

## Mixtures and Solutions-6<sup>th</sup> Grade

Timeframe  
10 weeks

February 24, 2012 DRAFT

Standards	Assessment/ Student Evidence	Academic Vocabulary	Resources
<b>INQB-Different kinds of questions suggest different kinds of scientific investigations.</b>	<ul style="list-style-type: none"> <li>Plan and conduct a scientific investigation that is appropriate for the question being asked.</li> </ul>	Observation Procedure	<i>Mixtures &amp; Solutions</i> Teacher Guide by FOSS- Investigations 1-3
INQA Scientific inquiry involves asking and answering questions and comparing the answer with what scientists already know about the world.			
INQC Collecting, analyzing, and displaying data are essential aspects of all investigations.			
<b>APPF Solutions must be tested to determine whether or not they will solve the problem. Results are used to modify the design, and the best solution must be communicated persuasively.</b>	<ul style="list-style-type: none"> <li>Test the best solution by building a model or other representation and using it with the intended audience. Redesign as necessary</li> </ul>		
<b>PS2A- Substances have properties such as density, solubility, boiling point, and melting point, all of which are independent of the amount of the sample.</b>	<ul style="list-style-type: none"> <li>Use properties such as solubility, size, and magnetic attraction to identify an unknown substance.</li> </ul>	Solubility Concentration/Dilute Magnetic attraction Substance Properties Saturate/Saturation	Solubility Simulation: <a href="http://phet.colorado.edu/web-pages/simulations-base.html">http://phet.colorado.edu/web-pages/simulations-base.html</a>

Power Standards in green

Complementary Standards in yellow

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PS2B-Mixtures are combinations of substances whose chemical properties are preserved.	<ul style="list-style-type: none"> <li>Separate a mixture using differences in properties (e.g., solubility, size, magnetic attraction) of the substances used to make the mixture.</li> </ul>	Mixture Solution Particles Dissolve Solid, liquid, gas	
PS2F-When substances within a closed system interact, the total mass of the system remains the same. This concept, called conservation of mass, applies to all physical and chemical changes.	<ul style="list-style-type: none"> <li>Apply the concept of conservation of mass to correctly predict changes in mass before and after chemical reactions.</li> </ul>	Mass	

Power Standards in green

Complementary Standards in yellow