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| **Atomics** | **Score:\_\_\_\_\_****Letter:\_\_\_\_\_** |
| **Advanced (A)** | **Intermediate (B)** | **Basic (C)** | **Introductory (D)** |
| * \_\_\_\_\_Lewis dot of compounds
* \_\_\_\_polar molecule
* \_\_\_\_\_ (HC) 3D VSEPR structure
* \_\_\_\_\_ (HC) Hybridization of central atom

\_\_\_\_/4 | * \_\_\_\_\_Identifying Bond Types
* \_\_\_\_\_Atypical electron configurations
* \_\_\_\_\_ Spin Diagrams
* \_\_\_\_\_(HC) Calculation of formal charge of atoms/molecule
* \_\_\_\_\_(HC) Quantum Numbers

\_\_\_\_/3 | * \_\_\_\_\_Lewis dot of atom/ion
* \_\_\_\_\_ Electron Configurations
* \_\_\_\_\_Bohr Models of atoms
* \_\_\_\_\_Polar bond
* \_\_\_\_\_ (HC) formal charge of atom

\_\_\_\_/2 | * \_\_\_\_\_ p+, e-, n0
* \_\_\_\_\_Valence Electrons
* \_\_\_\_Polar Definition
* \_\_\_\_\_ (HC) dipole definition

\_\_\_\_/1 |

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| **Trends**  | **Score: \_\_\_\_\_****Letter:\_\_\_\_\_** |
| **Advanced (A)** | **Intermediate (B)** | **Basic (C)** | **Introductory (D)** |
| Utilization of trends to ID element* \_\_\_\_\_Atomic radius
* \_\_\_\_\_Ionic radius
* \_\_\_\_\_Electro-negativity
* \_\_\_\_\_Ionization energy
* \_\_\_\_\_Periodic table location

\_\_\_\_/4 | Explanation of Periodic trends with examples* \_\_\_\_\_Atomic radius
* \_\_\_\_\_Ionic radius
* \_\_\_\_\_Electro-negativity
* \_\_\_\_\_Ionization energy
* \_\_\_\_\_Periodic table location

\_\_\_\_/3 | Explanation of Periodic trends * \_\_\_\_\_Atomic radius
* \_\_\_\_\_Ionic radius
* \_\_\_\_\_Electro-negativity
* \_\_\_\_\_Ionization energy
* \_\_\_\_\_Periodic table location

\_\_\_\_/2 | Definition of Periodic trends* \_\_\_\_\_Atomic radius
* \_\_\_\_\_Ionic radius
* \_\_\_\_\_Electro-negativity
* \_\_\_\_\_Ionization energy
* \_\_\_\_\_Periodic table location

\_\_\_\_/1 |

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| **Nuclear Chemistry** | **Score:\_\_\_\_****Letter:\_\_\_\_** |
| **Advanced** | **Intermediate** | **Basic** | **Introductory** |
| Writing reactions for and explaining* \_\_\_\_\_Alpha
* \_\_\_\_\_Beta
* \_\_\_\_\_Positron Emission
* \_\_\_\_\_ Electron Capture

\_\_\_\_\_/4 | * \_\_\_\_\_How E=mc2 is explained through nuclear chemistry
* \_\_\_\_\_ Nuclear vs. Combustion

\_\_\_\_\_/3 | * \_\_\_\_\_ Explanation of atomic force

\_\_\_\_\_/2 | * \_\_\_\_\_Nuclear vocab

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| **Chemical Reactions** | **Score:\_\_\_\_\_****Letter:\_\_\_\_\_** |
| **Advanced (A)** | **Intermediate (B)** | **Basic (C)** | **Introductory (D)** |
| * \_\_\_\_\_Using Bond energy
* \_\_\_\_\_Balancing chemical equations
* \_\_\_\_\_(HC) Hess’s law

\_\_\_\_/4 | * \_\_\_\_\_Predicting products
* \_\_\_\_\_Solubility

\_\_\_\_/3 | * \_\_\_\_\_Naming/ creating ionic compounds
* \_\_\_\_\_ Naming/ creating covalent compounds

\_\_\_\_/2 | * \_\_\_\_\_Types of chemical reactions
* \_\_\_\_\_ Vocabulary

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| **Waves** | **Score: \_\_\_\_\_****Letter: \_\_\_\_\_** |
| **Advanced (A)** | **Intermediate (B)** | **Basic (C)** | **Introductory (D)** |
| * \_\_\_\_\_Wave equations (2 steps) word application problems
* \_\_\_\_\_Interactions of EMR with matter

\_\_\_\_\_/4 | * \_\_\_\_\_Wave equations (2 steps)
* \_\_\_\_\_photoelectric effect

\_\_\_\_\_/3 | * \_\_\_\_\_Wave equations (1 step)
* \_\_\_\_\_ General EM spectrum and effects therein

\_\_\_\_\_/2 | * \_\_\_\_\_Parts of a wave
* \_\_\_\_\_Vocab

\_\_\_\_\_/1 |

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| **Moles/stoichiometry** | **Score: \_\_\_\_\_****Letter: \_\_\_\_\_** |
| **Advanced** | **Intermediate** | **Basic** | **Introductory** |
| * \_\_\_\_\_Excess Reagent calculations
* \_\_\_\_\_Molecular Formula
* \_\_\_\_\_ (HC) Application of EF and MF

