

Matter

Overview Sheet

Essential Question

How do we describe matter?

Vocabulary

matter	physical property	chemical property	disposition
gas	plasma	liquid	vaporization
melting	freezing	sublimation	condensation
chemical change	physical change	solid	phase change
Absolute Zero	evaporation/boiling	Bose-Einstein Condensate	

Objectives

1. Identify what constitutes matter
2. Describe the five states of matter and how they differ at the molecular level
3. Describe how energy (heat) affects the particles that make up matter
4. Name and describe the processes that occur as matter undergoes phase changes (freezing, melting, evaporation/vaporization, sublimation, condensation, disposition)
5. Differentiate between the physical and chemical properties of matter
6. Identify examples of physical and chemical changes

Helpful Websites

- http://www.chem4kids.com/files/matter_intro.html (overview)
- <http://www.school-for-champions.com/science/matterstates.htm> (3 phases)
- <http://cwx.prenhall.com/petrucci/chapter1/medialib/O105.html> (3 phases of water + animations)
- <http://www.scienceclarified.com/Ma-Mu/Matter-States-of.html> (phases of matter + overview)
- http://www.visionlearning.com/library/module_viewer.php?mid=120&l=&c3= (phases of matter + animations)
- <http://www.dac.neu.edu/physics/b.maheswaran/phy1121/data/ch04/anim/anim0402.htm> (phases of matter + animations)

More on back



- <http://www.miamisci.org/af/sln/phases/> (heat & 3 phases of matter + animations)
- http://www.harcourtschool.com/activity/states_of_matter/ (heat & 3 phases of matter + animations)
- <http://id.mind.net/~zona/mstm/physics/mechanics/energy/heatAndTemperature/changesOfPhase/changeOfState.html> (changing phases of matter)
- http://www.school-for-champions.com/science/matterstates_changing.htm (changing phases of matter)
- http://www.chem4kids.com/files/matter_changes.html (phase changes + overview)
- <http://www.dac.neu.edu/physics/b.maheswaran/phy1121/data/ch04/anim/anim0405.htm> (phase changes + animations)
- <http://www.dac.neu.edu/physics/b.maheswaran/phy1121/data/ch04/anim/anim0406.htm> (sublimation video)
- <http://www.plasmas.org/> (plasma)
- <http://www.explorelearning.com/index.cfm?method=cResource.dspDetail&ResourceID=30> (plasma)
- http://www.spaceweathercenter.org/amazing_plasmas/01/mattersorter.html (plasma + interactive)
- <http://www.colorado.edu/physics/2000/bec/> (BEC + Absolute Zero)
- http://www.absolutezerocampaign.org/get_involved/resources/topic_quest4_zero.htm (Absolute Zero)
- <http://www.learner.org/channel/courses/essential/physicalsci/session4/closer.html> (videos)
- http://virtual.yosemite.cc.ca.us/lmaki/Chem150-99/chapters/chapter1/lessons/phys_chem/phy_c_1.htm (interactive lesson - physical and chemical changes)
- <http://cwx.prenhall.com/petrucci/chapter1/medialib/tutor/f20/0103.html> (chemical and physical change + animations)
- http://www.bbc.co.uk/schools/scienceclips/ages/10_11/rev_irrev_changes.shtml (reversible and irreversible changes)
- <http://www.fordhamprep.org/gcurransho/sho/lessons/lesson15.htm> (physical and chemical changes)
- <http://www.mcwcdn.org/chemist/pcchange.html> (physical and chemical changes)
- <http://www.quia.com/rr/38085.html> (review game)
- <http://www.smaphysics.ca/senior1/chemistry/chemtests/physchem.html> (quiz)
- <http://www.nisd.net/secww/science/science-taks/quiz14/physical%20quiz.htm> (quiz)
- <http://www.teacherbridge.org/public/bhs/teachers/Dana/chemphys.html> (quiz)
- http://www.1001-periodic-table-quiz-questions.com/quiz/k-12/change_1.html (quiz)
- <http://www.glencoe.com/ge/science.php?qi=384> (quiz)
- <http://www.vtaide.com/png/matter.htm> (quiz)
- <http://www.fordhamprep.org/gcurransho/sho/review/rev15b.htm> (quiz)
- <http://www.quia.com/quiz/303980.html> (quiz)
- http://highered.mcgraw-hill.com/sites/0078600510/student_view0/unit4/chapter15/section_2_self-check_quiz_eng_.html (quiz)
- http://science.nasa.gov/headlines/y2002/20mar_newmatter.htm*
- http://science.nasa.gov/headlines/y2004/12feb_fermi.htm*

* You are not responsible for this information, it was just interesting