

Grade ___ Focus Calendar / Units of Study
20___ - 20___

Science – Grade _10_	Unit 1: Section 2A: Why We Use What We Do	Unit 2: Sections 1A/1B: Sources & Uses of Water & Looking at Water & Its Contaminants	Unit 3: Section 1C: Investigating the Cause of the Fish Kill	Unit 4: Section 1D: Water Purification and Treatment	Unit 5: Section 2C: Conserving Matter	Unit 6: Section 2B: Earth’s Mineral Resources
Key Skills	<ul style="list-style-type: none"> -Chemical vs. physical properties and chemical vs. physical changes -metals/nonmetals/metalloids -elements -periodic table & trends -basic atomic structure 	<ul style="list-style-type: none"> -Direct vs. Indirect Water uses -separation of mixtures based on physical properties -hydrologic cycle -water purification -data collection & analysis -physical properties of water -classification of matter -symbols, formulas, equations -formula writing -atoms and ions -modeling 	<ul style="list-style-type: none"> -Solubility, saturation, supersaturation -Polarity -Intermolecular forces -Solubility curves -Relationships between temperature, pressure and solubility -Data analysis 	<ul style="list-style-type: none"> -Hydrologic cycle -Water purification -Water softening 	<ul style="list-style-type: none"> -Law of conservation of matter -Balanced chemical equations -Mole and molar mass -Molar relationships/ stoichiometry -Percent composition -Cycling processes in materials -Dimensional analysis/factor label 	<ul style="list-style-type: none"> -Earth’s composition -Reactivity of metals/activity series -Properties of metals -Metallic trends -Oxidation-reduction reactions -Electron dot structures
Academic Vocabulary	<ul style="list-style-type: none"> -Compare & Contrast -Identify -Sequencing -Predict -Describe -Recognize -Calculate 	<ul style="list-style-type: none"> -Identify -Classify -Analyze -Describe -Diagram -Visualize -Predict -Evaluate -Compare & Contrast 	<ul style="list-style-type: none"> -Define -Describe -Predict -Classify -Interpret -Explain 	<ul style="list-style-type: none"> -Compare & Contrast -Describe -Evaluate -Assess 	<ul style="list-style-type: none"> -State -Apply -Explain -Identify -Describe -Calculate -Distinguish -Compare & Contrast 	<ul style="list-style-type: none"> -Describe -Recognize -Identify -Explain -Define -Distinguish
Reading/Writing Skills	<ul style="list-style-type: none"> -Compare & Contrast -Sequencing -Summarize -Spelling/Grammar -Writing a Question 	<ul style="list-style-type: none"> -Constructed Response based on Evaluation -Compare & Contrast -Summarize -Spelling/Grammar -Writing a Question 	<ul style="list-style-type: none"> -Making Predictions -Summarize -Spelling/Grammar -Writing a Question 	<ul style="list-style-type: none"> -Compare & Contrast -Summarize -Spelling/Grammar -Writing a Question 	<ul style="list-style-type: none"> -Compare & Contrast -Summarize -Spelling/Grammar -Writing a Question 	<ul style="list-style-type: none"> -Summarize -Spelling/Grammar -Writing a Question -Sequencing

Grade ____ Focus Calendar / Units of Study
20__ - 20__

Math Skills	-Addition -Subtraction	-Addition -Subtraction -Multiplication -Division	-Addition -Subtraction -Multiplication -Division -Proportions -Graphing	N/A	-Addition -Subtraction -Multiplication -Division	-Addition -Subtraction
Power Standards/GLEs Assessed	Chem PS 1, PS 4	Chem PS 1, PS 2, PS 4, PS 7	Chem PS 4, PS 7	Chem PS 7	Chem PS 2, PS 3, PS 7	Chem PS 1, PS 4, PS 7
Labs	Metal or Nonmetal -Determining properties of metals and nonmetals	Foul Water Water Use Analysis Water Testing -ions in solution	Solvents	Water Softening	Counting by Weighing with M&M's Rice Krispie Stoichiometry	Relative Reactivity of Metals
Approximate Instruction Dates	6 class periods	14 class periods	8 class periods	4 class periods	9 class periods	6 class periods

