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

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Created: **10/19/2007** Last Updated: **11/06/2007**

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