

Map: **Bartels, Hoffman, Michelitch - Physical Science** Type: **Projected** Grade Level: **8** School Year: **2007-2008**

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This map copied from: **Science: Grade 8 - Bajohr/Harouche/Anderson** by **Michele Bajohr**

	Essential Questions	Content	Skills	Assessments	Standards/PIs
September	<p>How does the scientific method help to solve problems?</p> <p>Why do scientists use the scientific method?</p> <p>Why do scientists test one variable (independent) at a time?</p> <p>What is the sequence of the scientific method?</p> <p>Why are graphs important?</p> <p>How do scientists graph data?</p> <p>What are the rules to follow when working in the science laboratory?</p> <p>How do we properly use the triple beam balance, graduated cylinder, over flow tank, and microscope?</p> <p>How is a well designed investigation developed?</p> <p>How are graphs useful to show trends in data?</p> <p>How do you determine the factor that is the independent/ dependent variable?</p> <p>Why do scientists use the metric system?</p> <p>How do we convert between units when using the metric system?</p>	<p>Scientific Method/ Review of Measurement and Graphing in the context of the scientific method.</p> <p>Mathematic deductive and inductive reasoning are used to reach mathematical conclusions.</p> <p>Critical thinking skills are used in the solution of mathematical problems.</p> <p>Scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.</p> <p>The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena.</p> <p>Scientific Method</p> <p>Constants</p> <p>Control Group</p> <p>Observation</p> <p>Inference</p> <p>Independent Variable</p> <p>Dependent Variable</p> <p>Hypothesis</p> <p>Conclusion</p>	<p>List the steps of the scientific method in order.</p> <p>Define all of the steps of the scientific method.</p> <p>Match the steps of the scientific method with the definition of the step.</p> <p>Discuss why scientists use the scientific method when solving a problem.</p> <p>Explain the importance of the scientific method.</p> <p>Demonstrate the scientific method.</p> <p>Design charts, tables, graphs that address their research question.</p> <p>Measure length, mass, volume and density .</p> <p>Compute mass by difference and when using weighing paper.</p> <p>Distinguish between different types of measurements and units.</p> <p>Round to the nearest tenth when making measurements.</p>	<p>Scientific Method Experiment very basic experiment</p> <p>Scientific Method Worksheet #1 order of method</p> <p>Review Sheet- Scientific method, Measurement, and Graphing</p> <p>Test- Scientific Method Test, Graphing Test, Measurement</p> <p>Quiz- Scientific Method, Measurement, and Graphing, Sponge Bob on Independent and Dependent Variable</p> <p>Laboratory Experiments- Scientific Method, Mass, Length, Volume, Density</p> <p>Worksheets- Scientific Method, Mass, Length, Units, Volume, Density</p> <p>Observation- of Cooperative Assignments</p> <p>Puzzle- Measurement</p> <p>Question and answer - Scientific Method, Graphing and Measurement</p> <p>scientific method test</p> <p>Scientific Method Worksheet</p> <p>analyzing method</p>	<p>MST1-K4-2B</p> <p>MST1-K4-2A</p> <p>MST1-K4-2C</p> <p>MST1-K4-2D</p> <p>MST1-K5-2A</p> <p>MST1-K5-2B</p> <p>MST1-K5-2C</p> <p>MST1-K6-2A</p> <p>MST1-K6-2C</p> <p>MST1-K6-2B</p> <p>MST6-K3-3A</p> <p>MST2-K1-1A</p> <p>MST2-K1-1C</p> <p>MST2-K1-1D</p> <p>MST2-K1-1E</p>