

Promotion Benchmarks for Science 8

End-of-Year Student Progress Record

2006-2007

	SOL	Comments	Achieved	Not Achieved
Scientific Investigation				
1. Identifies the components of experimental design: independent variable, dependent variable, constants, controls, and repeated trials	PS.1			
2. Selects appropriate laboratory equipment and accurately measures using metric units	PS.1			
3. Selects and uses an appropriate graph to display data; identifies patterns and trends in the data	PS.1			
Properties of Matter				
4. Finds the mass and volume of an object; calculates its density	PS.2			
5. Differentiates between a physical and a chemical change; applies the Law of Conservation of Mass	PS.5			
6. Differentiates between mass and weight	PS.5			
7. Differentiates between an element and a compound	PS.4			
8. Identifies the location, charge, and relative size of the three basic particles of an atom	PS.3			
9. Describes the properties of a solid, liquid and a gas; explains the effect of heating and cooling on the states of matter	PS.2 PS.7			
Energy and Its Transformation				
10. Explains the transformation of energy from one form to another: chemical, electrical, mechanical, nuclear, radiant, and thermal; applies the Law of Conservation of Energy	PS.6			
11. Describes the movement of sound waves through a medium; identifies the applications of sound waves in everyday life	PS.8			
12. Describes the movement of light waves; recognizes the applications of electromagnetic radiation (gamma rays, X-rays, ultraviolet, visible light, infrared, radio and microwaves) in everyday life	PS.9			
Forces and Motion				
13. Applies Newton's Laws of Motion to everyday situations	PS.10			
14. Applies the scientific meaning of work; explains how simple machines (inclined plane, pulley, and lever) make work easier	PS.10			