Grade ___ Focus Calendar / Units of Study
20___ - 20___

Science – Grade ____	Unit 7: Section 2D: Materials: Designing for Desired Properties	Unit 8: Section 4A: Gases in the Atmosphere	Unit 9: Section 4B: Radiation and Climate	Unit 10: Section 4C: Acids in the Atmosphere	Unit 11: Section 4D: Air Pollution: Sources, Effects, and Solutions	Unit 12: Sections 3A/3C: Petroleum: What Is It? & Petroleum: A Building Material Source
Key Skills	<ul style="list-style-type: none"> -Allotropes -Metal alternatives -Alloys and semiconductors -Modifying surfaces 	<ul style="list-style-type: none"> -Atmospheric composition -Molecular view of solids/liquids/gases -Pressure -Base and derived units/SI units -Atmospheric pressure -Kinetic molecular theory -Boyle’s/Charles’s laws -Kelvin temperature -Ideal and nonideal gases -Molar volumes -Ideal gas law 	<ul style="list-style-type: none"> -Electromagnetic spectrum -Photons -Frequency/wavelength -IR/visible/UV radiation -Greenhouse gases -Thermal properties -Specific heat capacity -Carbon cycle 	<ul style="list-style-type: none"> -Acid rain – what it is/its impact/addressing the problem -Arrhenius acids/bases and neutralization -Molarity -pH scale -Strengths of acids and bases -Ionization/dynamic equilibrium/buffers 	<ul style="list-style-type: none"> -Air pollutant sources -Particulate matter -Photochemistry -Smog formation -Filtering mechanisms for pollutants -Collision theory -Activation energy -Catalysts -Free radical reactions: ozone and CFCs 	<ul style="list-style-type: none"> -Combustion reactions -Intermolecular forces -Hydrogen bonding and boiling points -Distillation -Lewis structures -Covalent bonding -Electron shells -Isomers -Double bonding -Saturated/unsaturated compounds
Academic Vocabulary	<ul style="list-style-type: none"> -Explain -Illustrate -Describe -Differentiate 	<ul style="list-style-type: none"> -Identify -Describe -Define -Apply -State -Explain -Calculate 	<ul style="list-style-type: none"> -Identify -Describe -Calculate -Explain -Discuss 	<ul style="list-style-type: none"> -Explain -Describe -Define -Distinguish -Calculate -Compare 	<ul style="list-style-type: none"> -Identify -Describe -Compare & Contrast 	<ul style="list-style-type: none"> -Describe -Draw -Identify -Define -Predict -Explain -Compare & Contrast -Distinguish -Apply
Reading/Writing Skills	<ul style="list-style-type: none"> -Summarize -Spelling/Grammar -Writing a Question 	<ul style="list-style-type: none"> -Summarize -Spelling/Grammar -Writing a Question 	<ul style="list-style-type: none"> -Summarize -Spelling/Grammar -Constructed Response -Writing a Question 	<ul style="list-style-type: none"> -Compare -Summarize -Spelling/Grammar -Writing a Question 	<ul style="list-style-type: none"> -Compare & Contrast -Spelling/Grammar -Writing a Question 	<ul style="list-style-type: none"> -Compare & Contrast -Making Predictions -Summarize -Spelling/Grammar -Writing a Question

Grade ____ Focus Calendar / Units of Study
20__ - 20__

Math Skills	-Addition -Subtraction	-Addition -Subtraction -Multiplication -Division -Proportions -Graphing	-Addition -Subtraction -Multiplication -Division	-Addition -Subtraction -Multiplication -Division -Scientific Notation	N/A	-Addition -Subtraction -Multiplication -Division -Graphing
Power Standards/GLEs Assessed	Chem PS 4, PS 7	Chem PS 6	Chem PS 5, PS 7	Chem PS 4, PS 7	Chem PS 7	Chem PS 2, PS 4, PS 7
Labs	Striking It Rich Electroplating	Properties of Gases Hot Air Balloon	Specific Heat Capacity Solar Radiation/ Greenhouse Effect	Acid Rain Buffers	Air Particulates	Viscosity
Approximate Instruction Dates	5 class periods	12 class periods	5 class periods	5 class periods	5 class periods	8 class periods

Grade ____ Focus Calendar / Units of Study
20__ - 20__

Science – Grade ____	Unit 13: Section 3D: Energy Alternatives to Petroleum	Unit 14: Section 3B: Petroleum: An Energy Source				
Key Skills	-Energy sources -Biomolecules -Alternate fuel and alternate fuel vehicles	-Kinetic and potential energy -Law of conservation of energy -Exothermic and endothermic -Potential energy diagrams -Energy efficiency/ energy conversions -Combustion reaction -Heat of combustion -Altering fuels				
Academic Vocabulary	-Describe -Evaluate	-Distinguish -Identify -Explain -Draw -Interpret -State -Calculate -Describe -Apply				
Reading/Writing Skills	-Summarize -Spelling/Grammar -Writing a Question	-Summarize -Spelling/Grammar -Writing a Question				
Math Skills	-Addition -Subtraction -Multiplication -Division	-Addition -Subtraction -Multiplication -Division				
Power Standards/GLEs Assessed	Chem PS 7	Chem PS 5, PS 7				

Grade ___ Focus Calendar / Units of Study
20___ - 20___

Labs	Biodiesel Fuel	Combustion				
Approximate Instruction Dates	3 class periods	6 class periods				