

Standard(s)	Unit/Topic	Essential Skills: What do students absolutely need for the next level?	Resources Used	Assessment
MST Standard 1, 2, + 4	Unit 1: Measurement	<ol style="list-style-type: none"> 1. Express numbers in scientific notation. 2. Perform simple operations on numbers expressed in scientific notation with a scientific calculator. 3. Identify the basic units of The International System of Units. 4. Identify the common metric units used in physics. 5. Identify the most used metric prefixes and their numerical equivalents. 6. Perform conversions between common units and prefixes. 7. Define the terms accuracy and precision. 8. Determine significant digits (figures) for calculations. 9. Apply the rules for adding, subtracting, multiplying and dividing measurements. 		Homework, Quizzes, Lab write-ups, Exams

		<p>10. Define mass, volume, and density.</p> <p>11. Perform density calculations isolating each variable.</p> <p>12. Define and use percent error for calculations and measurements.</p>		
	Unit 2: Matter and Atomic Structure	<p>1. What is matter?</p> <p>2. What are the phases of matter? How can the three phases be distinguished from one another?</p> <p>3. What are physical properties? List several common physical properties. What are physical changes? Give examples of physical changes.</p> <p>4. What are chemical properties? List several chemical properties. What are chemical changes? Give some examples of chemical changes.</p> <p>5. What are the two types of mixture? How are mixtures separated?</p> <p>6. What is an element?</p> <p>7. What is a compound?</p>	Prentice Hall Chemistry textbook, Physical vs. Chemical Properties Lab, Classification of Matter Lab, Average Atomic Mass Lab	Homework, Quizzes, Lab write-ups, Exams

		<p>8. What is an atom? What are subatomic particles?</p> <p>9. What is Dalton's atomic theory?</p> <p>10. What is Rutherford's Gold Foil Experiment? What conclusions did Rutherford come to?</p> <p>11. What is the atomic number? How does the atomic number relate to subatomic particles?</p> <p>12. What is the mass number? How do we use the mass number to determine the number of neutrons?</p> <p>13. What are isotopes?</p> <p>14. What is an atomic mass unit?</p> <p>15. How is the atomic mass of an element determined?</p>		
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MST Standard 1, 2, + 4	Unit 2: Kinematics	<ol style="list-style-type: none">1. Calculate acceleration and other variables using different formulas derived from acceleration formula.2. Determine factors that affect projectile motion.3. Solve projectile motion problems using the formulas covered thus far.	Labs and Lab materials	Homework, Quizzes, Lab write-ups, Exams
	Unit 3: Statics and Dynamics	<ol style="list-style-type: none">1. Solve force problems involving objects at equilibrium.2. Discuss and explore Newton's Laws of motion.3. Determine the force of friction acting between objects.	Lab materials	Homework, Quizzes, Lab write-ups, Exams