



# CW High School

## Chemistry I B

### 1. Reactions and Equations (16.67%)

#### Learning Targets

#### 1.1 I can communicate parts of chemical equations.

Learning Target	Descriptor	Definition
4	Proficient	I can communicate parts of chemical equations.
3	Developing	I can distinguish between formulas and equations.
2	Basic	I can use subscripts and coefficients to count moles and atoms.
1	Minimal	I can identify reactants, products and states of matter.
0	No Evidence	No evidence shown.

#### 1.2 I can construct various chemical equations through the use of oxidation numbers, subscripts and coefficients.


Learning Target	Descriptor	Definition
4	Proficient	I can construct various chemical equations through the use of oxidation numbers, subscripts and coefficients.
3	Developing	I can utilize coefficients to balance equations
2	Basic	I can use oxidation numbers to balance formulas with subscripts.
1	Minimal	I can count atoms in formula's and equations.
0	No Evidence	No evidence shown.

#### 1.3 I can determine reactions types through lab observations and equations.

Learning Target	Descriptor	Definition
4	Proficient	I can determine reactions types through lab observations and equations.
3	Developing	I can predict reactants and products by reaction types.
2	Basic	I can classify reactions by reactants and products present.
1	Minimal	I can identify evidence of chemical reactions.
0	No Evidence	No evidence shown.

#### 1.4 I can convert word equations into numerical equations.

Learning Target	Descriptor	Definition
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Learning Target	Descriptor	Definition
4	Proficient	I can convert word equations into numerical equations.
3	Developing	I can generate correct reactants and products
2	Basic	I can create correct formula's from ions.
1	Minimal	I can translate words into ions and atoms.
0	No Evidence	No evidence shown.



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## Chemistry I B

### 2. Stoichiometry (16.67%)

#### Learning Targets

#### 2.1 I can use equations and stoichiometry to determine moles, mass, and volume.

Learning Target	Descriptor	Definition
4	Proficient	I can use equations and stoichiometry to determine moles, mass, and volume.
3	Developing	I can set up reaction stoich problems.
2	Basic	I can use mole ratios and molar masses for problems.
1	Minimal	I can define reaction stoichiometry.
0	No Evidence	No evidence shown.

#### 2.2 I can determine limited and excess reactants using stoichiometry.

Learning Target	Descriptor	Definition
4	Proficient	I can determine limited and excess reactants using stoichiometry.
3	Developing	I can calculate unused excess reactant.
2	Basic	I can utilized data to find limited reactant.
1	Minimal	I can define limited and excess reactant.
0	No Evidence	No evidence shown.

#### 2.3 I can perform labs to calculate percent yields using lab data and stoichiometry.

Learning Target	Descriptor	Definition
4	Proficient	I can perform labs to calculate percent yields using lab data and stoichiometry.
3	Developing	I can calculate theoretical yield with stoichiometry.
2	Basic	I can determine actual yield from lab data.
1	Minimal	I can use % yield equations.
0	No Evidence	No evidence shown.

### 3. Kinetic Molecular Theory (16.67%)

#### Learning Targets

#### 3.1 I can interpret phase diagrams.



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Learning Target	Descriptor	Definition
4	Proficient	I can interpret phase diagrams.
3	Developing	I can determine phase changes at different pressures and temperatures.
2	Basic	I can communicate the significance of triple points and critical points.
1	Minimal	I can identify regions of solid, liquid and gases.
0	No Evidence	No evidence shown.

### 3.2 I can construct models of intermolecular forces and how they affect states of matter.

Learning Target	Descriptor	Definition
4	Proficient	I can construct models of intermolecular forces and how they affect states of matter.
3	Developing	I can communicate how IMF's effect vapor pressure and phase changes.
2	Basic	I can calculate molar enthalpy of fusion and vaporization.
1	Minimal	I can identify IMF present in molecule.
0	No Evidence	No evidence shown.

### 3.3 I can interpret information from heating curves and calculate enthalpy along curve.

Learning Target	Descriptor	Definition
4	Proficient	I can interpret information from heating curves and calculate enthalpy along curve.
3	Developing	I can calculate the energy at different segments of curve.
2	Basic	I can communicate what is happening on a molecular level at each section.
1	Minimal	I can label parts of heating/cooling curve.
0	No Evidence	No evidence shown.

### 3.4 I can communicate the unique properties of water.

Learning Target	Descriptor	Definition
4	Proficient	I can communicate the unique properties of water.
3	Developing	I can defend why water is more dense as a liquid.
2	Basic	I can describe why the boiling point of water is so high for a light molecule.


  
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Learning Target	Descriptor	Definition
1	Minimal	I can identify dipoles of water molecule.
0	No Evidence	No evidence shown.

#### 4. Gas Laws (16.67%)

##### Learning Targets

4.1 I can use the combined and individual gas laws to determine volume, pressure, moles, rates, and temperature of gas solutions.


