



Yale-New Haven
Teachers Institute®

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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What's the... Matter?

Guide for Curriculum Unit 16.04.08

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Matter is all around us, but how often do we really take an opportunity to think about the matter that makes up our world? This curriculum unit will allow middle school students to think more deeply about the changes that occur in matter and consider *why* phase changes occur. Students will first learn about the three states of matter (solids, liquids, and gases). They will then examine the role thermodynamics (energy, heat, and work) plays in phase transitions. Students will practice modeling molecules and describing the molecular properties of each state of matter and compare elements, mixtures, and compounds. Through hands on experiments, students will be able to explore properties of matter. Finally, students will gain a deeper understanding of the law of conservation of matter and chemical equilibrium by writing chemical equations for everyday chemical reactions. Teaching this unit will enrich middle school students' knowledge and understanding of the world around them, which is filled with matter. Over this 10 day unit students will gain exposure to real-world scientific connections through hands on inquiry, interactive simulations, and catchy songs about states of matter.

(Developed for General Science, grade 7; recommended for General Science, grades 6-7)

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