

| Topic, Unit, Theme or Process Taught   | Maine LEARNING RESULT Links (Standard and PI) | Strategies/Skills/Concepts/Secure Goals<br>By the end of this grade level or course, learners will be able to:   | Resources<br>(Complete bibliographic form for required texts or resources and lists of supplementary resources) | Assessments and Major Assignments<br>(Tests, quizzes, projects, papers, homework, labs, etc.) |
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| For all units: <u>Chemistry in the Community</u> ChemCom-4 <sup>th</sup> Ed. 2002<br>HW Freeman and Co. New York |   |  |   |   |
| Unit 1<br>Water  |   | Structure of Matter<br>Physical properties of matter (states)<br>Density<br>Mixtures and solutions<br>Ions & Ionic Compounds<br>Protons, Neutrons, Electrons<br>Chemical Formulas<br>Solubility<br>Temperature | Lesson 5<br>Lesson 3<br>Lesson 4<br>Lesson 13<br>Lesson 11<br>Lesson 5<br>Lesson 2<br>Lesson 13<br>Lesson 4     |   |
| Unit 2<br>Materials:<br>Structure and Uses   |   | Periodic Table-properties based on position in table (grouping elements)<br>Physical properties of matter<br>Reactivities<br>Balancing Equations<br>Conservation of Matter<br>Molar Masses                     | Lesson 6<br>Lesson 3<br>Lesson 11<br>Lesson 9<br>Lesson 9<br>Lesson 7   |   |
| Unit 3<br>Petroleum:<br>Breaking & Making Bonds  |   | Chemical Bonding<br>Conservation of Energy<br>Heat & Combustion<br>Condensation<br>Hyrdocarbons<br>Enthalpy  | Lesson 11<br>Lesson 12<br>Lesson 13   |   |

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| Unit 4<br>Air: Chemistry<br>& the<br>Atmosphere |  | Gases<br>Pressure<br>Kinetic Theory<br>Boyle's Law & P-V Relationship<br>Temp-Vol. Relations & Charles' Law<br>T-V-P Relations<br>Thermal Properties of Matter<br>Specific Heat Capacity<br>pH<br>Acids & Bases | Lesson 3<br>Lesson 13<br>Lesson 12<br>Lesson 12<br>Lesson 12<br>Lesson 12<br><br>Lesson 14<br>Lesson 14 |  |
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