3 I can utilize the metric system to convert various units.

Learning Target	Descriptor	Definition
4	Proficient	I can utilize the metric system to convert various units.
3	Developing	I can create derived units from problems with multiple units.
2	Basic	I can manipulate decimals during unit conversions.
1	Minimal	I can define the prefixes in metric system.
0	No Evidence	No evidence shown.

2. Atomic Structure and the Mole (16.65%)

Learning Targets

2.1 I can describe the various subatomic particles and their properties.



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Learning Target	Descriptor	Definition
4	Proficient	I can describe the various subatomic particles and their properties.
3	Developing	I can describe the properties of atom.
2	Basic	I can communicate locations of particles.
1	Minimal	I can define particles.
0	No Evidence	No evidence shown.

2.2 I can determine average atomic mass using isotope data.

Learning Target	Descriptor	Definition
4	Proficient	I can determine average atomic mass using isotope data.
3	Developing	I can use formula to calculate average atomic mass.
2	Basic	I can calculate % abundance of isotopes.
1	Minimal	I can identify deferent isotopes.
0	No Evidence	No evidence shown.

2.3 I can distinguish between neutrals atoms, isotopes and ions.

Learning Target	Descriptor	Definition
4	Proficient	I can distinguish between neutrals atoms, isotopes and ions.
3	Developing	I can determine particle numbers from notation.
2	Basic	I can determine anion and cation charges.
1	Minimal	I can use atomic notation and isotope notation.
0	No Evidence	No evidence shown.

2.4 I can solve composition stoichiometry problems using the mole.

Learning Target	Descriptor	Definition
4	Proficient	I can solve composition stoichiometry problems using the mole.
3	Developing	I can calculate moles, mass and particles.
2	Basic	I can create conversion factors .



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Learning Target	Descriptor	Definition
1	Minimal	I can determine molar mass.
0	No Evidence	No evidence shown.

3. Electrons and Quantum Numbers (16.67%)

Learning Targets

3.1 I can describe the creation of all forms of electromagnetic radiation.

Learning Target	Descriptor	Definition
4	Proficient	I can describe the creation of all forms of electromagnetic radiation.
3	Developing	I can calculate the energy of a Photon
2	Basic	I can calculate the frequency and wavelength of a photon
1	Minimal	I can communicate how EMR is produced
0	No Evidence	No evidence shown.

3.2 I can use quantum numbers to determine the locations of the electrons.

Learning Target	Descriptor	Definition
4	Proficient	I can use quantum numbers to determine the locations of the electrons.
3	Developing	I can assign quantum #'s to an electron.
2	Basic	I can locate what block an electron is in.
1	Minimal	I can identify what energy level the electron is in.
0	No Evidence	No evidence shown.

3.3 I can develop models of the atom using orbital notation and electron configurations.

Learning Target	Descriptor	Definition
4	Proficient	I can develop models of the atom using orbital notation and electron configurations.
3	Developing	I can write all 4 types of electron configurations.
2	Basic	I can apply notation rules to electron configurations.
1	Minimal	I can use diagonal rule to fill electron orbitals.



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Learning Target	Descriptor	Definition
0	No Evidence	No evidence shown.

3.4 I can describe the connections between the periodic table and orbital configurations.

Learning Target	Descriptor	Definition
4	Proficient	I can describe the connections between the periodic table and orbital configurations.
3	Developing	I can explain why the four blocks on the table exist.
2	Basic	I can communicate the reason why each period is contains so many elements.
1	Minimal	I can identify valence electrons in each family.
0	No Evidence	No evidence shown.

4. Periodicity (16.67%)

Learning Targets


4.1 I can analyze the periodic table and determine properties of elements based on location.

Learning Target	Descriptor	Definition
4	Proficient	I can analyze the periodic table and determine properties of elements based on location.
3	Developing	I can apply electron configurations to the periodic table.
2	Basic	I can describe elements based on their block and energy levels.
1	Minimal	I can connect families to valence electrons.
0	No Evidence	No evidence shown.

4.2 I can predict the various trends of the periodic table.

Learning Target	Descriptor	Definition
4	Proficient	I can predict the various trends of the periodic table.
3	Developing	I can show how elements exchange electrons so they are isoelectric to noble gases.
2	Basic	I can apply coulomb's law to ionization energy, electronegativity and metallic properties.
1	Minimal	I can show patterns in table like mass, atomic # and atomic radius.
0	No Evidence	No evidence shown.

5. Chemical Bonding (16.67%)

 Learning Targets
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5.1 I can classify the bond types and properties of each bond.

Learning Target	Descriptor	Definition
4	Proficient	I can classify the bond types and properties of each bond.
3	Developing	I can categorize intramolecular bonds.
2	Basic	I can categorize intermolecular bonds.
1	Minimal	I can list properties of various bonds.
0	No Evidence	No evidence shown.

5.2 I can draw Lewis structures that represent various bonds.


Learning Target	Descriptor	Definition
4	Proficient	I can draw Lewis structures that represent various bonds.
3	Developing	I can draw bonds and unshared pairs on electrons.
2	Basic	I can create structures that fulfill octet rule.
1	Minimal	I can determine total valence electrons.
0	No Evidence	No evidence shown.

5.3 I can analyze models of molecular geometry to determine bond properties.

Learning Target	Descriptor	Definition
4	Proficient	I can analyze models of molecular geometry to determine bond properties.
3	Developing	I can classify the molecular geometry.
2	Basic	I can determine number of domains around central atom.
1	Minimal	I can determine bond and unbonded domains.
0	No Evidence	No evidence shown.

5.4 I can use the VSEPR theory to determine bond angles.

Learning Target	Descriptor	Definition
4	Proficient	I can use the VSEPR theory to determine bond angles.
3	Developing	I can determine bond angles from valence repulsion.
2	Basic	I can correlate valence shells and dipole moments.


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Learning Target	Descriptor	Definition
1	Minimal	I can define VSEPR.
0	No Evidence	No evidence shown.



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6. Chemical Formulas (16.67%)

Learning Targets

6.1 I can construct various formulas based on bond type.

Learning Target	Descriptor	Definition
4	Proficient	I can construct various formulas based on bond type.
3	Developing	I can write formulas for molecular compounds.
2	Basic	I can determine bond type by electronegativity.
1	Minimal	I can identify metals and nonmetals.
0	No Evidence	No evidence shown.

6.2 I can determine the percent composition, molar mass and empirical formulas.

Learning Target	Descriptor	Definition
4	Proficient	I can determine the percent composition, molar mass and empirical formulas.
3	Developing	I can solve for mass spec data and determine empirical and molecular formulas.
2	Basic	I can calculate percent composition of elements.
1	Minimal	I can determine molar mass.
0	No Evidence	No evidence shown.

6.3 I can use oxidation numbers to determine ionic formula.

Learning Target	Descriptor	Definition
4	Proficient	I can use oxidation numbers to determine ionic formula.
3	Developing	I can write ionic formulas and names.
2	Basic	I can manipulate data to make sum of oxidation numbers equal zero.
1	Minimal	I can utilize oxidation charts to find anion and cation charge.
0	No Evidence	No evidence shown.

Submitted on 10/29/2021 by