\_\_\_\_\_/4 | * \_\_\_\_\_Limiting Reagent
* \_\_\_\_\_Empirical Formula

\_\_\_\_\_/3 | * \_\_\_\_\_2 step molar conversions
* \_\_\_\_ basic stoichiometry
* \_\_\_\_\_Percent composition

\_\_\_\_\_/2 | * \_\_\_\_\_1 step molar conversions
* \_\_\_\_\_ Percent error
* \_\_\_\_\_ percent yield

\_\_\_\_\_/1 |

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| **Solutions** | **Score:\_\_\_\_\_****Letter\_\_\_\_\_** |
| **Advanced** | **Intermediate** | **Basic** | **Introductory** |
| * \_\_\_\_\_Ion concentration
* \_\_\_\_\_Solution stoichiometry
* \_\_\_\_\_word problem colligative calculations
* \_\_\_\_\_(HC) hydrogen bonding

\_\_\_\_\_/4 | * \_\_\_\_\_HOW things dissolve
* \_\_\_\_\_solubility curve
* \_\_\_\_\_ colligative explanation

\_\_\_\_\_/3 | * \_\_\_\_\_Net ionic equation
* \_\_\_\_\_Solution making (g needed, etc.)
* \_\_\_\_\_basic colligative calculations

\_\_\_\_\_/2 | * \_\_\_\_\_Molarity (mole/L)
* \_\_\_\_\_ concentration measurements
* \_\_\_\_\_Ionic vs covalent dissolution

\_\_\_\_\_/1 |

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| **Acids and Bases** | **Score: \_\_\_\_\_****Letter\_\_\_\_\_** |
| **Advanced** | **Intermediate** | **Basic** | **Introductory** |
| * \_\_\_\_\_Neutralization

\_\_\_\_\_/4 | * \_\_\_\_\_pH, POH, [OH-], [H3O+]

\_\_\_\_\_/3 | * \_\_\_\_\_Acid/base reactions
* \_\_\_\_\_Acid/Base Strength

\_\_\_\_\_/2 | * \_\_\_\_\_Naming Acids
* \_\_\_\_\_Naming Bases

\_\_\_\_\_/1 |

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| **Gas laws** | **Score: \_\_\_\_\_****Letter:\_\_\_\_\_** |
| **Advanced** | **Intermediate** | **Basic** | **Introductory** |
| * \_\_\_\_\_KMT explaining gas laws
* \_\_\_\_\_Phase diagrams
* \_\_\_\_\_Application gas law stoichiometry

\_\_\_\_/4 | * \_\_\_\_\_Combined gas laws
* \_\_\_\_\_ideal gas law
* \_\_\_\_\_Gas law stoichiometry

\_\_\_\_\_/3 | * \_\_\_\_\_Basic gas laws

\_\_\_\_\_/2 | * \_\_\_\_\_KMT definition
* \_\_\_\_\_vocab

\_\_\_\_\_/1 |

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| **Kinetics and Equilibrium General Chemistry** | **Score: \_\_\_\_****Letter:\_\_\_\_** |
| **Advanced** | **Intermediate** | **Basic** | **Introductory** |
| * \_\_\_\_\_Keq applications
* ­\_\_\_\_\_ Q applications
* \_\_\_\_\_ Using experimental data to determine rate law and related information

\_\_\_\_\_/4 | * \_\_\_\_\_Keq calculations
* \_\_\_\_\_ Q calculations
* \_\_\_\_\_Calculations with rate law

\_\_\_\_\_/3 | * \_\_\_\_\_Le Chatelier’s Principle
* \_\_\_\_\_ Rate law
* \_\_\_\_\_ Identifying order of reaction

\_\_\_\_\_/2 | * \_\_\_\_Dynamic Equilibrium
* \_\_\_\_Reaction rate

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| **Kinetics and Equilibrium Honors Chemistry**  | **Score: \_\_\_\_****Letter:\_\_\_\_** |
| **Advanced** | **Intermediate** | **Basic** | **Introductory** |
| * \_\_\_\_Application of Ksp
* \_\_\_\_\_Application of Keq and calculations
* \_\_\_\_\_ Common Ion Effect calculations
* \_\_\_\_\_ Using experimental data to determine rate law and related information

\_\_\_\_\_/4 | * \_\_\_\_\_Ksp Calculations
* \_\_\_\_\_Q calculations
* \_\_\_\_\_Calculations related to rate law
* \_\_\_\_ ICE table

\_\_\_\_\_/3 | * \_\_\_\_\_Le Chatelier’s Principle
* \_\_\_\_\_Keq calculations
* \_\_\_\_ Rate law

\_\_\_\_\_/2 | * \_\_\_\_Dynamic Equilibrium
* \_\_\_\_Reaction rate
* \_\_\_\_ Identifying order of reaction
* \_\_\_\_ Activation Energy

\_\_\_\_/1 |