Learning Target	Descriptor	Definition
4	Proficient	I can use the combined and individual gas laws to determine volume, pressure, moles, rates, and temperature of gas solutions.
3	Developing	I can manipulate equations for correct variable.
2	Basic	I can create diagram representations of gas molecule collisions.
1	Minimal	I can convert to the correct units
0	No Evidence	No evidence shown.

4.2 I can calculate volume, moles, pressure, and temperature using the ideal gas law.

Learning Target	Descriptor	Definition
4	Proficient	I can calculate volume, moles, pressure, and temperature using the ideal gas law.
3	Developing	I can manipulate a 4 variable equation.
2	Basic	I can utilize the proper rate law constant.
1	Minimal	I can convert to the correct units.
0	No Evidence	No evidence shown.

4.3 I can perform eudiometer lab adjustments with Dalton's law of partial pressure.

Learning Target	Descriptor	Definition
4	Proficient	I can perform eudiometer lab adjustments with Dalton's law of partial pressure.
3	Developing	I can communicate how individual gases sum to total pressure.
2	Basic	I can adjust wet gas to a dry gas.
1	Minimal	I can collect a gas in lab.


  
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Learning Target	Descriptor	Definition
0	No Evidence	No evidence shown.

#### 4.4 I can perform gas stoichiometry on STP and non STP problems.

Learning Target	Descriptor	Definition
4	Proficient	I can perform gas stoichiometry on STP and non STP problems.
3	Developing	I can calculate volume with ideal gas law.
2	Basic	I can utilize molar volume in stoichiometry.
1	Minimal	I can communicate molar volume at STP.
0	No Evidence	No evidence shown.

#### 5. Solutions (16.67%)

##### Learning Targets


##### 5.1 I can determine the solubility of solutes from solubility charts.

Learning Target	Descriptor	Definition
4	Proficient	I can determine the solubility of solutes from solubility charts.
3	Developing	I can determine is solution is saturated or unsaturated.
2	Basic	I can determine amount dissolved at giving temperature.
1	Minimal	I can differentiate between solute and solvent.
0	No Evidence	No evidence shown.

##### 5.2 I can communicate the factors that affect the rates of solubility.

Learning Target	Descriptor	Definition
4	Proficient	I can communicate the factors that affect the rates of solubility.
3	Developing	I can create a solution that inhibits solubility.
2	Basic	I can create a solution that increases the rates of collisions.
1	Minimal	I can list factors that affect rates of solubility.
0	No Evidence	No evidence shown.

##### 5.3 I can calculate the molar enthalpy of solutions.


  
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Learning Target	Descriptor	Definition
4	Proficient	I can calculate the molar enthalpy of solutions.
3	Developing	I can utilize enthalpy to determine energy.
2	Basic	I can identify bonds affecting enthalpy.
1	Minimal	I can calculate moles in solution.
0	No Evidence	No evidence shown.

#### 5.4 I can determine the molarity, molality and mass percent of solutions.

Learning Target	Descriptor	Definition
4	Proficient	I can determine the molarity, molality and mass percent of solutions.
3	Developing	I can calculate concentrations.
2	Basic	I can utilize solution properties.
1	Minimal	I can calculate moles in solution.
0	No Evidence	No evidence shown.

#### 5.5 5. I can solve for the variations of solutions based on their colligative properties.

Learning Target	Descriptor	Definition
4	Proficient	5. I can solve for the variations of solutions based on their colligative properties.
3	Developing	I can determine freezing point depression.
2	Basic	I can calculate boiling point elevation.
1	Minimal	I can calculate molality.
0	No Evidence	No evidence shown.



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## Chemistry I B

### 6. Acid/Base Chemistry (16.65%)

#### Learning Targets

#### 6.1 I can distinguish properties and theories of acids and bases.

Learning Target	Descriptor	Definition
4	Proficient	I can distinguish properties and theories of acids and bases.
3	Developing	I can write neutralization reactions.
2	Basic	I can describe properties of acids and bases.
1	Minimal	I can identify acid/base pairs.
0	No Evidence	No evidence shown.

#### 6.2 I can perform titration labs and interpret titration curves.

Learning Target	Descriptor	Definition
4	Proficient	I can perform titration labs and interpret titration curves.
3	Developing	I can construct a titration curve.
2	Basic	I can interpret a titration curve.
1	Minimal	I can utilize titration equipment.
0	No Evidence	No evidence shown.

#### 6.3 I can calculate pH and concentrations of solutions.

Learning Target	Descriptor	Definition
4	Proficient	I can calculate pH and concentrations of solutions.
3	Developing	I can determine pH of various solutions.
2	Basic	I can communicate pH and pOH scales.
1	Minimal	I can calculate acid base concentrations.
0	No Evidence	No evidence shown.

Submitted on 2/8/2022 by